



Bait Byoot

بيت بيوت

Rebuilding Homes, Recreating
Memories, and Renewing Hopes
in Damascus

DANA AWAD | 5720230

Dedication

To the people of Syria, whose dreams of home endure through every trial. This work honors your resilience and hope.

Abstract

This research delves into the post-war reconstruction of Damascus, focusing on the intricate balance between preserving cultural heritage and embracing modernity. Through the lens of informal settlements, particularly in the neighborhood of Jobar, the study examines the adaptability of contemporary dwellings alongside historic courtyard houses. The analysis highlights the tension between modernization aspirations and the preservation of unique cultural identities in a post-war context.

A comprehensive survey, incorporating diverse voices from the Syrian community, revealed a tapestry of preferences and aspirations that underscore the importance of community living, memories associated with home, and resilience. This input shaped the design intervention known as Bait Byoot, which aims to rebuild structures while fostering a sense of community and resilience. The project integrates green spaces, communal hubs, and varied materials, addressing immediate housing needs and promoting sustainable, flexible growth.

Bait Byoot, beyond a housing project, it serves as a blueprint for revitalizing war-torn communities, providing a foundation for healing and growth. The design respects traditions and experiences, bridging the past and future to create spaces for new memories and opportunities.

This research emphasizes the human element in post-war reconstruction, advocating for urban resilience and recognizing that rebuilding communities extends beyond physical structures. It calls for a delicate interplay between modernization, cultural preservation, and the human experience. By envisioning the future of neighborhoods like Jobar, the study aims to revitalize the essence of community, creating spaces where resilience, cultural richness, and the philosophy of home-making converge into a narrative of hope and renewal.

Acknowledgments

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01 | INTRODUCTION

The Ongoing Conflict in Syria

On March 15, 2011, what should have been a normal day for the lives of the 21 million citizens of Syria was marked by the beginning of a 12-year civil war. Initially sparked by a call for the ouster of the current political regime, the protests quickly escalated to create a divide between the people of Syria, with some supporting the political regime and others opposing it. Human losses have since reached an estimated 600,000, according to the most recent statistics from the Center for Preventive Action (2023).

The Impact of the Civil War

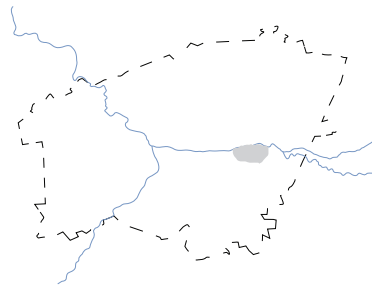
In the wake of the devastating effects of the conflict in Syria, millions of individuals have left their homes with the expectation of a brighter future. However, many of these individuals later discovered that their homes had been destroyed in a matter of seconds due to the intense bombing that had destroyed entire neighbourhoods. With nothing left, approximately 5 million Syrians decided to migrate in the hope of establishing a new life in a new country that could provide them with a prosperous future (*Conflict The city of Damascus*, 2023). Unfortunately,

have lost their lives in the process. Migration did not represent the only source of displacement in Syria's neighbourhoods and cities, as a significant number of Syrians have been internally displaced, with approximately 7 million Syrians having moved to other parts of the country in order to escape the war's bullets and missiles (*Conflict in Syria*, 2023).

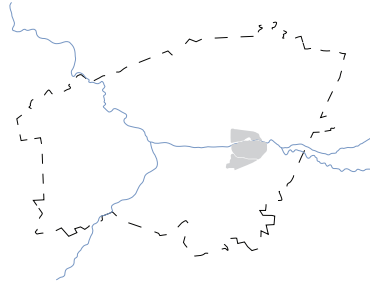
As the years pass, the socio-economic situation in Syria continues to deteriorate. Economic sanctions, public health issues, pandemics, and drought have had a significant impact on the country's economy. As of 2022, more than half of the population is living under the extreme poverty level, a level not seen before the onset of the conflict (*Syria's Economic Update*, 2022). The conflict has caused a division of the once unified population, as well as the physical division of the country. This has caused the urban boundaries of Syria to be delineated according to a particular political group.

The Role of Architecture in Reconstruction

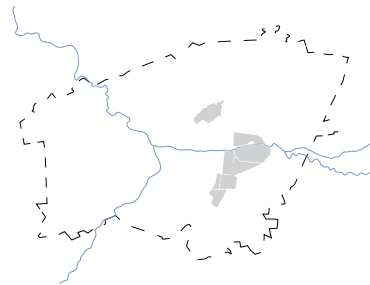
In the face of the challenges facing the country and its citizens, is there any way architecture can be used to bring back life? Can architecture be used to create a brighter future for the citizens of Syria, and if so, what steps can be taken to achieve this?



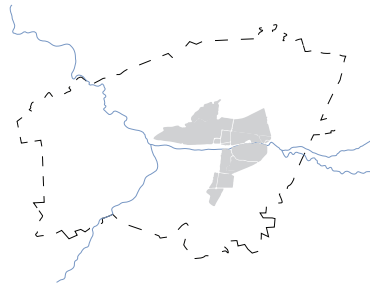
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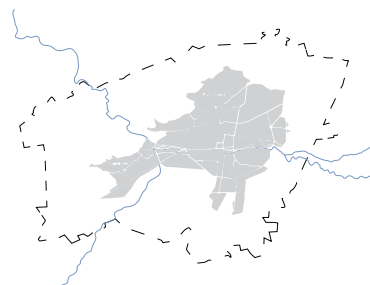
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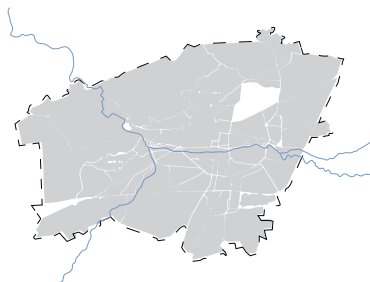
1515 - 1919



1920 - 1944



1944 - 1975



After 1975

1.1 DAMASCUS : A HISTORIC CITY IN RUINS

The city of Damascus, the world's oldest habitable city, has been a haven for numerous civilizations for centuries (*The Architectural and Urban Identity of Damascus*, 2020). Even decades after its independence, the memories of various colonies linger in the city, accompanying its growth and development. What began as a vibrant metropolis has since been transformed into one of the most inhospitable cities in the world. The oasis-like 'Pearl of the East' has become a desert, a place of destruction and displacement. Damascus, along with millions of other Syrians, lost its life in 2011 when the civil war began.

Figure 1 : Expansion of Damascus

The ongoing conflict in Syria has caused irreparable harm to the city of Damascus and its inhabitants, a fact that is widely recognized by the international community, yet little effort has been made to shift the city from its current state. Twelve years after its beginning, the civil war has yet to end, although the country has achieved a degree of relative tranquility following a cessation of bombing and shelling.

Reconstruction Dilemma

At this point, twelve years after the onset of the war, and after the city has been in ruins for years, one would have expected a significant reconstruction process that would not only rebuild the city, but the entirety of Syria. Millions of Syrians, both inside and outside the country, have been living with the expectation of returning home (Hanna & Harastani, 2019). However, this hope has been dashed since the government's announcement of its reconstruction plans in 2016 (Sukkar et al., 2021). Why has the government been unable to devise a plan for reconstruction that meets the expectations of the

people of Syria?

Challenges of Current Reconstruction Plans

For centuries, Damascus has experienced a housing shortage due to the influx of Syrian citizens from rural areas (Goulden, 2011). This influx caused the city to expand beyond the historical boundaries of Old Damascus, seen in figure 1, yet the government was unable to provide housing to the new arrivals (Malas, 2021). As a result, many Syrians opted to build their own homes in order to find a place to call their own. This led to the emergence of the Syrian as a designer and planner (*The Architectural and Urban Identity of Damascus*, 2020), who began to construct simple houses that provided the necessary space for their families. These houses eventually led to the creation of informal settlements, commonly referred to as *ashwa'iyat*. The Syrian informal settlements are characterised by their distinct land tenure. They are either not legally permitted to be constructed on the government's land, or they are constructed without a legal permit and are not built

following the municipality's urban plan (Sukkar et al., 2021). The difference between informal settlements in Syria and slums lies in their architecture and urban design. In Damascus, informal neighbourhoods are clusters of concrete blocks that look like the formal neighbourhoods of Damascus. While these blocks may exist globally, what sets them apart is the Syrians' ability to form families that evolve into communities, expanding organically within these structures.

The post-war reconstruction of Syria has been expected to address the housing issue that the country has faced for a long period of time (Al Droubi, 2020). With a damaged and destroyed country, planners and architects have the opportunity to develop new design strategies, as the war has left a barren landscape. However, this has not been the case with the current reconstruction plans. It has been suggested that the reconstruction of Damascus will only worsen the housing problem (Deknatel, 2022). Two of the plans that have been made available to the public by the government are Marota City and Basilica City, which is intended to create luxurious neighbourhoods with high-rise buildings and expansive boulevards (*The Architectural and Urban Identity of Damascus*, 2020), while in reality only serving the higher income classes, which make around 15% of the population (Tfaily, 2018). This raises a number of questions, such as the viability of a reconstruction project that does not adequately serve the needs of the community after twelve years of war, and where the displaced people will find sanctuary in a plan that seeks to further displace them.



Figure 2 : Damascus in 1950 (Al Dbiyat et al., 2020)

*“We shall remember.....
Damascus, the ‘Pearl
of the East’. The pride
of Syria, the fabled
garden of Eden, the
home of princes and
genii of the Arabian
Nights, the oldest
metropolis on Earth,
the one city in all the
world that has kept its
name and held its place
and looked serenely on
while the Kingdoms
and Empires of four
thousand years have
risen to life, enjoyed
their little season of
pride and pomp, and
then vanished and been
forgotten.”*

Mark Twain (Kawadri, 2018)

1.2 RESEARCH GOAL

The Urgency of Reconstruction

The ongoing conflict in Syria has caused extensive damage to the country's population, infrastructure, and built environment, resulting in the displacement of millions of people and the exportation of millions of others. This has caused the country to become increasingly unstable, with many people left with only memories of their former homes, streets, and neighbourhoods. Despite the uncertain future of the war, steps must be taken to begin the process of reconstruction. After 12 years of conflict, it is essential for the people of Syria to regain a sense

of security in order to gradually reconstruct their past lives. For this reason, this research aims to initiate a fast rebuilding process of the country in order to restore essential facilities, educational institutions, and services. However, in this sense, reconstruction should not be limited to the construction of individual buildings; instead, it should bring life back to the country, with only the community having the capacity to create it.

I believe that the key to a successful reconstruction in Damascus is to think about the past and how

the city has tried to plan over the centuries. I also believe that a reconstruction in Damascus should think about the future because the city has gone through a lot of changes in its social and economic life. The reconstruction should focus on the Syrian community because it is the heart of the city.

Research Objective

Given the current housing issues and the uncertain future of Damascus, the purpose of this research is to determine:

What type of post-war neighbourhood meets the needs of the Syrian community and the future of the city of Damascus?

It is challenging to define the Syrian community or confine a population of 21 million people in one statement. Various attributes contribute to the formation of communities in Syria, such as tribes, religion, and families. Additionally, in Syria, individuals can belong to multiple communities simultaneously. For the purposes of this research, focusing on informal settlements, the community un-

der consideration is comprised of displaced Syrians who have either lived or are currently living in the informal settlements of Damascus. This community encapsulates individuals belonging to the poor working class or those situated below the poverty line.

Critical Questions

This paper will explore how post-war reconstruction in Syria will unfold, with a particular focus on Damascus, the world's oldest habitable capital. This paper will explore the potential way(s) in which Damascus can be rebuilt to bring back life to the city. In order to provide a comprehensive response to this issue, a series of sub-questions will be addressed, including:

- *What are the design principles of informal settlements in Syria?*
- *What are the characteristics of urban resilient neighbourhoods?*
- *What are the needs and wants of the Syrian community?*
- *How can the design of a house evoke a sense of home for Syrians?*

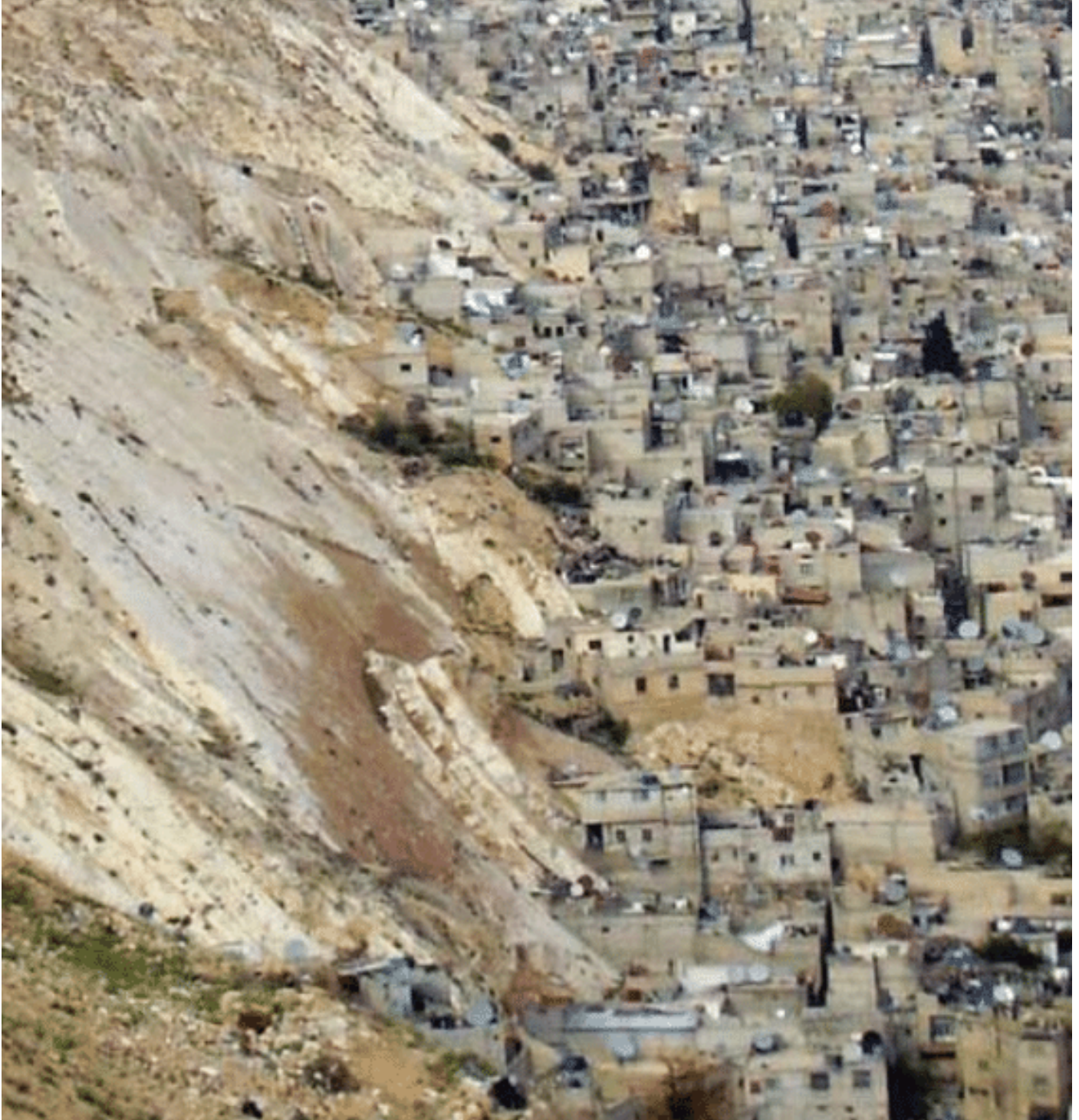


Figure 3 : Informal settlements along the mountains of Damascus (Srewil, 2008)

1.3 LITERATURE REVIEW

Global Implications

The reconstruction of Syria is a global issue due to the mass destruction that the world has been attempting to halt for more than a decade. As the fighting parties have yet to reach an agreement, the war is still deemed to be ongoing (Zenbarajki, 2016). This means that the government is responsible for reconstructing the city (Sukkar et al., 2021). The local community, as well as architects and planners, are concerned about the long-term prospects of the country's reconstruction (Kusiak & Azouz, 2023). Various researchers have expressed their disapproval of the government's plans for re-

construction (Goulden, 2011; Hanna & Harastani, 2019; Hourani & Rawashdeh, 2022; Malas, 2021; Sukkar et al., 2021; Tfaily, 2018). Furthermore, some have criticized the reconstruction from a political perspective, viewing it as a means for the government to declare victory by razing opposition-held areas. Others have referred to the reconstruction as a violation of the country's identity and the erasure of its memory.

Learning from history

The reconstruction of Syrian cities such as Damascus is a multifaceted process, as the country is confronted with a range of so-

cio-political, economic, and other factors that have a significant impact on the future of the country. Architecture students, such as Maher Daboul, Mohammed al Rmmesh, and others, from various universities around the world, including those from Leibniz University Hannover, Ittihad Private University, The University of Notre Dame, have proposed plans for the redevelopment of various cities in Syria (Chambers, 2022; Sukkar et al., 2021). Their objectives for the reconstruction varied greatly, with some aiming to reconstruct the historic architecture, while others sought to create a modern city.

A Holistic Approach

In order to effectively plan for the future of a country, it is essential to examine its past and present before embarking on any reconstruction project (Kusiak & Azzouz, 2023; Tfaily, 2018). This is particularly true of the capital city of Damascus, which has a long and rich history in urban planning which dates back to the fifth millennium BC (Ali et al., 2018a). Scholars such as Clerc & Hurault (2010), Collelo (1987), Haddad (2009) and Jabbour (2002) have examined the city from

various perspectives, such as social, political, architectural, urban, and mixed community dynamics. Through the years, architects have documented the alterations in Damascus's urban structure and architectural style (Ali et al., 2018; *The Architectural and Urban Identity of Damascus*, 2020).

A Local Perspective

This research seeks to explore the concept of post-war reconstruction in Syria, a topic that has remained largely unexplored due to the ongoing civil war. While there is a wealth of knowledge available on how to reconstruct a post-war country (Zenbarajki, 2016), there is a lack of research on how to reconstruct Damascus. Research has focused on bringing back the city's identity and revitalizing its memory, but little attention has been given to the people who are most affected by the reconstruction. This research seeks to address this issue by examining the needs and desires of the local Syrian community and applying them to a design proposal for a neighbourhood in Damascus.

1.4 METHODOLOGY

The post-war reconstruction of a city is intricate due to the presence of multiple layers of complexity. In order to create a plan for the reconstruction of Damascus, it is necessary to acquire knowledge of various concepts. This study will utilise two types of data: theoretical and practical data, outlined in figure 4.

Literature

Theoretical data will be presented in the form of literature and drawings, while practical data will be provided in the form of surveys and interviews. The development of urban planning and housing in

Damascus will provide insights into the various characteristics of the city. Additionally, a study of Damascus's informal settlements will be conducted, introducing a typology of popular housing. This will enable the current status of informal neighbourhoods to be assessed and their characteristics to be evaluated. Finally, the studies of the built environment of Damascus are related to the social nature of the city and its community.

The research will not be complete without an understanding of the post-war urban reconstruction process. According to architects and urban planners, it is important to gain knowledge from other examples prior to initiating any reconstruction project (Tfaily, 2018). Furthermore, to ensure that the outcome of this research will be a design that is future-proof, it is essential to investigate how this can be achieved (Vale & Campanella, 2005). A case study on an urban resilient neighbourhood will be used to illustrate the design elements and strategies relevant to this dimension. It is worth noting

that this case study will encompass two crucial topics of this research, post war reconstruction and informal settlements. Therefore, the case study will be an example of a post war reconstruction of an informal neighbourhood.

Formal Analysis

Drawings will be a key component of this study and will be related to the various literature themes. The drawings help to understand the morphological structure of informal neighbourhoods in Syria. Maps, sections and elevations help to understand the informal settlements of Damascus at different architectural and urban levels. The drawings are not only restricted to the architectural drawings mentioned above, but also include photos. These photos provide important information about the situation of informal neighbourhoods before the war and after. They add a human dimension that is not found in technical drawings.

Human Centered Research

In order to ensure the involvement of the local community throughout the design process,

surveys and have been conducted. The surveys were shared online to facilitate the participation of individuals in Syria and outside. The objective of the survey, outlined in appendix 1, is to serve as a basis for the interviews done at a later phase. Conversely, the interviews involved 3-5 participants. They took place online.

The interviews were spread throughout the entirety of the design process. The interviews can be conceptualized as a single workshop with various target audiences, which are deemed to be the clients of the project. This facilitated the development of a design tailored to the Syrian population.

Design for the Future

The research would be incomplete without an in-depth understanding of post-war urban reconstruction. According to architects and urban planners, it is important to gain knowledge from other examples prior to initiating a reconstruction project. Furthermore, to ensure the outcome of this research is a future-proof design,

it is essential to investigate how such a result can be achieved. A case study on resilient urban areas will provide pertinent design components and strategies to address this dimension.

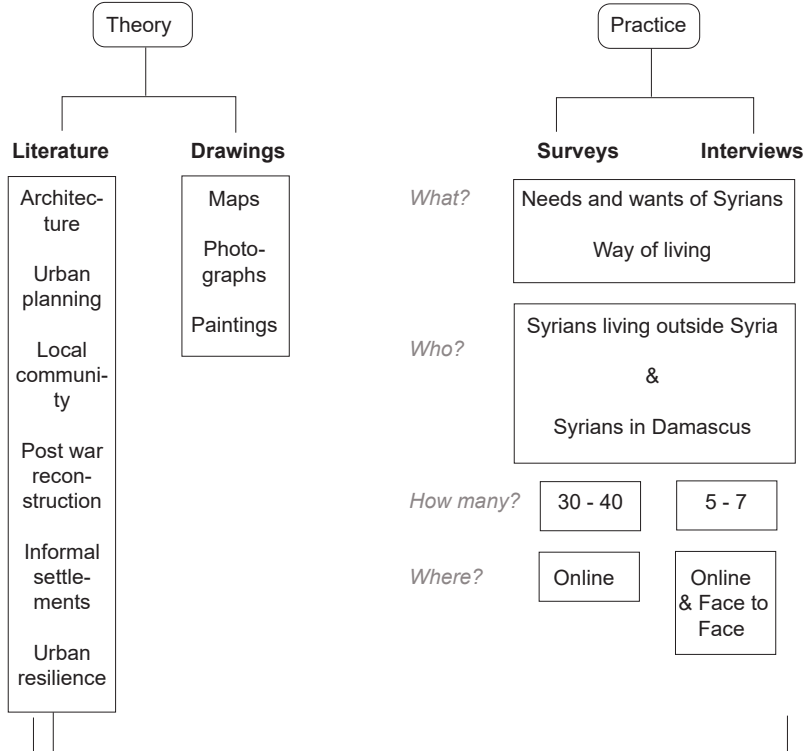
Ethical Considerations

The research will adhere to strict ethical guidelines to ensure the rights and well-being of all participants. Informed consent will be obtained from all survey and interview participants, and their right to withdraw from the study without repercussions will be emphasized. To safeguard participants' anonymity and confidentiality, no personally identifiable information will be shared.

SYRIA'S POST WAR RECONSTRUCTION

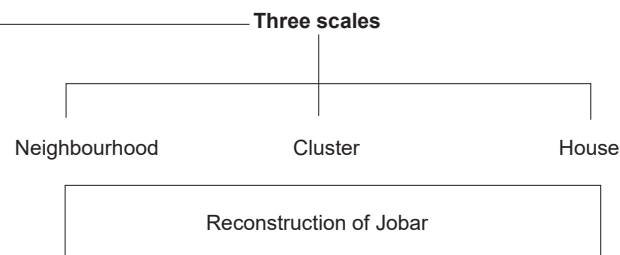
JOBAR , DAMASCUS

What type of post-war neighbourhood meets the needs of the Syrian community and the future of the city of Damascus?



Design framework

How can Damascus's post-war urban regeneration address the needs of the local population and the city's future?



Damascus's future

- How did Damascus change over time?
- Which current problems will impact the future of Damascus?
- How to address the issue of housing and informal settlements in the city of Damascus?
- How can Damascus's neighbourhoods be urban resilient?

The Syrian community

- What is the size of the Syrian community?
- Prior to the war, what were the living conditions of the Syrian community?
- What was the impact of the war on the lifestyle of the Syrian population?

Past + Present + Future

Figure 4 : Research methodology scheme

1.5 DESIGN OUTCOME

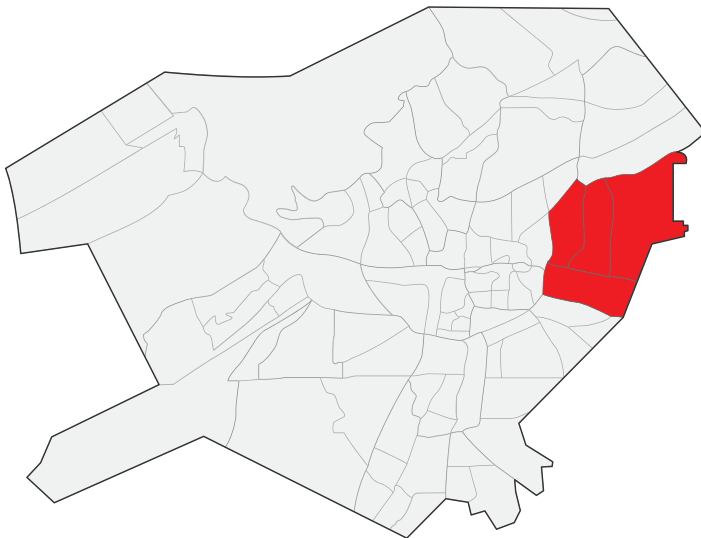


Figure 5 : Jobar's location relative to Damascus

Architecture can have a significant influence on how societies recover from the effects of war. If used correctly, architecture and urban planning can improve the quality of life in communities. However, the only way for a design to be successful is if it is supported by research. This research will provide the basis for design intervention related to post-war reconstruction in Damascus. The findings of the research are intended to create a framework containing design criteria that will guide the design process. Given the complexity of this project, the design will be focused on a particular re-

gion in Damascus, referred to as Jobar, highlighted in figure 5. As with many other areas in Damascus, Jobar was subject to extensive destruction due to the bombing and missile attacks, seen in figure 6. However, it remains one of the few areas in Damascus that have been completely destroyed, with only its infrastructural network still visible.

A Vision for Jobar

The reconstruction of Jobar is planned to be based on community-led design, with Syrians having a significant impact on the final design outcome. As previously mentioned, Syrians have developed the habit of creating and developing their own living communities over the years. However, due to limited knowledge on urban planning and design, these neighbourhoods have posed numerous challenges to its inhabitants. The objective of the reconstruction of Jobar is to reconstruct an area within one of Jobar's four districts, namely Jobar Al Gharbi (West Jobar).

Designing for Scale

The design outcome of this project will be based on three scales. The first scale will be based on creating a zoning plan to identify the urban morphology of the area. Subsequently, the scale will be reduced to focus on the design of both public and semi-public spaces. Finally, the focus will be placed on the design of the dwelling to meet the needs of various target groups. A key component of this design result is the development of an adaptable resilient neighbourhood. This means that the neighbourhood will be able to adapt to the changing socio-economic circumstances of its time. Another essential criterion for this design project is the creation of homemaking. The design aims to foster an environment that helps Syrians feel at home following years of displacement. The objective of the design product is to provide a solution to the design question: *How can Damascus's post-war urban reconstruction address the needs of the local population and the city's future?*



Study area



Study area

Figure 6 : Satellite images showing the destruction of Jobar's buildings and infrastructure, 2009 and 2022 (Google Earth, 2023)

1.6 LIMITATIONS

This study will be subject to limitations and constraints that will invariably influence its research and design processes. The examination of the Jobar site will rely exclusively on the available online resources, encompassing literature, maps, and photographs. The ongoing conflicts in the Middle East preclude any travel to Damascus, thereby affecting firsthand experience that might be obtained through a field study.

Furthermore, the survey employed in this research will be conducted electronically, as opposed to face-to-face interactions. Consequently, in certain instances, should respondents encounter difficulties comprehending a question, there will be a limitation in the ability to provide immediate clarifications that would otherwise be feasible during in-person surveys.

By employing online surveys, individuals residing in Syria will be afforded the convenience of participating in this study at a time of their choosing when electricity is accessible. It is imperative to acknowledge the potential impediments associated with internet access and electricity availability, as these could potentially impede online survey participation. Additionally, in light of existing travel restrictions, interviews will be carried out remotely.

CONCLUSION

In conclusion, Syria, particularly Damascus, faces enormous challenges as it emerges from more than a decade of conflict. The devastating human impact, widespread destruction, and massive displacement of people are truly disheartening. Nevertheless, there exists a promising path forward. By strategically employing architecture, guided by community involvement, rigorous research, and drawing insights from historical experiences, it is possible to undertake the task of reconstruction. This entails not only rebuilding physical infrastructure but also the restoration of the lives affected by this crisis.

As Syria embarks on the formidable endeavor of post-war reconstruction, it is crucial to prioritize the comprehensive fulfillment of the needs and aspirations of its residents and to foster the development of resilient, adaptable, and thriving communities. The research detailed in this paper serves as a comprehensive plan for post-conflict rebuilding, firmly rooted in today's cultural context of Damascus while being highly attuned to the specific requirements and desires of its inhabitants. This research underscores the potential of architecture as a powerful catalyst for positive transformation, offering the opportunity to both recover the past and pave the way for a more promising future.

02 | INFORMAL SETTLEMENTS

A PERVASIVE URBAN AND SOCIAL CHALLENGE

Informal settlements, also known as “zones of collective contravention,” have been a longstanding urban and social issue in Syria since their emergence in the 1950s (*Explained: Informal Housing Areas in Damascus, 2021*). These settlements have proliferated across the Northern, Southern, and Western regions of Damascus, forming a contiguous belt that surrounds the capital, as seen in figure 7. The expansion of Damascus’s population is attributed to rural migrants seeking better job prospects and the influx of Palestinian, Iraqi, and Syrian refugees displaced by conflict, including the Golan Heights crisis. This demographic shift created a substantial demand for housing that the Syrian government struggled to meet due to inadequate planning policies.

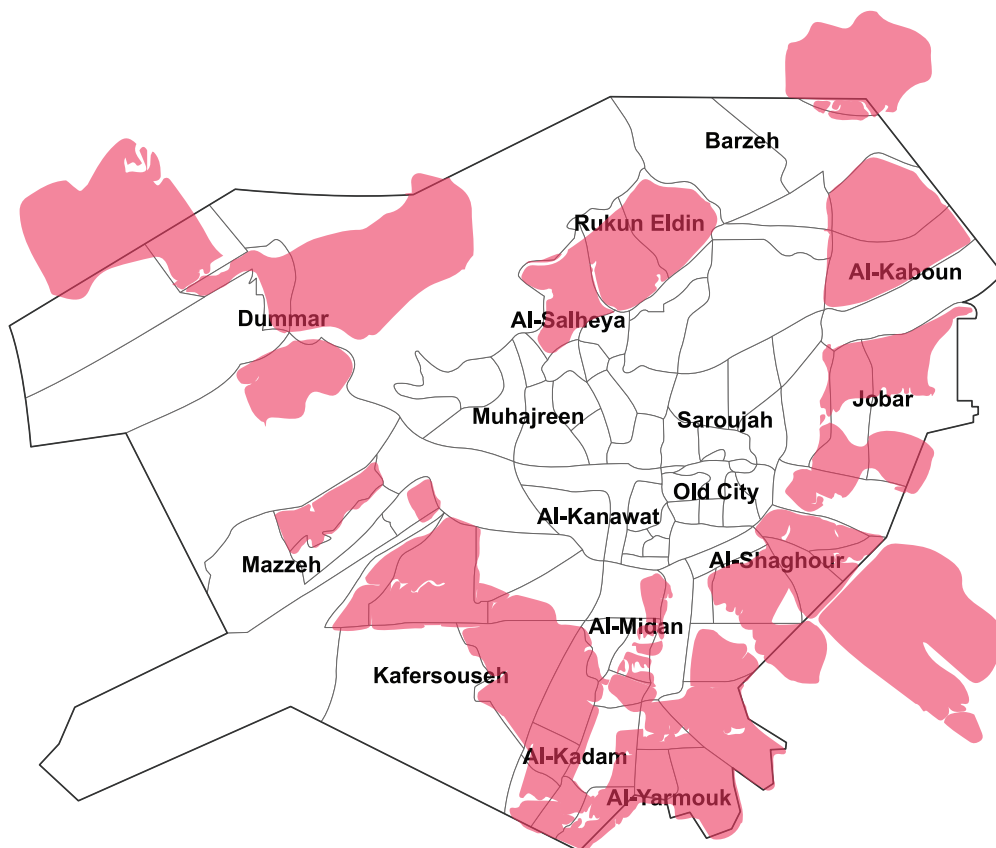


Figure 7 : Map highlighting the regions of informal settlements in Damascus, based on (Al Dayri, 2007)

2.1 GOVERNMENT'S RESPONSE AND INTERNATIONAL COLLABORATION

In the early 2000s, the Syrian government made addressing the issue of informal settlements a top priority (Clerc, 2014). Over the years, legislation has been modified in an attempt to curtail these settlements, as outline in figure 9. In 2001, the latest zoning plan divided informal settlements into three categories (*Explained: Informal Housing Areas in Damascus*, 2021):

- 00: Areas in the process of being regulated
- 01: Areas in need of a detailed zoning plan
- 02: Areas whose regulation is the least urgent, often comprising scattered informal settlements and agricultural lands that do not contribute significantly to urban growth.

Moreover, the Syrian government collaborated with international expertise from countries such as France, Germany, and Japan to develop new zoning plans and urban policies (Clerc, 2014). International involvement commenced in 2005 with the Informal Settlements Upgrading and Rehabilitation National Program, initiated by the municipality. Despite strict



Figure 8 : Public housing under construction (Clerc, 2012)

policies, including house demolitions and severe penalties for illegal construction (enacted in 2003 and 2008), informal settlements continued to persist.

The government's approach to addressing informal settlements typically involves three strategies: demolish and reconstruct (urban renewal with legal construction), improve and rehabilitate (upgrading with regularization), or a combination of both methods (*Explained: Informal Housing Areas in Damascus*, 2021).

Public Housing Initiatives and Their Shortcomings

In the early 2000s, the government reintroduced public housing programs through the Public Establishment for Housing (Clerc, 2014). However, public housing projects were insufficient, with only 57,000 houses built over a seven-year period, failing to meet the rising housing demand. Despite substantial growth in Damascus's real estate market, many properties remained vacant, serving as investments for both local and overseas investors. In 2010, Law 82 encouraged private real estate developers to participate in public housing projects, but this initiative did not effectively address Damascus's housing problem.

1974

Law 9 :

Two methods of land preparation for development - 'partitioning' by landlords and 'development' by local authorities.

Law 14 :

It aimed to address the shortage of formal housing supply and penalized land speculation while regulating urban densification.

Owners of vacant lands were penalized if they did not develop their lands.

2000

Law 26 :

It provided a more prominent role for the private sector in partitioning and preparing land for development, which had repercussions on the government's approach to informal housing.

2003

Law 1 :

Strengthened prohibitions on illegal housing and imposed penalties on violators.

2004

Law 46 :

Aimed to regularize some informal settlements through the provision of titles and building permits. However, it was not widely implemented.

2007

Law 8 :

Removed the cap on ownership for foreign investors for investment projects.

Law 9 :

Established the High Investment Council and the Syrian Investment Agency to facilitate international investment.

2008

Law 15 :

This law grants real estate developers the power to develop designated areas.

Law 33 :

Aimed at regularizing informal housing in certain approved districts but had limited implementation.

Law 59 :

Revised previous laws, further strengthening prohibitions and penalties.

2012

Decree 40 :

This decree provides strict measures to prohibit informal construction, orders the demolition of infringements, and imposes severe fines and prison sentences against those involved in informal construction.

Decree 66 :

This decree provides the legal foundations for developing two areas of informal settlements near Damascus, including the controversial Marota City.

2015

Decree 19 :

This decree allows local councils to establish private joint-stock holding companies to carry out work on their behalf, including managing their assets and properties.

Law 23 :

This law provides for the implementation of approved master plans either through the subdivision (taqsim) of land by landowners or through regularisation (tanzim) by local authorities.

2018

Law 10 :

It is applied to areas designated for reconstruction, particularly in Damascus and its suburbs. It outlines provisions for redevelopment and has generated resistance from affected residents.

Figure 9 : Timeline of important laws and decrees implemented to aid with the problem of informal settlements in Damascus, based on (Sukkar et al., 2021)

2.2 IMPACT OF CIVIL WAR ON INFORMAL SETTLEMENTS



Figure 10 : Destruction of an informal settlement
(Khaddour & Deng, 2023)

The fate of informal settlements became intertwined with the onset of the Syrian civil war. Unlike countries participating in the Arab Spring, Syria did not witness public square uprisings in 2011; instead, the turmoil began in informal settlements, leading to their bombing and destruction rather than renewal, as initially planned by the government in 2008 (Clerc, 2014). The informal settlements of Damascus suffered extensive damage during the war, and surprisingly, the conflict led to a 10% increase in informal settlement construction. With the government's attention diverted by the ongoing conflict, illegal construction activities, such as exceeding approved building heights, escalated.

2.3 CHARACTERISTICS OF INFORMAL SETTLEMENTS



Figure 11 : Stairs alleyway in an informal settlement (Kafa, 2013)

Referred to as *ashwa'iyat* in Arabic, informal settlements reflect an anarchic character. These settlements are characterized by homogeneous urban spaces that expand organically as more people settle. They exhibit a hierarchy in their street network and high population density. Informal neighbourhoods typically feature small plots, low-rise buildings, no setbacks, and narrow streets.

Challenges of Access and Infrastructure

Access to informal neighbourhoods is often challenging, as many are located on the outskirts

of Damascus, subject to difficult topographies, such as mountainous terrain, seen in figure 11, and a lack of organized, accessible public transportation (Kafa, 2013). Typically, the wider streets are concentrated near the district's borders, ensuring easier access to and from the region. Inside the neighbourhood, streets are typically narrow, accommodating only one vehicle at a time and locally known as *hara*, forming the main arterial network that can lead to dead ends.

The high population density in informal neighbourhoods results in limited open spaces and green areas. Residents mainly rely on narrow alleys for navigation (Kafa, 2013). While the urban morphology of most neighbourhoods is relatively uniform, exceptions arise due to contextual factors, like sloping terrain. Consequently, the traditional Damascene neighbourhood typology of *hamams* and *souks* has faded into modernization, leaving many neighbourhoods with only basic necessity shops or even devoid of shops entirely.

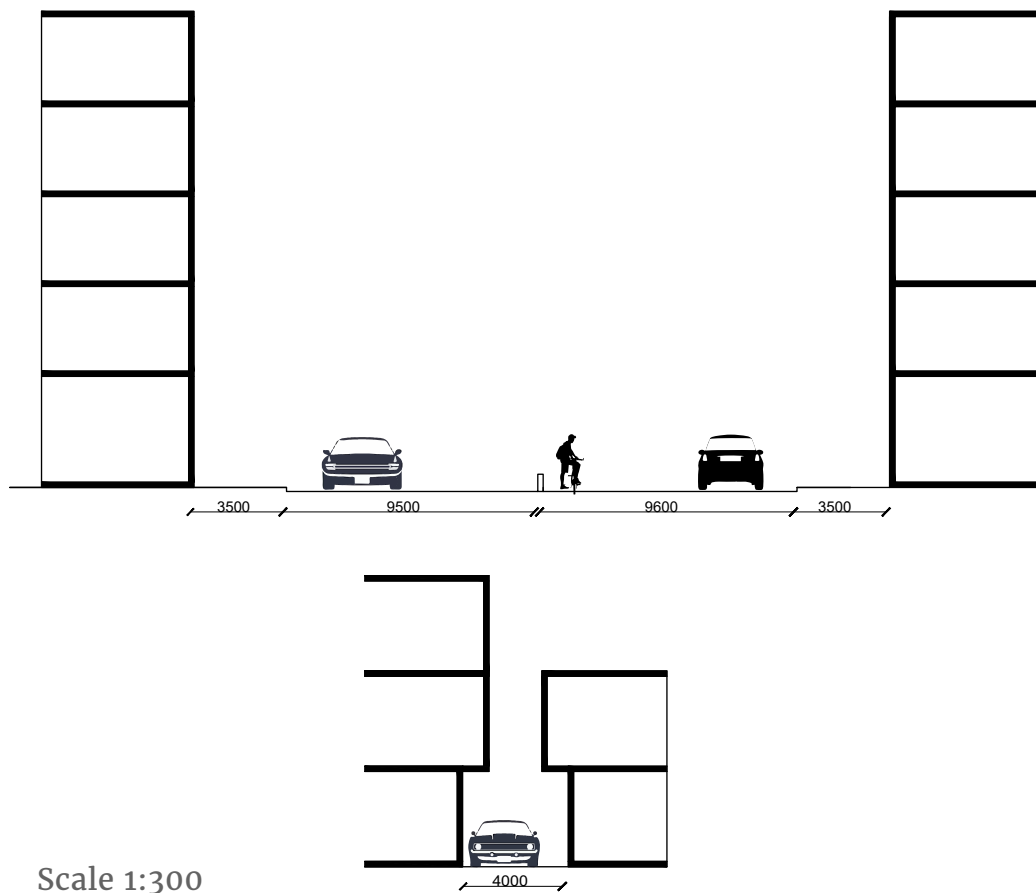


Figure 12 : Street sections of a typical major road and an arterial road which can be found in any informal settlement in Damascus

Infrastructure and Basic Services

In the late 1980s, the government began to acknowledge the presence of informal settlements and initiated the provision of basic infrastructure, including water and electricity (Clerc, 2014). Concerning sewage, there is no universal system uniformly applied across all neighbourhoods. Typically, the sewage system differs from one household or locality to another

(Kafa, 2013). These variations may include trenches dug at the base of houses, linked to canals, installation of sewage tanks during house construction, or the unauthorized establishment of connections with the city's sewer pipes. Although by 2004, approximately 97% of informal neighbourhoods had access to these amenities, service quality remained suboptimal. Some neighbourhoods experienced water and electricity availability for only a few hours a week. Sanitary issues also prevailed due to the waste collection system (Kafa, 2013). Inhabitants typically left their trash in front of their houses for collection, but in the absence of waste collectors, residents often resorted to dumping garbage in vacant lots within the neighbourhood. The waste collection process follows a simple procedure, wherein municipal-hired garbage collectors gather trash bags and deposit them into a truck, subsequently transporting it to a landfill. Nevertheless, in areas of neighbourhoods characterized by narrow alleyways as the primary infrastructure, trolleys are employed for garbage collection.



Figure 13 : Poor infrastructure and waste collection in informal settlements
(Kafa, 2013)

2.4 URBAN MORPHOLOGY

The analysis of informal settlements encompasses the study of urban morphology and architectural design. For a macro-level study, two neighbourhoods were selected based on facilities, public and private spaces, green areas, and street hierarchy. This analysis relies on maps as a primary tool. The architectural design of informal settlements is analyzed through the study of floor plans, elevations, and sections, as detailed in a survey conducted by Kafa (2013). Many of the drawings are derived from online sources and provide an accurate representation of the architectural style of informal buildings, although they may not be entirely precise.

Figure 14 : Map of Yarmouk Camp (Yarmouk Crisis: International Community Has 'Compelling Imperative to Act,' Says UN Official, 2015)



2.4.1 CASE STUDY : YARMOUK CAMP - AT TAQADUUM

The Yarmouk Camp, established in 1957, is one of the three unofficial refugee camps in Damascus recognized by UNRWA, United Nations Relief and Works Agency for Palestine Refugees in the Near East. The Yarmouk Camp is labeled as a camp despite its unofficial status for social and political objectives. Its initial purpose was to accommodate Palestinian refugees, hence the term “camp” was employed to designate this residential area. This choice of nomenclature may suggest an intentional effort to delineate between Syrian and Palestinian neighbourhoods. It could also be a measure

to avoid government responsibility for this locality, given that camps are typically perceived as temporary shelters. Initially, it was created to shelter Palestinian refugees who had sought refuge in mosques, hospitals, and schools. This neighbourhood, seen in figure 14, spans an area of 2.1 square kilometers, hosting the largest Palestinian community in Syria, numbering around 180,000 residents (*Yarmouk (Unofficial Camp*)*, n.d.). However, as Yarmouk Camp expanded, informal settlements began to emerge, consisting of houses built on agricultural land without oversight from the General Authority of Palestinian Arab Refugees. The neighbourhood's three primary streets form its urban fabric and are known for being the busiest routes for transportation to and from the area, as well as within the neighbourhood.

Despite the presence of various facilities, residents found them insufficient for the neighbourhood's substantial population. For instance, only three medical centers served over a million residents, and schools were overcrowded,

prompting parents to seek education options outside the neighbourhood. Families were allocated plots measuring 4x10 meters, with slightly larger ones for larger families (Al Sahly, n.d.). The UN-RWA initially provided financial support for residents to construct their houses, which later evolved into the provision of building materials. Yarmouk Camp's layout began to take shape as the first settlements appeared as one-story houses made of mud roofs, providing essential amenities.

At Taqqadoun, one of Al Yarmouk's districts, is home to a population of 36,000 residents according to the 2004 census (Al Dayri, 2007). Similar to Al Yarmouk Camp, At Taqqadoun is densely built on a strict grid pattern, characterized by one primary and one secondary street that serve as the main transportation network, as seen in figure 15. Narrow alleyways within the district enable residents to navigate the neighbourhood.

An examination of a small region within At Taqqadoun reveals a structured parcellation of the

cessibility network thanks to the grid pattern. The appearance of emptiness on the maps is a result of the post-war destruction. Before the conflict, the area was heavily built upon, with buildings in close proximity, leaving minimal open spaces. This also translated into a lack of green spaces. In terms of facilities, there is a notable shortage of services, with only one pharmacy and a lack of essential amenities.

Parcellation



Building density and morphology



Services

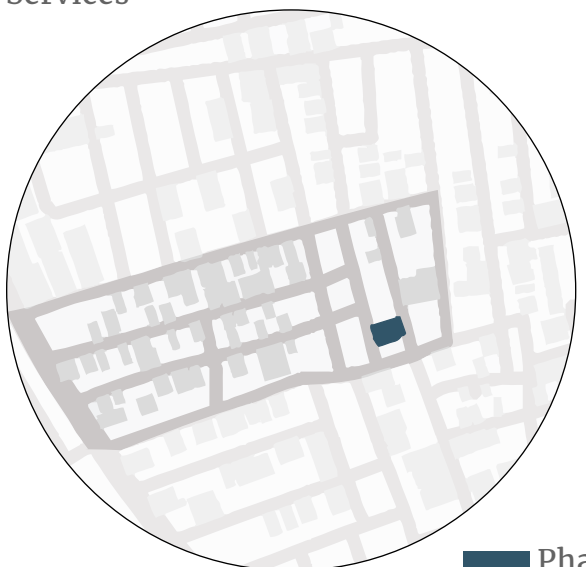


Figure 15 : Urban analysis of a neighbourhood in At Taqqadoun

■ Pharmacy



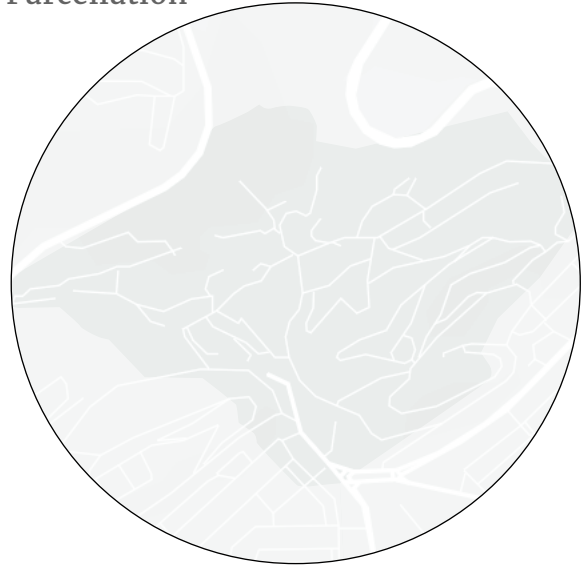
Figure 16 : Mezzeh 86 (Kafa, 2013)

2.4.2 CASE STUDY : MEZZEH 86

Mezzeh 86 emerged in the late 1980s, starting as small rooms constructed by members of the Defense Brigades near their workplace. Over time, this neighbourhood expanded as soldiers relocated their families from various regions of Syria, eventually becoming known for its military character. With an estimated population of 250,000, Mezzeh 86 stands as a hybrid between countryside and city (Al-Sheikh, 2013). Many residents originate from Syrian villages, thus bringing a different way of life to the neighbourhood.

Mezzeh 86 closely resembles informal settlements in its urban composition, characterized by high population density, limited open spaces, and an absence of greenery, as visualised in figure 17. However, its context differs, impacting the neighbourhood's design. Houses are constructed along the mountain slope, seen in figure 16, resulting in scattered, irregular arrangements without a defined structure. This topographical challenge limits access to the neighbourhood, with only a few main roads, poorly serviced (Kafa, 2013). To navigate the area, residents often rely on stairs and narrow alleys. Neighbourhoods within Mezzeh 86 vary in size due to the organic nature of this region, with diverse facilities distributed along the borders of these neighbourhoods for the benefit of residents in different areas.

Parcellation



Building density and morphology



Services

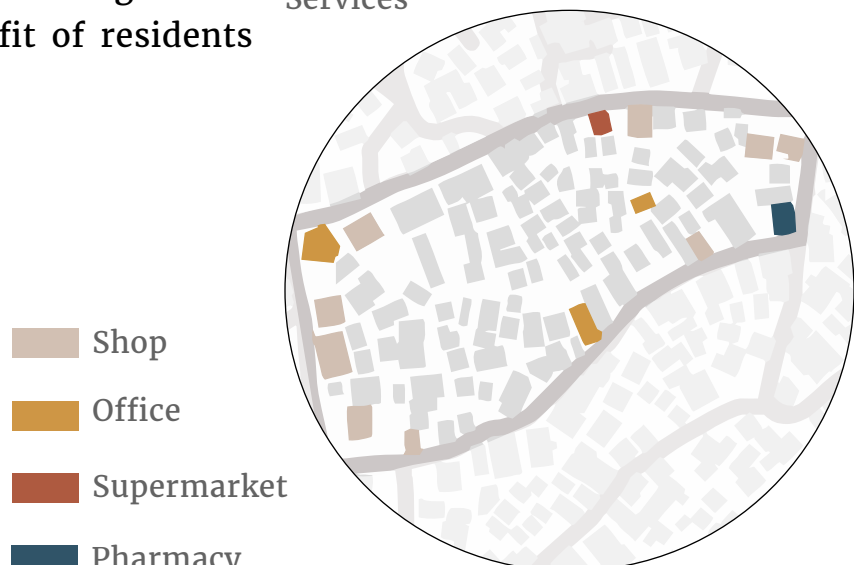


Figure 17 : Urban analysis of a neighbourhood in Mezzeh 86

2.5 ARCHITECTURAL CHARACTERISTICS

Houses in informal settlements are typically designed with simplicity in mind, featuring a courtyard house that fosters privacy. Courtyards serve as the primary circulation nodes of these houses, around which other rooms are arranged (Etienne, 2008). Courtyard size varies based on plot size and the desired number of rooms by inhabitants. Some houses possess larger courtyards, providing spaciousness, while others have more modest courtyards that function as narrow corridors allowing sunlight to reach rooms (Kafa, 2013).

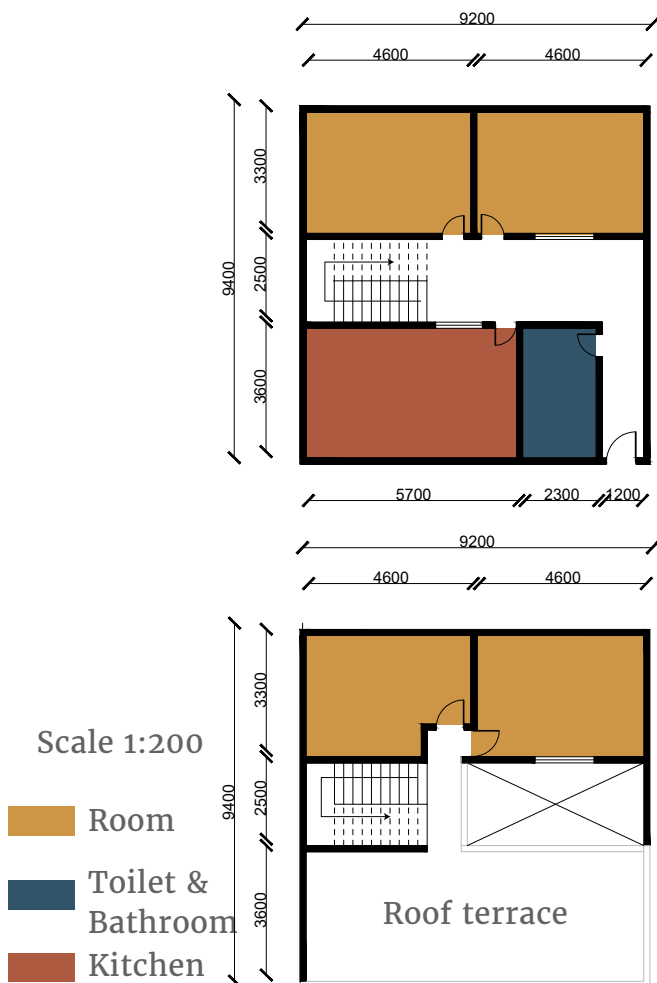


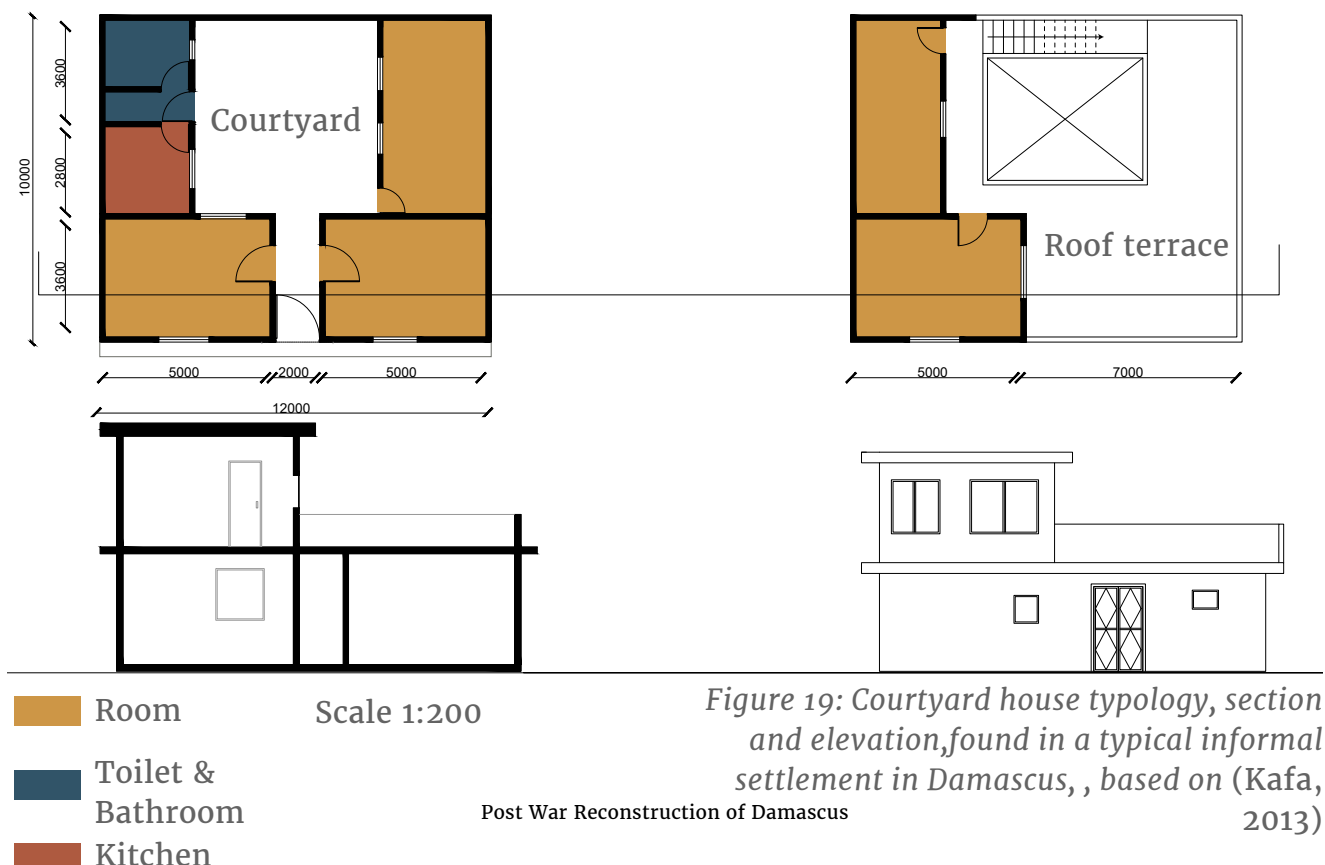
Figure 18 : Courtyard house typology found in a typical informal settlement in Damascus, based on (Kafa, 2013)

Floorplans of informal houses il-

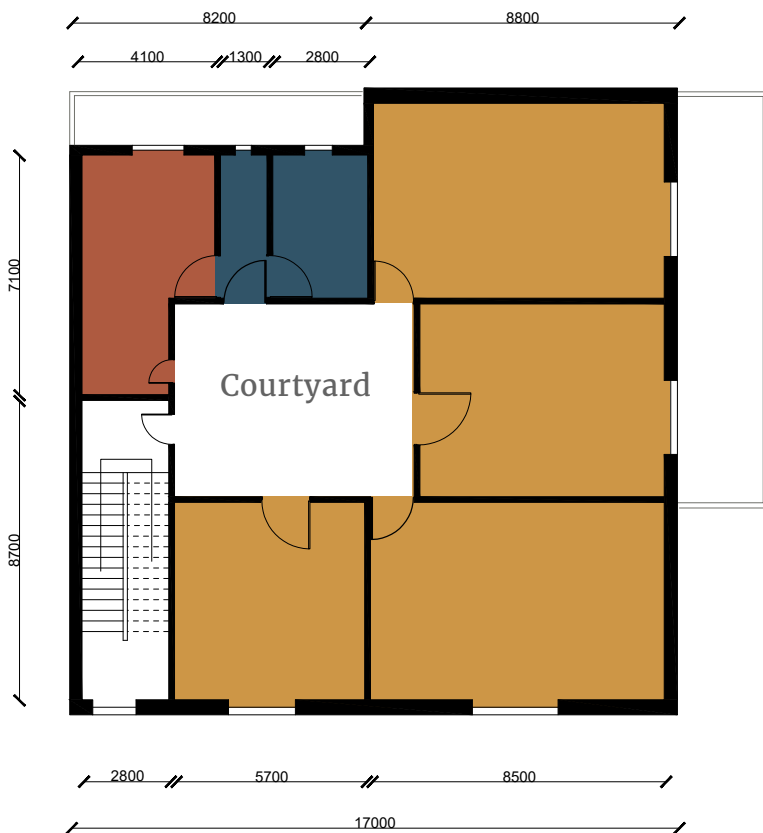
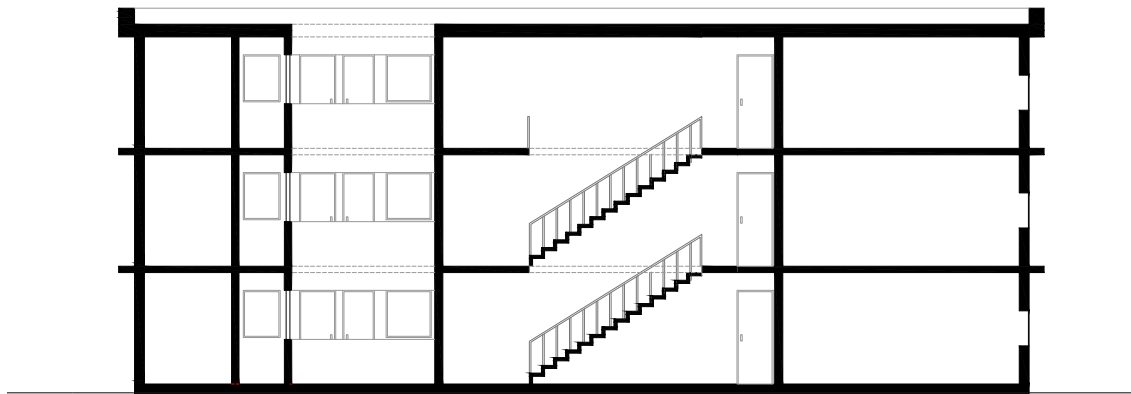
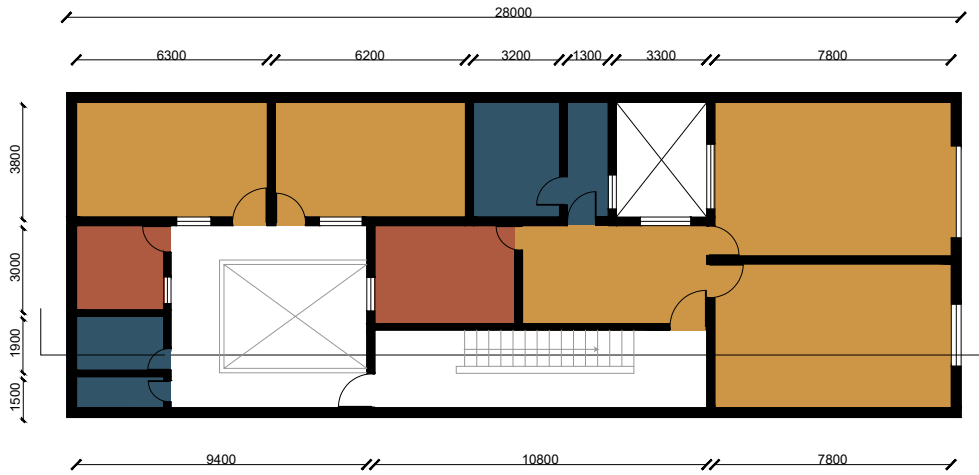
illustrate a minimalist design aimed at providing necessary spaces. A family of four or five, for instance, can generally be accommodated by one or two bedrooms (Kafa, 2013). Informal houses are flexible and can house multiple blood-related families, expanding vertically when financial resources allow. In some cases, houses are shared with foreigners. If inhabitants lack the means to expand and improve their homes, they often rent out ground floor spaces, typically used for shops or offices, altering the relationship between the house and the public realm.

In recent years, apartments, to address the increasing housing demand, have gained popularity. These apartment typologies

closely resemble the aforementioned design of houses, often featuring courtyards referred to as *manouar*, or skylights (Etienne, 2008). Despite the similarities in architectural design and typology, apartments foster less interaction among neighbors compared to traditional houses. Typically, traditional residences are positioned along a street that undergoes a vibrant transformation into a lively public space throughout the day and into the evening. Residents actively participate in communal activities, with children utilizing the area for play, and adults engaging in brief conversations with their neighbors while sitting outdoors. In residential buildings, interaction primarily occurs at stairwells.



Informal Settlements of Damascus



- Room
- Toilet & Bathroom
- Kitchen

Scale 1:200

Figure 20 : Apartment typologies, section and elevation, found in a typical informal settlement in Damascus, based on (Kafa, 2013)

2.6 ARCHITECTURAL EXPRESSION AND CON- STRUCTION

The architectural expression of informal housing is characterized by flat facades, minimal and small windows to allow for limited natural light, and flat roofs. These roofs facilitate future expansions, as residents often use them as terraces, planting flowers, fruits, and vegetables. Buildings and houses in informal settlements share a common aesthetic, with the primary distinction being building height. Houses generally comprise up to three floors, while buildings can reach seven or eight stories (Kafa, 2013).

Construction

Informal settlements are often colloquially referred to as “grey boxes” due to their materiality, predominantly composed of concrete and cement (Clerc, 2013). Structures typically consist of cement blocks measuring 40 x 15 x 20 cm within a reinforced concrete framework of posts and beams (Etienne, 2008).

The construction process is relatively quick, taking between three to five days to complete. Approx-

imately 20% of informal house owners are involved in their house's construction, while the rest may engage specialists (Etienne, 2008). Carpenters create an on-site framework, followed by around 20 individuals pouring concrete. Once the concrete sets, a smaller crew assembles the concrete framework and fills in cement blocks. In some cases, steel rebars are left exposed, rusting over time and compromising structural integrity.



Figure 22 : Construction rebars of a house left exposed in an informal settlement (Kafa, 2013)

The structural foundation of these residences is established through a network of beams directly placed on the natural ground, each with a height of 50 cm (Etienne, 2008). Supporting the floors and walls are posts measuring 20 x 40 cm, elevated to a height equivalent to 15 to 17 courses of concrete blocks (3.0 - 3.4 m). The beams, with an optimal length of around 4.5 m and a section of 15 x 25 cm, are designed with economic considerations. The construction approach predominantly employs reinforced concrete post-beam systems, except for the simplest homes, which may be constructed without this system. In such cases, the houses typically lack reinforced concrete pillars, and instead, the pillar is improvised using stacked concrete blocks.

Expansion

The plot experiences densification through both horizontal and vertical processes (Etienne, 2008). Horizontal densification entails using available spaces on the plot to extend the residential structure, achieved by widening the house or incorporating additional rooms or structures. Vertical densification,

on the other hand, involves adding new floors or levels atop the existing structure, enabling expansion without enlarging the building's footprint on the plot.

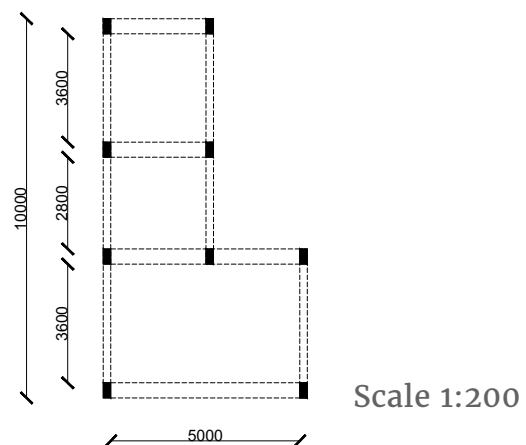
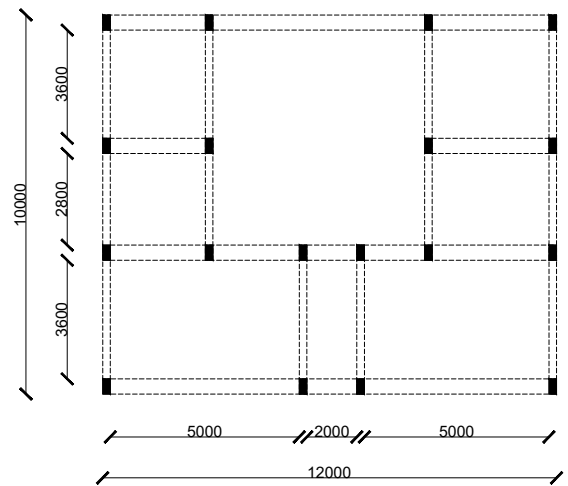


Figure 23 : Typical structural grid of a house in an informal settlement

CONCLUSION

Informal settlements in Syria have posed persistent urban and social challenges for the government. The dynamics of these settlements have evolved over time, influenced by factors such as population growth, political events, and shifts in government policies. Understanding the architectural and urban characteristics of these settlements is crucial for addressing the complex issues they present. The government's efforts to tackle informal settlements and provide basic infrastructure have had mixed success, particularly in light of the ongoing conflict. Additionally, the architectural and spatial aspects of informal housing, with their unique design elements, offer insights into the adaptability and resourcefulness of their residents.

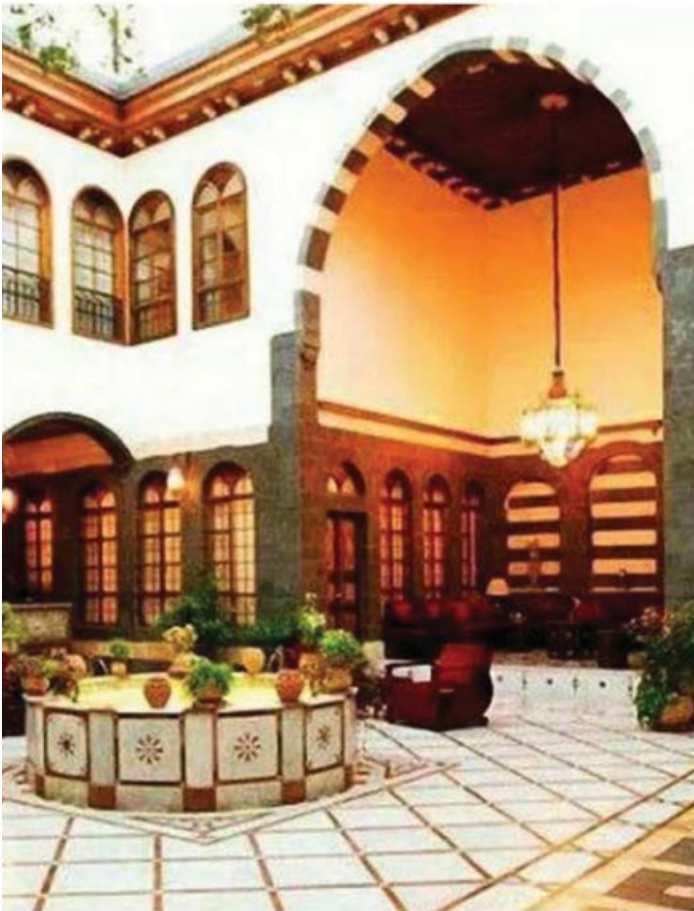
03 | COURTYARD HOUSES

ARCHITECTURAL HARMONY: COURTYARD DWELL- INGS IN OLD DAMASCUS

This chapter explores the enduring legacy of courtyard houses, drawing parallels between contemporary housing typologies and the historic architectural marvels of Old Damascus. This research started with an analysis of informal settlements, which revealed a connection between the contemporary dwellings and the courtyard houses.

The analysis of informal settlements establishes a link between contemporary housing typologies and the historic archetype of courtyard houses. The adaptive nature of informal settlements mirrors the historic typology, catering to the needs of low and middle-income groups, creating a bridge between past and present.

3.1 OLD DAMASCUS'S ARCHITECTURAL SYM- PHONY



In the heart of Old Damascus, the ancient city whispers stories through the architectural marvels of traditional Syrian courtyard houses. These homes, each bearing the weight of history, reveal a spatial symphony that intertwines with cultural context, defining the essence of everyday living, hospitality, and private spaces.

As one steps into the sunlit alleys of Old Damascus, the courtyard houses stand as a testament to the architectural prowess of a bygone era. The ground floors, adorned with hospitality spaces and everyday living areas, echo the lively

Figure 23 : Traditional Damascene courtyard house (The Architectural and Urban Identity of Damascus, 2020)

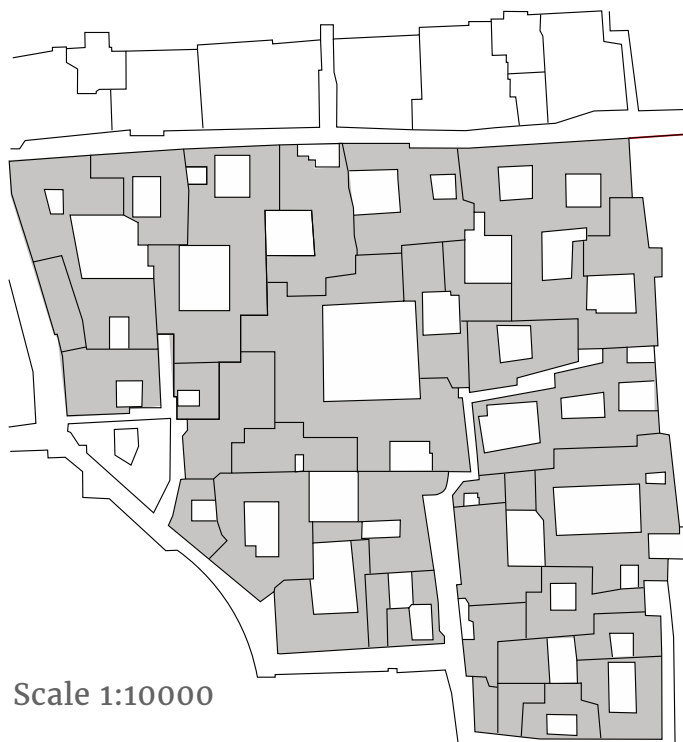
conversations and communal gatherings that once graced these hallowed halls. The distinct articulation between these spaces paints a vivid picture of social connectivity and communal living.

Ascend the narrow stairs to the first floor, and a different world unfolds. Private chambers and service rooms, carefully tucked away from the hustle below, speak of a quieter, more intimate life. The structural aggregation evident in the architectural form unveils a deliberate design, where each element finds its place in the intricate dance of space and function.

Yet, within this apparent simplicity lies a world of spatial nuances. Courtyards, with their verdant allure, bridge the realms of everyday living and hospitality, creating a seamless transition between public and private life. The majestic *iwans*, adjacent to both courtyards and living spaces, beckon inhabitants to linger, blurring the lines between indoors and outdoors. The male *majlis*, a cornerstone of hospitality, finds its place near the main entry, inviting guests into a realm of warmth. Kitchens, once nestled in corners or standalone structures, whisper tales of aromatic feasts and familial bonds, providing sustenance to both body and soul.

The courtyard commands a substantial portion of the building footprint. It weaves through the houses, connecting spaces and creating a harmonious flow.

3.2 THE CONTEXT OF OLD DAMASCUS



The courtyard houses are inseparable from their context. Damascus's oldest housing typology has formed a compact cluster within the heart of its oldest neighbourhoods. These courtyard houses created dense structures, of which all houses were placed adjacent to each other, this was made possible due to the lack of windows on the exterior walls which enabled these houses to interlink.

Figure 24 : Site plan of a cluster of courtyard houses in Old Damascus

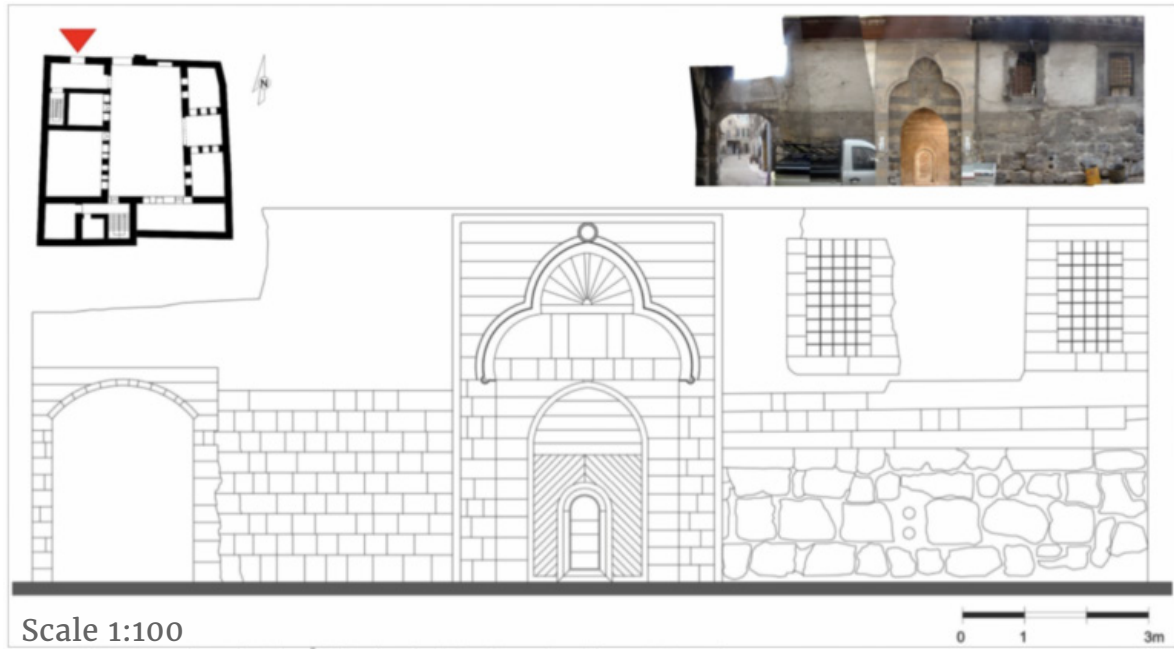


Figure 25 : Elevation of a typical courtyard house , Al Aglani House (Fayyad, 2022)

3.3 ARCHITECTURAL IDENTITY

The Damascene courtyard houses, recognized as the city's oldest housing typology, transcend temporal boundaries, offering a living testament to architectural resilience. The traditional architecture of the Damascene House epitomizes humaneness, seamlessly meeting the diverse needs of its occupants while eloquently reflecting the cultural identity of the region. In this typology, safety and privacy emerge as prioritized elements, fostering a harmonious living environment accommodating individuals across various social strata. The extensive footprint, often surpassing 1000 m²,

underscores the centrality of the courtyard—a spatial nucleus where all rooms converge, and users orient themselves (Major et al., 2022). It was necessary for these houses to occupy a large footprint due to the courtyard that takes up at least 25% of the area. The smallest house within this typology can encompass an area of 240 m².

Zoning:

A zoning strategy defines the old housing typology, catering to the privacy requirements of residents and guests. The ground floor, housing communal spaces and semi-private rooms, coexists seamlessly with the first floor, dedicated to private spaces such as bedrooms (Major et al., 2022). This architectural configuration reflects an Arabic way of living, emphasizing communal interactions on the ground level and private sanctuaries above.

Craftsmanship:

The unique identity of Damascene architecture intertwines with the cultural and social heritage of Syrian society. These houses transcend mere dwelling spaces, actively re-

sponding to evolving user needs regardless of social standing. The collaborative involvement of local creatives and craftsmen not only preserves cultural authenticity but fosters a sense of community. Privacy, a paramount consideration, is articulated in the façade and architecture, with exterior walls intentionally devoid of windows. Intricate door detailing reflects the identity of residents and the craftsmanship of Syrians, seen in figure 25 (Major et al., 2022). The absence of exterior windows is compensated by strategically placed interior windows facing the courtyard, allowing light to permeate these unique living spaces.

The Damascene Courtyard Houses



Figure 26 : Typologies of courtyard houses (Major et al., 2022)

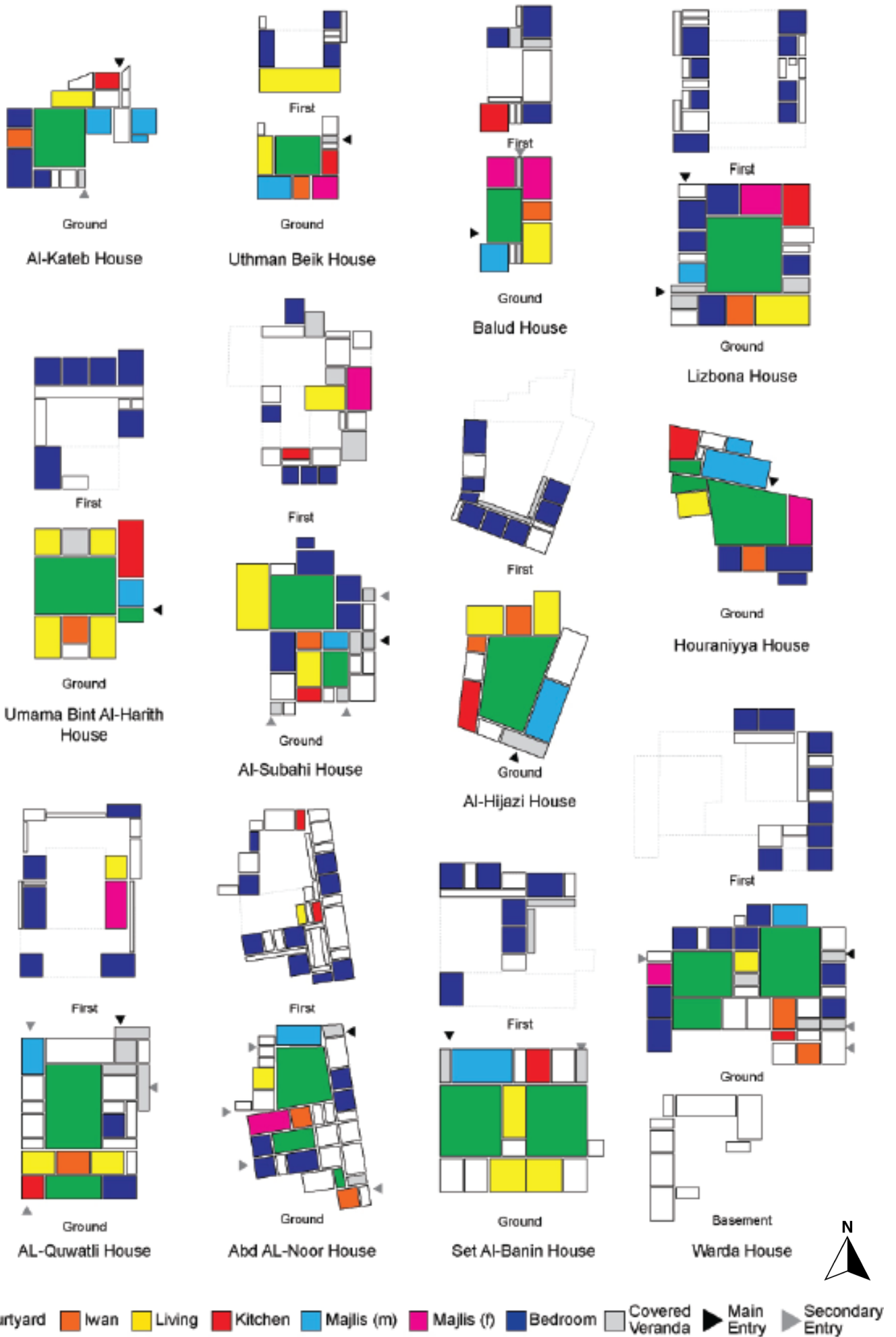


Figure 27: Zoning of courtyard houses (Major et al., 2022)
Post War Reconstruction of Damascus

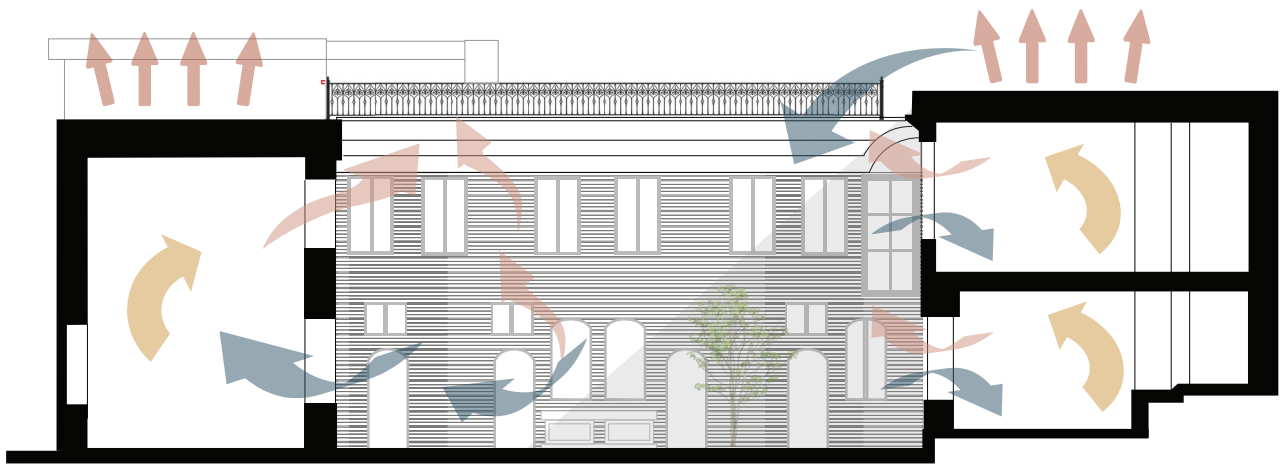


Figure 28 : Section of a courtyard house showing ventilation and heat directions, based on (Shayah & Khanmohammadi, 2023)

Scale 1:200

3.3 SUSTAINABILITY OF DAMASCENE HOUSES

The Damascene House, with its rich architectural legacy, emerges as a beacon of sustainability deeply rooted in cultural significance. This section delves into the principles that define the sustainability of Damascene architecture and explores how these can be seamlessly integrated into contemporary Syrian housing, bridging the gap between tradition and modernity.

Integration of Local Resources:

Central to the sustainability of Damascene architecture is the thoughtful integration of local building materials and natural elements (Shayah & Khanmohammadi, 2023). By utilizing materials with high efficiency and thermal performance suited to the local climate, Damascene houses not only respond to environmental conditions but also establish a connection to the surrounding landscape. Courtyards, a hallmark feature, play a dual role in enhancing climatic responsiveness and promoting social lifestyles, acting as communal spaces within the household.

Energy Efficiency through Passive Solar Design:

The Damascene House stands as a testament to energy efficiency, meticulously designed following the principles of passive solar design (Major et al., 2022). The orientation of the building, coupled with the strategic distribution of activities, optimizes the use of natural energy sources such as the sun and wind, as seen in figure 28 (Shayah & Khanmohammadi, 2023). This commitment to energy efficiency not only reduces environmental impact but also contributes to long-term energy savings.

Waste Management and Environmental Responsibility:

An integral aspect of Damascene sustainability lies in the meticulous management of building waste and pollution. The houses are designed to minimize carbon emissions associated with material transportation, utilizing locally sourced materials that are naturally renewable (Shayah & Khanmohammadi, 2023). Moreover, these materials can be recycled and reused after the eventual demolition of the building, minimizing environmental impact.

Comparison between contemporary and old housing typology:

The housing typology of informal settlements, analysed in chapter 2, closely mirrors that of the old Damascene houses. The design, centered around privacy and the Arabic family structure, persists, evident in the separation of room types and spaces. However, a significant difference is observed in the reduction of the courtyard area to form a narrow outdoor corridor or compact courtyard. This transformation alters the old housing typology, previously regarded as a healthy dwelling model, into one that poses numerous health implications. The smaller courtyard in informal settlements is insufficient to allow sunlight and natural air into the house.

CONCLUSION

Despite potential drawbacks, the courtyard houses of Old Damascus stand as cultural beacons, their spatial organization and interconnectivity contributing to a distinctive house genotype. The courtyard, *iwans*, and living spaces, entwined with the spirit of tradition, define not just a physical space but a way of life.

The principles ingrained in the traditional Damascene house architecture offer a transformative pathway for contemporary Syrian housing. By embracing sustainable design elements and cultural authenticity, modern residences can be crafted to meet the demands of climate, reflect evolving social lifestyles, and maintain a distinctive architectural identity. The integration of Damascene architectural principles, such as environmental considerations, energy efficiency, cultural heritage, and waste management, provides a blueprint for sustainable and culturally authentic housing models in Syria. The guiding points derived from the Damascene house architecture serve as a compass, guiding the way toward a harmonious coexistence of tradition and contemporary sustainability.

04 | JOBAR, DAMASCUS

JOBAR UNVEILED: NAVIGATING HISTORIC, URBAN, AND ARCHITECTURAL LAYERS

To formulate an effective reconstruction plan tailored to both the community's needs and the current situation in Damascus, a comprehensive understanding of the neighbourhood's characteristics and qualities is imperative. Despite the extensive destruction, with approximately 80% of Jobar reduced to rubble, it would be a misconception to perceive the area as a mere blank canvas, devoid of historical and cultural context (Shehada, 2023). Instead, the remnants of Jobar offer a unique opportunity for thoughtful and innovative design interventions. These interventions should be grounded in a deep appreciation of the neighbourhood's architectural and urban characteristics, acknowledging the historical and cultural significance embedded in its pre-war fabric.

The Jobar neighbourhood in Damascus has a rich historical development originating in its early days as a rural area adjacent to the city. Situated in the northeast of Damascus, Syria, Jobar belonged to the Rural Damascus Governorate until 1967, when a new urban plan incorporated it into the city (Shehada, 2023). The connectivity between Jobar and Damascus dates back to the 1930s when a road traversed the orchards of Eastern Ghouta (Al Asali, 2018). The village comprised mud houses clustered around roads and central points, engaging in rural economic and social activities such as orchards, livestock, carpentry, and shoe making.

4.1 JOBAR'S URBAN PLANNING HISTORY

Urban Transformation

Despite being designated an expansion area in the general plan of Damascus in 1968, subsequent organizational plans overlooked topographical and occupational differences within Jobar (Al Asali, 2018). This led to the neighbourhood remaining a rural town adjacent to Damascus for two decades, as urban legislation was not issued. This prolonged administrative gap resulted in Jobar facing a state of neglect.

The early 2000s marked a significant turning point with the issuance of urban legislation in Jobar.

This resulted in the demolition of the old fabric of Jobar's neighbourhoods, making way for the construction of high-rise buildings (Al Asali, 2018). This transformation altered the social and economic fabric of the population, prompting residents to transition from traditional professions to real estate trading. Contributing to this shift were open market plans for the Syrian economy. However, the construction of highways during this period led to the loss of agricultural lands and the separation of informal settlements between Jobar and neighbouring areas.

Urban planning initiatives in Jobar included the construction of highways like the southern corridor and central highway, causing further loss of agricultural lands and separation of informal settlements (Al Asali, 2018). The policy of waiting for all neighbourhoods to be rebuilt resulted in a lack of services in urban spaces, leading to protests for safe means of crossing highways. Slow and limited formal planning, coupled with waves of rural-urban migration,

significantly increased informal housing, culminating in a high population density exceeding 500 people per kilometer in 2011 (Al Dardari, 2022).

Cultural and Religious Significance:

Jobar is home to several religious and cultural landmarks, including the renowned Great Mosque of Jobar (Al-Asma'i Mosque), the shrine of Al-Asma'i, and the mosque of Harmala bin Ibrahim, a companion of Prophet Mohammad (PBUH) (Al Dardari, 2022). Notably, Jobar houses one of the oldest synagogues globally, dating back around 2,000 years. The neighbourhood boasts additional landmarks such as a public bath, Syria's oldest sports club, government commercial centers, numerous mosques, shrines, a modern residential project, a police station, a health center, and two private hospitals (Jobar, n.d.). Additionally, it hosts various schools and cultural centers, including a high school for girls and a middle school for boys.

Scale 1:6000



4.2 DEMOLITION, DESTRUCTION & RECONSTRUCTION

The architectural landscape of Jobar has suffered significantly due to the conflict, with a substantial portion of housing units, government buildings, schools, and health centers severely or completely destroyed, seen in figure 29 (Al Dardari, 2022). Satellite images and reports indicate dysfunctional infrastructure, including water and electricity. This destruction has resulted in mass displacement and poor living conditions for the remaining population.

Demands and Challenges:

In 2011, following the popular uprising in Syria, Jobar residents

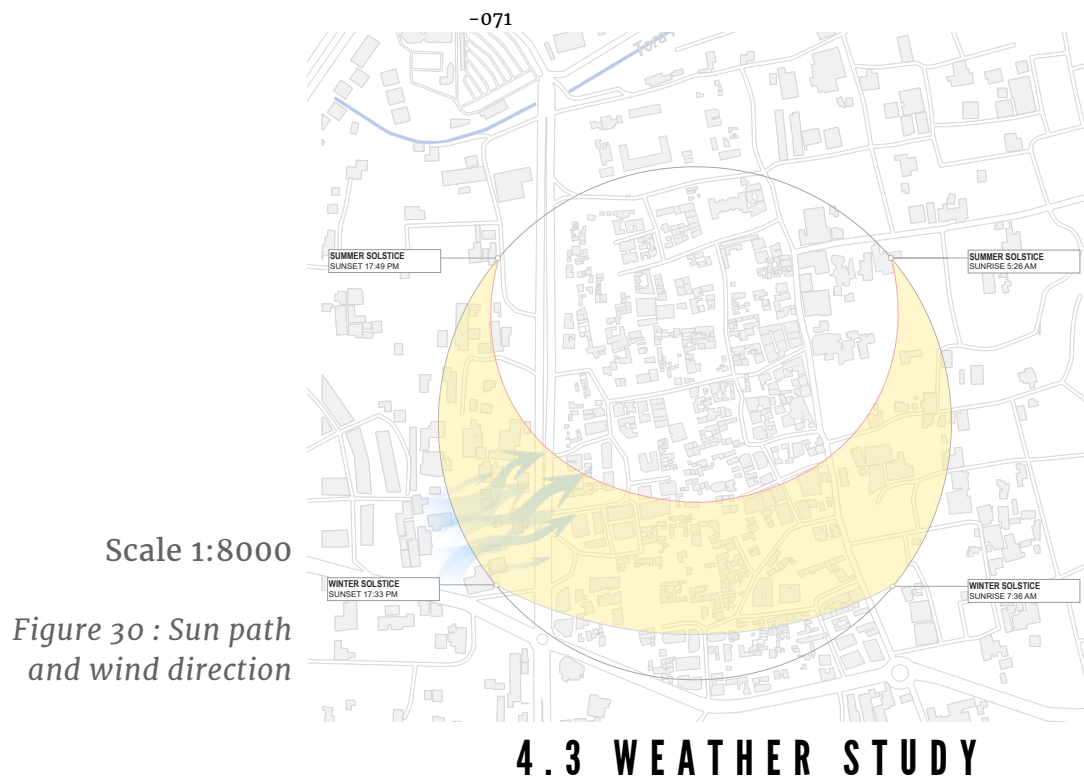
Figure 29 : Building morphology in 2007 and 2022

presented demands related to real estate and service infrastructure. They urged the government to improve these aspects through urgent operations, including sorting out records, creating sidewalks, and establishing a public park (Shehada, 2023). The request for a public park underscored the significant loss of green spaces and orchards in Jobar.

As of 2018, the majority of Jobar's residents have been displaced, with the Damascus Governorate introducing Plan No. 106 to amend the urban character (*Damascus Governorate Issues Detailed Zoning Plan for Jobar*, 2022). This plan aims to change zoning from protection, internal agricultural, and residential expansion to areas under urban planning (Shehada, 2023). It includes expanding existing roads, creating new roads, parks, schools, and other public facilities, encompassing neighboring areas for a new total area of 304 hectares (*Damascus Governorate Issues Detailed Zoning Plan for Jobar*, 2022).

Challenges of the Reconstruction Plan:

Challenges persist in the implementation of the plan, with a lack of information about residents' future rights (Shehada, 2023). Many residents are unaware of the specifics they are objecting to in the plan. Concerns arise about potential displacement of real estate and landowners without proper mechanisms for population involvement, raising fears of property seizures without adequate participation. The prohibition of entry into the neighbourhood, including the cemetery, exacerbates the residents' inability to return.



Jobar, Damascus, experiences predominantly sunny weather, contributing to a warm and luminous ambiance within the neighbourhood. The ample sunlight influences the play of shadows, creating dynamic. The interplay of light and shadow adds a layer of visual interest to the urban fabric. In terms of rainfall, Jobar encounters relatively low precipitation levels, characteristic of the arid climate in the region, as seen in figure 31 (*Simulated Historical Climate & Weather Data for Damascus*, n.d.). The wind, as a climatic element, weaves through the narrow alleys of Jobar, contributing to natural ventilation and providing a welcome breeze, especially during warmer periods. The layout of the neighbourhood, with its interconnected streets and pathways, allows for the free flow of wind.

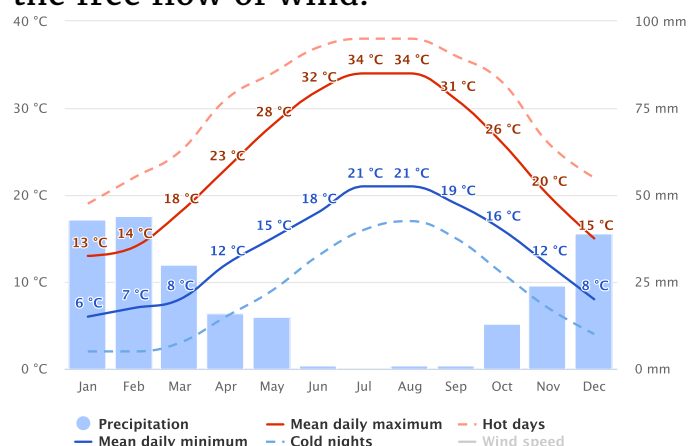


Figure 31 : Temperature and precipitation levels of Damascus (*Simulated Historical Climate & Weather Data for Damascus*, n.d.)

Post War Reconstruction of Damascus

4.4 SITE ANALYSIS

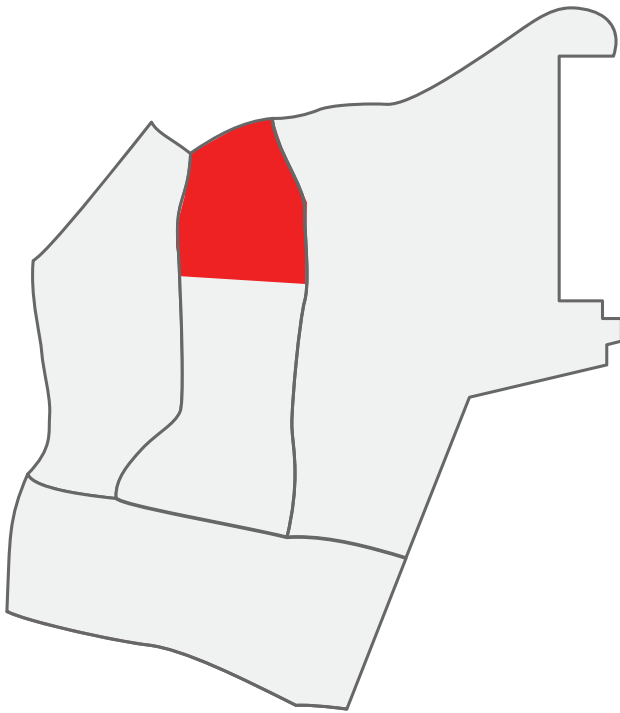


Figure 32 : Study area in Jobar al Gharbi

The neighbourhood in one of Jobar's districts, highlighted in figure 32, underwent a thorough analysis to identify its strengths, weaknesses, and potential design opportunities. The focus was on determining whether this neighbourhood shares characteristics with the informal settlements of Damascus, concentrating on its urban and architectural design.

The analysis commenced with an exploration of urban design, encompassing morphology, parcelation, infrastructure, facilities, and greenery. A virtual walk-through of the neighbourhood, utilizing images and videos, provided insights into its architectur-

2000



-073

2009



2018



2022



Scale 1:8000

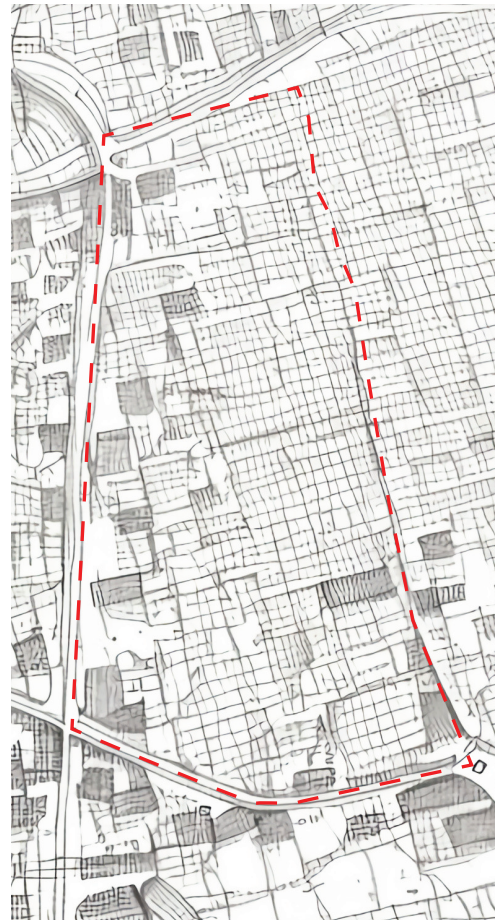
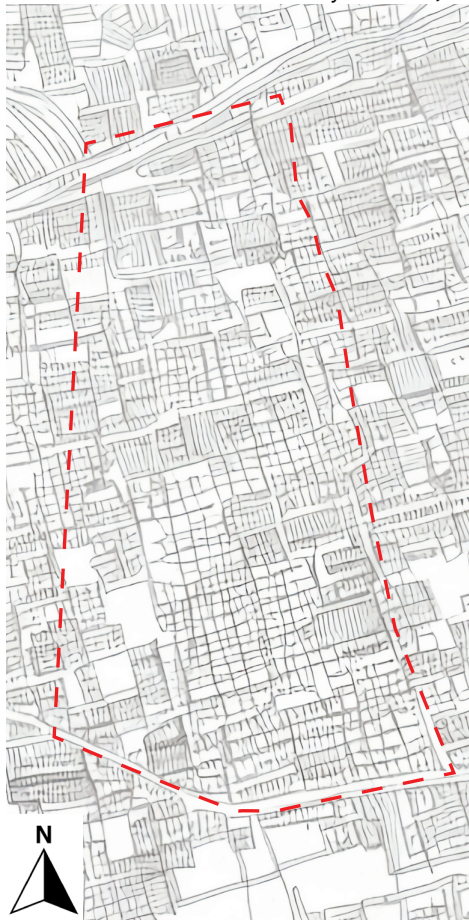
Post War Reconstruction of Damascus

Figure 33 : Satellite images showing changes in Jobar
(Google Earth, 2023)



Figure 34 :
Parcellation of
Jobar in 2000
and 2009

Scale 1:8000



4.4.1 URBAN DESIGN ANALYSIS

Parcellation

Situated in the northern region of Jobar Al Gharbi, one of Jobar's districts, satellite images, seen in figure 33, revealed that this neighbourhood was undefined until around 2009. Initially comprising agricultural plots, it transformed in the early 2000s into smaller parcels to accommodate buildings, deviating from its previous agricultural land parcellation.

The change in parcellation significantly influenced the neighbourhood's network. As smaller parcels emerged, the street network became more structured, depart-

ing from the irregular, organic pattern dictated by varied agricultural land sizes in 2000. A notable transformation was the introduction of a highway bordering the western side, establishing a clear border to the neighbourhood.

Street Network:

Similar to Damascus's informal settlements, the neighbourhood in Jobar features a hierarchical street network. A primary network accessible by public transportation and automobiles borders the western side of the neighbourhood. Unofficial bus stops are found along the southern road, although not visible on the drawings due

to their location further down the street. Minor roads, approximately 3 meters wide, considered as alleys, traverse the neighbourhood, connecting primary and secondary roads, facilitating residents' access to and from residential buildings. Within the neighbourhood, no designated parking areas can be observed; however, due to the empty areas in between building blocks, those have been converted to parking spots. Furthermore, the neighbourhood does not contain a bus stop or pick-up point; however, surrounding neighbourhoods within less than a 10-minute walk, there lie multiple bus stops and garages.



Densification

Jobar experienced a population increase over time, evident in the growing building densification within the neighbourhood. Traditional large farmhouses were replaced by building blocks, occupying a smaller footprint and leading to significant densification as structures were closely situated. Consequently, open spaces became scarce, leaving little room for green areas in the neighbourhood.

Greenery:

In the examined neighbourhood, green spaces are limited, with a singular prominent area situated on the southern side. A comprehensive analysis reveals a network of trees that subtly weaves through the entirety of the neighbourhood. This network, though not immediately apparent, contributes significantly to the overall green character of the area, providing shade, aesthetic appeal, and ecological benefits. Additionally, another noteworthy green space adorns the eastern neighbourhood, offering the area more greenery which enhances the overall living environment. However, these green areas

do not have

2009



2018



Scale 1:8000

Figure 36: Changes in Jobar's urban morphology

a function to them which makes them not frequently used by the residents of the neighbourhood. An analysis of the green network and functions of greenery revealed a scarcity of green spaces in Jobar, with only a few public parks, and the Abbassiyin Stadium serves as the sole green sports field at the western edge of Jobar.

Figure 37 : Greenery in Jobar



Facilities:

Typically, based on the study of informal settlements in chapter 2, facilities in those areas are limited and scarce. Few amenities can be found in an entire region that houses thousands of people. Therefore, the common interpretation is that neighbourhoods lack any amenities or facilities. However, this was not the case with the

studied neighbourhood. It was observed that basic facilities such as schools, supermarkets, and medical services can be found there. These are distributed across the entire neighbourhood and strategically placed around the borders so that other neighbourhoods can make use of those facilities, enhancing accessibility.



Figure 38 : Facilities in Jobar

Building blocks, heights and enclosed spaces:

In the informal settlements of Jobar, the architectural landscape is characterized by a diversity in dwelling heights and sizes. Larger blocks, particularly prominent in Jobar, feature substantial structures covering a footprint of 550 m², while smaller blocks occupy around 150 m². The determination of building heights relied on a detailed examination of the building shadows observed in satellite images, revealing a spectrum ranging from 4-5 floor low-rise structures, approximately 16 meters in height, to towering 14-floor high-rises reaching 53 meters. The irregular positioning of these building blocks results in the creation of varied open spaces, ranging from enclosed courtyards to semi-enclosed and completely open areas. In the absence of designated functions, these spaces often transform into empty land, re-purposed for practical needs such as parking.

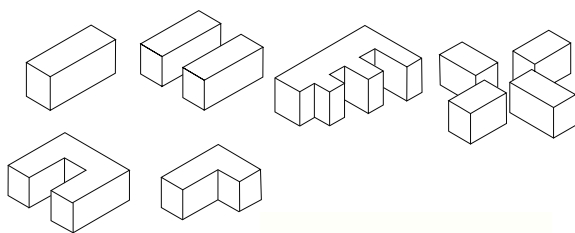


Figure 39 : Types of building blocks in Jobar



Figure 40 : Buildings height in Jobar
Scale 1:8000

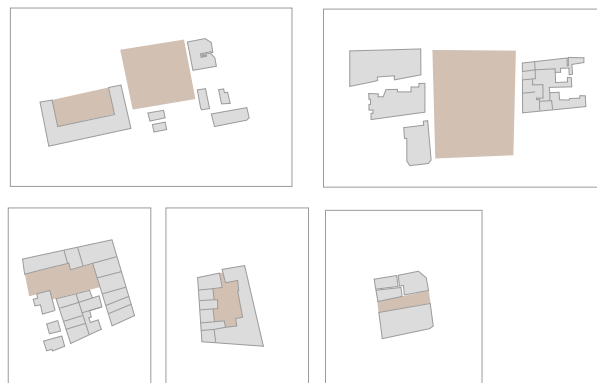


Figure 41 : Enclosed spaces in Jobar

Image Analysis:

The architectural expression of buildings in Jobar, as depicted in figure 42, unveils an exploration of street profiles and design expressions. However, the narrative takes a turn as all these images were captured during the war, revealing the undeniable scars borne by the structures. Amidst the devasta-

tion, one discerns a recurring architectural motif—a manifestation of concrete blocks. Noteworthy is an image capturing a once vibrant street in Jobar, adorned with an array of shops. It was once a bustling convergence point, drawing people from diverse areas for communal shopping experiences.



Figure 42 : Image analysis of Jobar (Lens Dimashqi, 2013; Lens Young Jobrani, 2014a, 2014c, 2014b)

Figure 43 :
Typical section
of a street in
Jobar



4.4.2 ARCHITECTURAL EVOLU- TION

The neighbourhood, like the rest of Jobar, transitioned from agricultural land to an urbanized residential area. Mud houses, visualised in figure 44, were replaced by multi-storey concrete building blocks, resembling the architectural style prevalent in informal settlements. Residential buildings feature small windows, balconies facing the streets—often recessed for enhanced privacy. Notably, plinths often serve as commercial spaces, housing shops and offices, contributing to the neighbourhood's urban fabric.



Figure 44 : Elevation of Jobar's farm house

Scale 1:200

CONCLUSION

In summary, the analysis of Jobar's neighbourhood reveals a dynamic evolution, transitioning from agricultural plots to a structured urban environment. The introduction of a defining highway and the hierarchical street network showcase the neighbourhood's adaptability. Despite challenges like building densification and limited open spaces, the neighbourhood defies assumptions with strategically placed facilities.

05

CASE STUDY

NAHR EL BARED CAMP TRIPOLI , LEBANON



In the realm of urban studies, the selection of a case study is aimed at unraveling the complexities inherent in the evolution of urban spaces. This formal investigation is centered around a particular neighbourhood, Nahr el Bared that encapsulates three pivotal research themes: informal renewal, post-war reconstruction, and urban resilience. Within this carefully chosen locale, the analysis seeks to study the intricacies of its developmental trajectory.

Figure 45 : Map of Nahr El Bared Camp
(Knudsen, 2018)



*Figure 46 : Nahr El Bared Camp
in 1948 (De Stone & Suber,
2019)*

5.1 HISTORICAL EVOLU- TION

The historical narrative of Nahr el-Bared Palestinian refugee camp traces back to its establishment in 1949, conceived to offer sanctuary to Palestinians displaced in 1948 (Halkort, 2013). Situated 16 kilometers north of Tripoli in northern Lebanon, the camp is one among 12 Palestinian refugee camps in the country (Barakat, 2013). Over a span of more than six decades, the camp underwent organic growth and encountered severe setbacks, notably in 2007 during a three-month conflict between the Lebanese Armed Forces and Fatah Al-Islam. This conflict resulted in the nearly complete destruction of the camp, leaving 95% of it in ruins and compelling mass displacement of its inhabitants.

A noteworthy aspect of the camp's evolution lies in the majority of residents acquiring land through power of attorney, conferring effective use rights without formal ownership documentation (Halkort, 2013). However, these informal developments were never officially documented on maps, posing a considerable challenge during the 2007 conflict.

In the aftermath of destruction, a forward-thinking team of architects proposed a pioneering mapping project crucial for subsequent recon-

struction (Halkort, 2013). This grassroots initiative involved establishing a comprehensive property database, meticulously documenting every structure within and around Nahr el-Bared. Beyond its practical implications, the initiative brought attention to the previously unrecorded history of the camp, empowering residents to reclaim their narrative.

The aftermath witnessed the commencement of an extensive reconstruction project led by the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) (Barakat, 2013). The overarching objective was not merely to reconstruct physical structures but also to preserve the intricate social fabric of the camp and enhance its urban environment.

Central to the reconstruction strategy was a community-driven, participatory methodology, fostering collaboration with local communities, the Government of Lebanon, and international partners (*Reconstruction of Nahr El-Bared Camp UNRWA Compound*, 2010). Financial support from the donor community played a pivotal role in ensuring the success of the project.



Figure 47 : Destruction of Nahr El Bared Camp in 2007 (Barakat, 2013)

4.2 DESIGN PRINCIPLES



Figure 48 : Nahr El Bared Camp (Barakat, 2013)

The reconstruction design adhered to specific principles, focusing on improved residential units, community engagement, and cultural preservation (*Reconstruction of Nahr El-Bared Camp UN-RWA Compound*, 2010). The project unfolded in four distinct phases, encompassing planning, pre-reconstruction activities, actual construction, and ongoing infrastructure enhancements.

Design Aspects:

The intricate design aimed at fostering a conducive environment for home-making, addressing massing and layout, flexibility and adaptability, participatory ap-

proaches, preservation of identity, increased living space, building height, and public space (Barakat, 2013). The massing of blocks was intricately planned to create alleyways and courtyards, providing a cooler atmosphere during hot summer days and creating a sense of community. The incorporation of a traditional cast-in-place construction system allowed for future adaptability. Each building's independent structural system enables families to adapt their structures, accommodating changes in family size without major reconstruction.

The design process embraced a highly participatory approach, involving individual family consultations, workshops, and open days (Barakat, 2013). Collaboration between architects and the refugee community ensured the design catered to specific needs and aspirations. The reconstruction prioritized the preservation of the camp's social fabric and identity. Community landmarks such as mosques, schools, and NGO offices were meticulously recreated on their original locations to foster a sense of identity and community acceptance.



Figure 49 : Design elements
(Reconstruction of Nahr El-Bared Camp
UNRWA Compound, 2010)

Addressing the previous lack of space, the project created courtyards, play areas, and community meeting halls (Barakat, 2013). Wider alleyways were incorporated to allow better access, including for emergency vehicles, enhancing safety and convenience within the camp. The reconstructed buildings feature an increased number of floors, with an average of 3.30 floors compared to the pre-destruction average of 2.47 floors. This adjustment allows for vertical expansion to accommodate increases in family size. The project focused on increasing public space within the camp, including the creation of courtyards, play areas, community meeting halls, and other open areas (Barakat, 2013). The aim is to pro-

vide more recreational spaces and improve the overall living environment for the residents.



Figure 50 : Construction phases (Reconstruction of Nahr El-Bared Camp UNRWA Compound, 2010)



Figure 51 : Nahr El-Bared Camp before and after (Aburamadan, 2022)

5.3 COMMUNITY BASED DESIGN



Community-based design is important in the reconstruction of the Nahr el-Bared Refugee Camp because it ensures that the residents' needs, preferences, and cultural concerns are taken into consideration. By involving the community in the design process, their voices are heard, and they have a say in shaping their own living environment. This approach promotes a sense of ownership, empowerment, and engagement among the residents, as they become active participants in the reconstruction process. Additionally, community-based design helps to create a more inclusive and sustainable camp, as the designs are tailored to

Figure 52 : Mapping the old neighbourhood (De Stone & Suber, 2019)

the specific needs and aspirations of the residents, resulting in a more functional and culturally appropriate living space.

The community has been involved in the design of the facades in the Nahr el-Bared Refugee Camp through consultations and workshops. The project's architects have conducted open days, workshops, and 1:1 scale mock-ups of proposed new public spaces to gather input and feedback from the refugee community. This participatory approach has allowed residents to express their preferences and concerns regarding the design of the facades. The community's input has been taken into consideration

to address issues such as privacy, cultural/design concerns, and the overall quality of the construction.



Figure 53 : Design Workshop (Barakat, 2013)



Figure 54 : Region of the neighbourhood drawn by residents according to its pre-war design (De Stone & Suber, 2019)

5.4 URBAN RESILIENCE

Emotional and urban resilience played a crucial role in the rebuilding of Nahr el Bared Refugee Camp. The destruction of the camp in the 2007 conflict not only resulted in the physical loss of homes and businesses but also inflicted deep emotional traumas on the residents. The architects and planners faced the challenge of honoring these traumas and ensuring that the camp's history and achievements were reclaimed without turning the residents into eternal prisoners of their pasts.

The reconstruction project aimed to not only recover lost property and assets but also to address the emotional and psychological needs of the residents. The refugees had already experienced the trauma of displacement and exile, and the destruction of the camp added another layer of loss and pain. The architects recognized the importance of emotional resilience in the rebuilding process. Additionally, the urban resilience of the camp was a key consideration. Nahr el Bared had outgrown its original size and location since its founding in 1949. The expansion of the camp, both vertically and horizontally, had created a complex spatial structure that needed to be preserved. The architects and planners had to navigate the challenge of rebuilding the camp while maintaining its historical and spatial integrity.

CONCLUSION

The comprehensive case study of Nahr el-Bared Refugee Camp stands as a testament to the significance of community involvement, strategic planning, and resilience in post-conflict reconstruction. The innovative approaches employed not only addressed immediate challenges but also laid the foundation for a sustainable and resilient future. The intricate blend of historical context, participatory methodologies, and future-proof design principles offers valuable insights for similar endeavors.

06

RE - CONSTRUCTION NARRATIVES

The Case of Jobar

In the aftermath of the conflict, the Syrian government unveiled an ambitious reconstruction plan for Jobar, seen in figure 55, aiming to expand the neighbourhood by introducing new parcellation (*Damascus Governorate Issues Detailed Zoning Plan for Jobar*, 2022). While retaining some major roads, the plan redesigns the street pattern, incorporating building blocks and green spaces. Despite its intent to enhance greenery and facilities, the reconstruction plan neglects the unique characteristics of the old neighbourhood, potentially alienating its residents. The tension between modernization and preservation surfaces, signaling the emergence of a transformed but unrecognized community.



Figure 55 : Governmental reconstruction plan for Jobar (Damascus Governorate Issues Detailed Zoning Plan for Jobar, 2022)

6.1 THE PROCESS OF (RE) CONSTRUCTING

Post war reconstruction

Post-war reconstruction strategies vary significantly, shaped by the ideologies of the governing regime. In certain instances, reconstruction serves as a political tool, conveying messages to the global community. Conversely, in other cases, it becomes a medium for commemorating the past and contemplating the future (Vale & Campanella, 2005). Interestingly, the concept of reconstruction does not always align with its literal meaning. Paradoxically, some situations witness more destruction than construction in the name of reconstruction. This unconventional approach is often a deliberate effort to erase specific time periods, conflicts, or even an entire country's history, highlighting the intricate interplay between physical rebuilding and the selective reshaping of historical narratives.

6.2 INFORMAL “RECONSTRUCTION”

The intricacies surrounding the reconstruction of informal settlements contribute to a complex and multifaceted challenge. Unlike formal neighbourhoods, the process of reconstructing informal settlements involves addressing numerous elements and issues. Describing this as the reconstruction of informal neighbourhoods is a misnomer, as the primary focus often revolves around formalizing the previously informal structures. This approach categorizes the reconstruction as a form of post-war reconstruction, aligning with broader governmental ambitions. Interestingly, this evolution frequently results in the creation of entirely formal neighbourhoods, reflecting the government’s vision

sion rather than preserving the informal nature of the settlements, similar to the case of Taiwan shown in figure 56. Notably, instances like the reconstruction of Haret Hreik in Beirut underscore that these efforts are typically not spearheaded by the government, as they neither approve nor legalize these informal neighbourhoods.

In the realm of urban development, the terms reconstruction, regeneration, upgrading, and renewal are prevalent, each representing a unique approach to addressing urban challenges (Farouk Hassan, 2012):

- **Reconstruction:** This involves rebuilding after damage, often caused by disasters or war, with a focus on restoring infrastructure and buildings.

- **Regeneration:** Taking a holistic approach, regeneration envisions and implements lasting improvements in economic, physical, and environmental conditions. It extends beyond physical restoration to encompass social and economic development as well as community empowerment.

- **Upgrading:** This approach concentrates on enhancing existing infrastructure and amenities, particularly in informal settlements or urban neighbourhoods. The goal is to improve basic utilities and living conditions.

- **Renewal:** This strategy focuses on revitalizing urban areas, often through the demolition of outdated structures and the construction of new buildings, aiming for modernization.

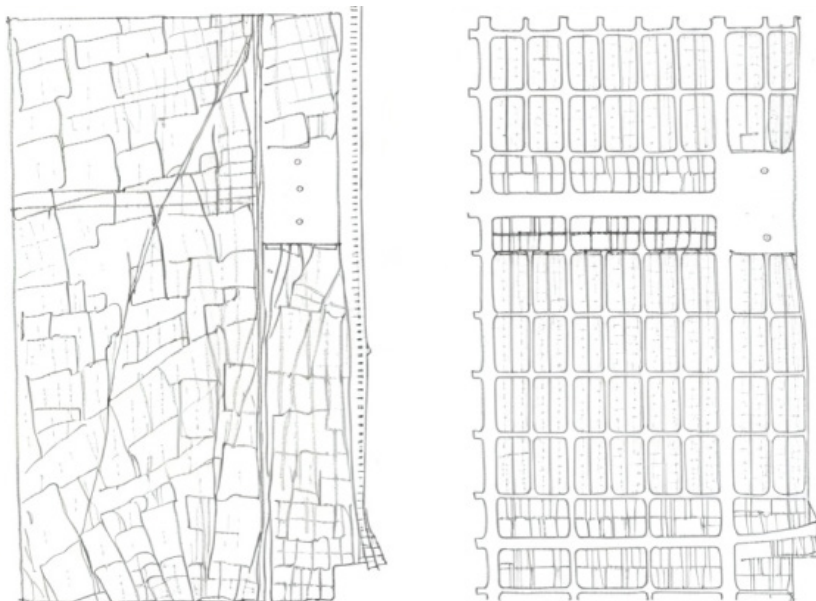


Figure 56: The formalization of an informal neighbourhood in Taiwan

6.3 CHALLENGES IN TRANSFORMATION

The transformations that informal settlements undergo often manifest with a distinctive formal nature, presenting a profound challenge in urban development. Architects and planners frequently adopt an approach of renewing or reconstructing informal settlements through formalization—a process involving organization and structure. Unfortunately, the outcome tends to be a neighbourhood that deviates significantly from its original character. Informal settlements, celebrated for their anarchic growth as more residents join, face a transformation with the imposition of a formal urban framework by architects and planners. Consequently, inhabitants find themselves compelled to adapt to a new way of living, one that starkly contrasts with their familiar surroundings.

In this process, as highlighted by Beeckmans et al. (2022), the once vibrant and organic nature of informal settlements diminishes. The reconstructed or renewed neighbourhoods lose touch with the essence of the people who originally inhabited them. This failure to align the transformation with the needs and desires of the displaced population underscores a crucial aspect of reconstruction. A successful renewal should not only address physical structures but also preserve the social fabric and identity of the community it serves.

07 | HUMAN CEN- TERED DESIGN

In the pursuit of a comprehensive understanding of informal settlements in Damascus, an online survey, outlined in appendix 1, marks the inception of a community-based research journey. This initiative navigates the layers of these settlements by posing inquiries that span beyond traditional architectural confines. The survey's exploration encompasses key facets such as accessibility, greenery, amenities, and housing conditions, aiming to transcend conventional boundaries in architectural research.

Distinguished by its dual approach, the survey seeks both quantitative and qualitative insights. Multiple-choice questions serve as a conduit for numerical data, providing a structured understanding of prevalent conditions. Simultaneously, the qualitative dimension is unveiled through open-ended responses, fostering a narrative-rich exploration. Participants are not merely respondents but contributors to the unfolding narrative, invited to articulate their visions for the reconstruction of informal neighbourhoods and share insights into their ideal house designs.

7.1 PARTICIPANT DEMOGRAPHICS

A diverse cohort of 25 participants, ages 18–65, primarily from locations outside Syria, forms the cornerstone of this transformative research endeavor. The survey collects demographic information and assesses various aspects of the participant's neighbourhood. It begins by gathering details such as age, current residence, neighbourhood name, and duration of residence. Questions cover neighbourhood conditions, accessibility, transportation, greenery, public spaces, utilities, and public services. Participants are asked about the presence of specific facilities, the perceived accessibility of the neighbourhood, and suggestions for improvements. The survey delves into the availability and types of greenery, community spaces, and community events or traditions celebrated. Additionally, it explores the composition of households, types of dwellings, ownership status, the number of residents, bedrooms, and satisfaction with housing arrangements. The comprehensive questionnaire provides insights into the participant's neighbourhood experience, allowing for a nuanced understanding of their living conditions and preferences.



Figure 57: Drawings that envision the participants' insights regarding neighbourhood reconstruction

7.2 SURVEY INSIGHTS

Perspectives on Neighbourhood Living:

The survey captures a diverse range of perspectives on neighbourhood living across various locations, with respondents spanning different age groups and residency durations, some of the responses are outlined in appendix 2. Residents in Syria, particularly in Damascus, express a desire for increased green spaces, organized infrastructure, and well-coordinated public facilities. Access to reliable public transportation and the creation of aesthetic and functional public gardens are common requests.

Respondents outside Syria, despite varied experiences, share common themes of valuing cleanliness, greenery, and organized neighbourhoods. While some highlight specific likes such as beautiful terraces and family gatherings, others stress the need for improvements in public services, transportation, and overall neighbourhood organization. The ideal home often represents a place of security and warmth, emphasizing the importance of private and communal green spaces. These insights underscore the multifaceted nature of neighbourhood preferences, emphasizing the significance of aesthetics, functionality, and community in shaping an ideal living environment.

Significance of Home and Ideal Home Designs:

For the respondents, the concept of home holds deep significance, embodying a place of security, warmth, and familial connections. Many express a desire for homes that act as shelters in changing circumstances, providing a sense of strength and togetherness. The ideal home design reflects a blend of aesthetics and functionality, featuring spacious interiors, private gardens with trees and flowers, and designated areas for different family activities. Elements such as terraces, large kitchens, and separate bathrooms contribute to the envisioned ideal home. The respondents often associate their ideal homes with comfort, safety, and an inviting atmosphere for family gatherings. There is a common emphasis on cleanliness, well-organized layouts, and an appreciation for green spaces, highlighting the importance of creating living environments that nurture both personal well-being and community connections.



Figure 58 : Drawing that envision the participant's insights on house design

Views on Future Reconstructions:

The open-ended questions concerning future reconstructions in Damascus were often left empty or participants simply stated that they do not know how such reconstruction should unfold, while others preferred to leave that up to people of the correct expertise such as architects, engineers, and planners.

In contrast, a subset of participants offered more elaborate insights, advocating for specific enhancements in the post-reconstruction landscape. These nuanced responses often underscored a demand for additional facilities, emphasizing the impor-

tance of integrating sports amenities and healthcare services into the fabric of reconstructed neighbourhoods. Beyond these practical considerations, certain responses delved into a broader reconstruction approach—one attuned to the distinctive needs and lifestyle of the typical Arabic family. This perspective suggests a desire for a reconstruction framework that aligns with cultural norms and familial dynamics, emphasizing the importance of creating living spaces that resonate with the essence of the community. In essence, the varied responses not only illuminate the complexity of envisioning post-war reconstruction but also hint at the diverse aspirations and priorities that inform the collective vision for the future urban landscape of Damascus.

shaping ideal living environments.

In essence, this exploration underscores the complexity of post-war reconstruction and unveils the diverse aspirations shaping the collective vision for Damascus' urban landscape. The survey concludes as a foundation for further research and interventions, acknowledging the dynamic interplay of culture, functionality, and community in

08 | EXPLORING RESILIENCE

Approaching post-war reconstruction requires addressing the spatial impacts of violence and promoting increased social tolerance. It is crucial that reconstruction involves social groups with equal status and civil rights, operating under clear policies for urban resource use (Staničić & Šijaković, 2019). Urban conflicts, especially civil wars, create political and spatial divisions, leading to feelings of guilt, hatred, and distrust. Post-war recovery must tackle challenging issues like ethnic oppression, crimes against minorities, transitional justice, and public memory of violence. The motivation for recovery should come from the self-conscious activism of city residents, aiming to (re)build not only the physical city but also fostering mutual relations for disaster resilience. The result should encourage meaningful social interaction, environmental sustainability, and the rebuilding of urban and collective memory.

8.1 DESIGN PROGRAM

Home-making:

At the heart of this design intervention is the philosophy of home-making — an approach that recognizes the impact of resilient, shared communities in shaping the post-war urban fabric. It goes beyond the construction of physical dwellings, delving into the intricate layers of human connection, cultural identity, and a shared sense of belonging. Home-making in a post-war context involves not only rebuilding structures but also cultivating a space where residents can heal, connect, and collectively reflect on the past (Beeckmans et al., 2022) .

The following list outlines the post-war reconstruction program based on the survey and research results, which is also visualised in figure 59:

- Housing Types:

Diversity emerges as a crucial theme in addressing the varied preferences of residents. The design introduces a thoughtful mix of housing types, encompassing duplexes or townhouses tailored for individuals seeking a more interactive environment. This nuanced approach aims to cater to the diverse needs and lifestyles prevalent within the community.

- Green Spaces:

Beyond mere aesthetics, green spaces are imbued with a dual purpose. They not only enhance the overall environment but also function as communal areas for gatherings, recreational activities, and potential expansion zones. The incorporation of a diverse range of plants and trees aligns seamlessly with the residents' appreciation for nature and gardening.

- Accessibility:

In the balance between private and

public transportation preferences, the program ensures adequate parking spaces for car owners. Additionally, it explores eco-conscious alternatives such as a community bike-sharing program, aligning with the community's environmental concerns. It also incorporates accessibility features for disabled residents. Thoughtful design considerations, including ramps and easy access points, reflect a sincere commitment to accommodating diverse needs.

-Community Center:

The establishment of a community center assumes a pivotal role as a focal point for gatherings, events, and club activities. The inclusion of hobby-related spaces, finely tuned to resident interests, enriches the sense of community engagement, providing a vibrant heartbeat to the neighbourhood.

- Age-Specific Amenities:

Recognizing the importance of age-specific spaces, the program allocates areas tailored to different age groups. This includes playgrounds catering to families with children and tranquil spaces designed for older residents. Such

thoughtful considerations ensure the creation of an inclusive living environment.

- Resilience to Climate Events:

Given the climate concerns raised in the survey, houses and infrastructure are strategically designed to withstand local climate events, contributing substantially to the overall disaster resilience of the community. Adding a layer of ingenuity, the design philosophy embraces the reuse of damaged building debris while incorporating locally sourced materials like mud or clay bricks. This not only ensures sustainability but also forges a meaningful connection with the region's traditional building practices.

- Flexibility for Future Needs:

Anticipating the potential for growth, the program adopts a forward-thinking approach by allocating space for additional amenities or houses. This planning aligns seamlessly with the expressed interest in fostering a growing and evolving community, thereby ensuring adaptability to future needs.

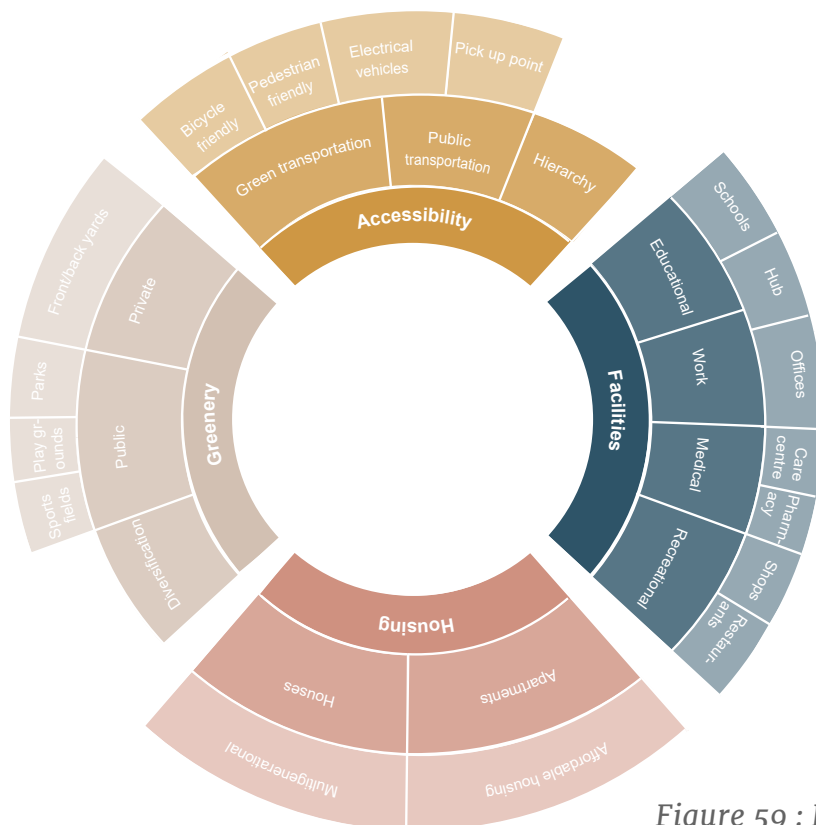


Figure 59 : Design program

8.2 DESIGN INTERVENTION PROPOSALS

The design intervention is a response to the unique challenges faced by the neighbourhood of Jobar, fusing insights from informal settlements with principles of adaptability, sustainability, and community building. The proposal seeks to redefine urban reconstruction by integrating flexible housing for aging in place and future expansion. Inspired by the sense of belonging observed in informal settlements, the 20 dwellings concept aims to create a close-knit community that weaves together the historical identity of Jobar with innovative elements suited for post-war reconstruction.

The chosen location for the inter-

vention in Jobar holds significant advantages due to its strategic position, fostering community and self-sufficiency. Positioned in the eastern side, the plot is bordered by streets, enhancing accessibility and making it a central hub for connectivity.

The decision to select this particular plot, spanning 8,000 square meters, aligns with the need to accommodate 20 dwellings for around 100 families, this has been based on the informal neighborhoods analysed in chapter 2. This additional space provides the potential to integrate recreational activities and greenery, catering to the preferences identified in the survey.

The design intervention revolves around the courtyard housing typology The common goal is to create a cluster of 20 dwellings with a communal space and a green area accessible to residents and neighboring clusters.

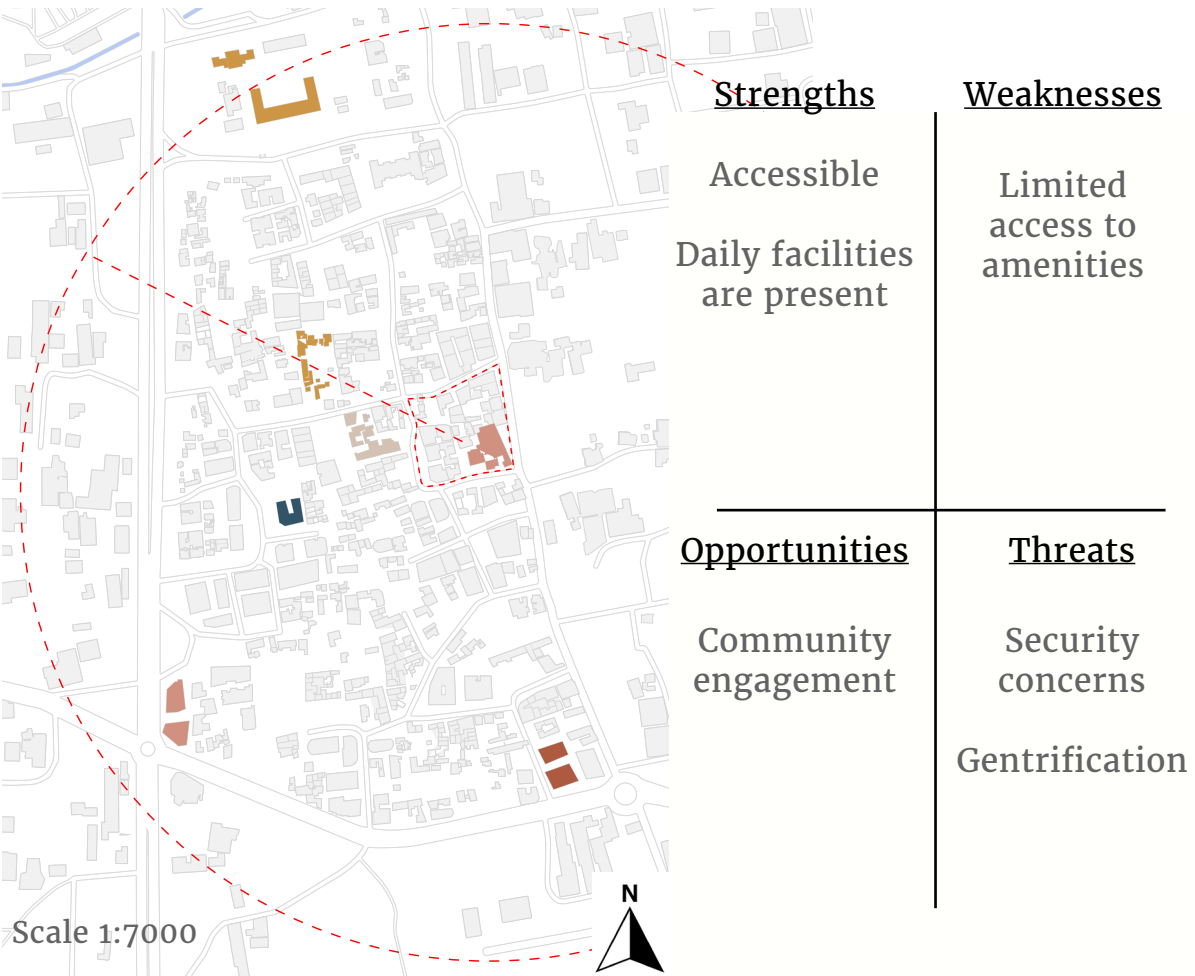


Figure 60 : Map showing a five minute walking radius from the site

Post War Reconstruction o

Figure 61 : SWOT analysis of the chosen plot

8.3.1 VARIANT ONE

8.3 DESIGN VARIANTS

In Variant 1, the design draws inspiration from the original nature of the neighbourhood, where buildings were scattered around communal spaces, lacking a cohesive connection. This characteristic, observed before the bombings, highlighted separate buildings surrounding individual courtyards, each functioning independently. This design intervention preserves this concept but takes a transformative approach. Instead of maintaining disconnected communal spaces, variant 1 consolidates these individual spaces into one central communal area.

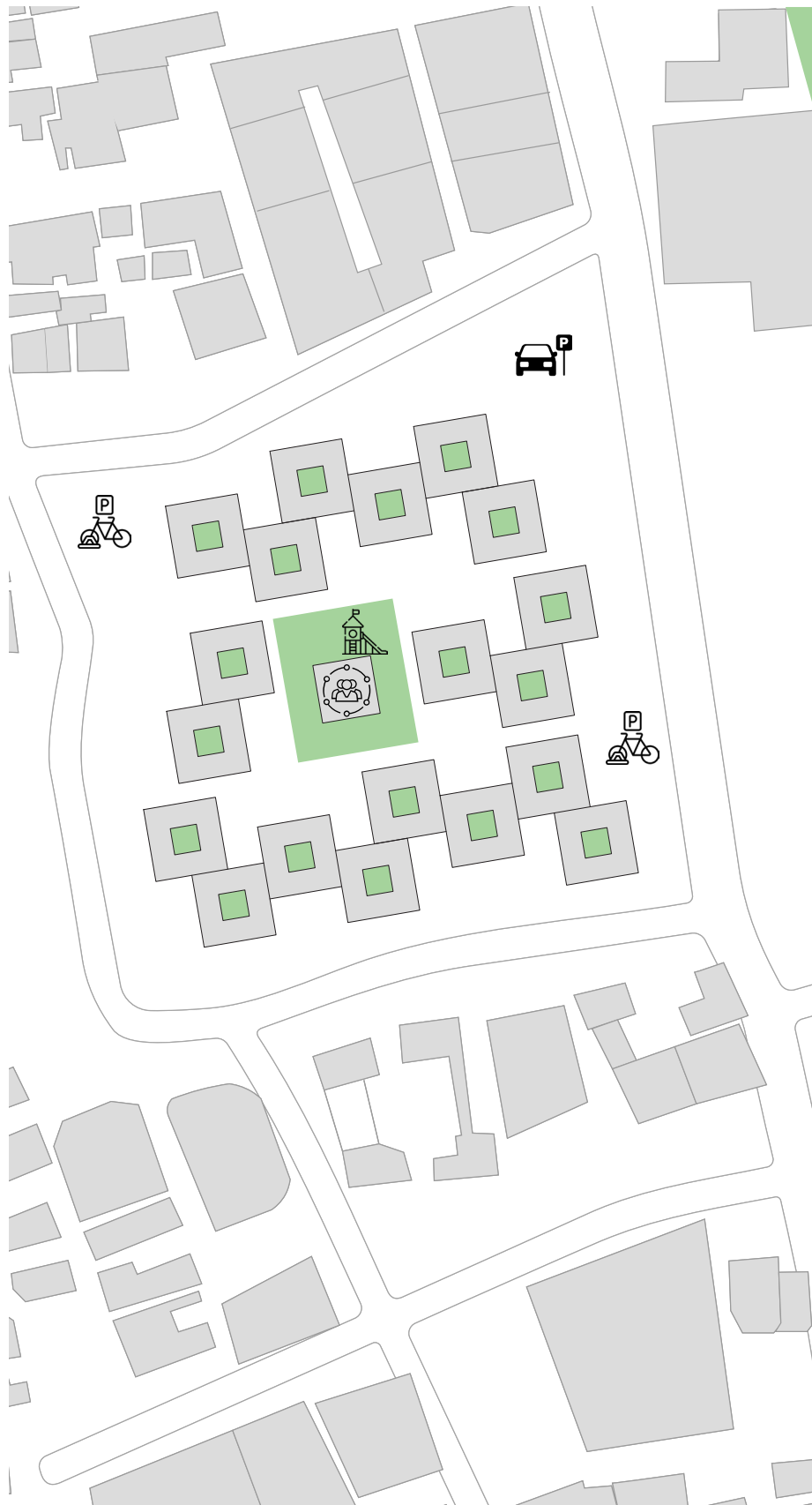
By bringing together the separate courtyards into a shared commu-

nal space, the design fosters a sense of unity and shared identity within the cluster. This adaptation respects the original neighbourhood's layout while addressing the need for a more integrated and communal living environment. The resulting design reflects the messy yet interconnected nature observed in informal settlements, creating a harmonious cluster of dwellings that share a centralized communal space. This modification aims to enhance community interaction, promoting a collective spirit among residents.

Furthermore, by creating a single communal space, the design introduces a unique opportunity for residents to come together, encouraging social interactions and community engagement. The central communal area becomes a focal point for various activities, fostering a vibrant and lively atmosphere within the neighbourhood. This approach not only pays homage to the original neighbourhood's layout but also adapts it to suit the evolving needs of the community in a post-war reconstruction context.



Figure 62 : Zoning of variant one courtyard house typology



Scale 1:1500

Figure 63 : Variant one master plan



8.3.2 VARIANT TWO

Variant 2 of the design intervention introduces a distinctive approach by modifying the courtyard housing typology to redefine the entrance and interaction points within the cluster. In this variant, the courtyard transforms into the focal point at the front of each dwelling, acting as the entrance and the front yard of the house. Unlike traditional courtyard housing, where the courtyard is typically located in the center, this modification serves to create an inviting and extraverted layout.

The intention behind this adjustment is to encourage connectivity and openness among the residents. Each dwelling's courtyard now faces outward, creating a

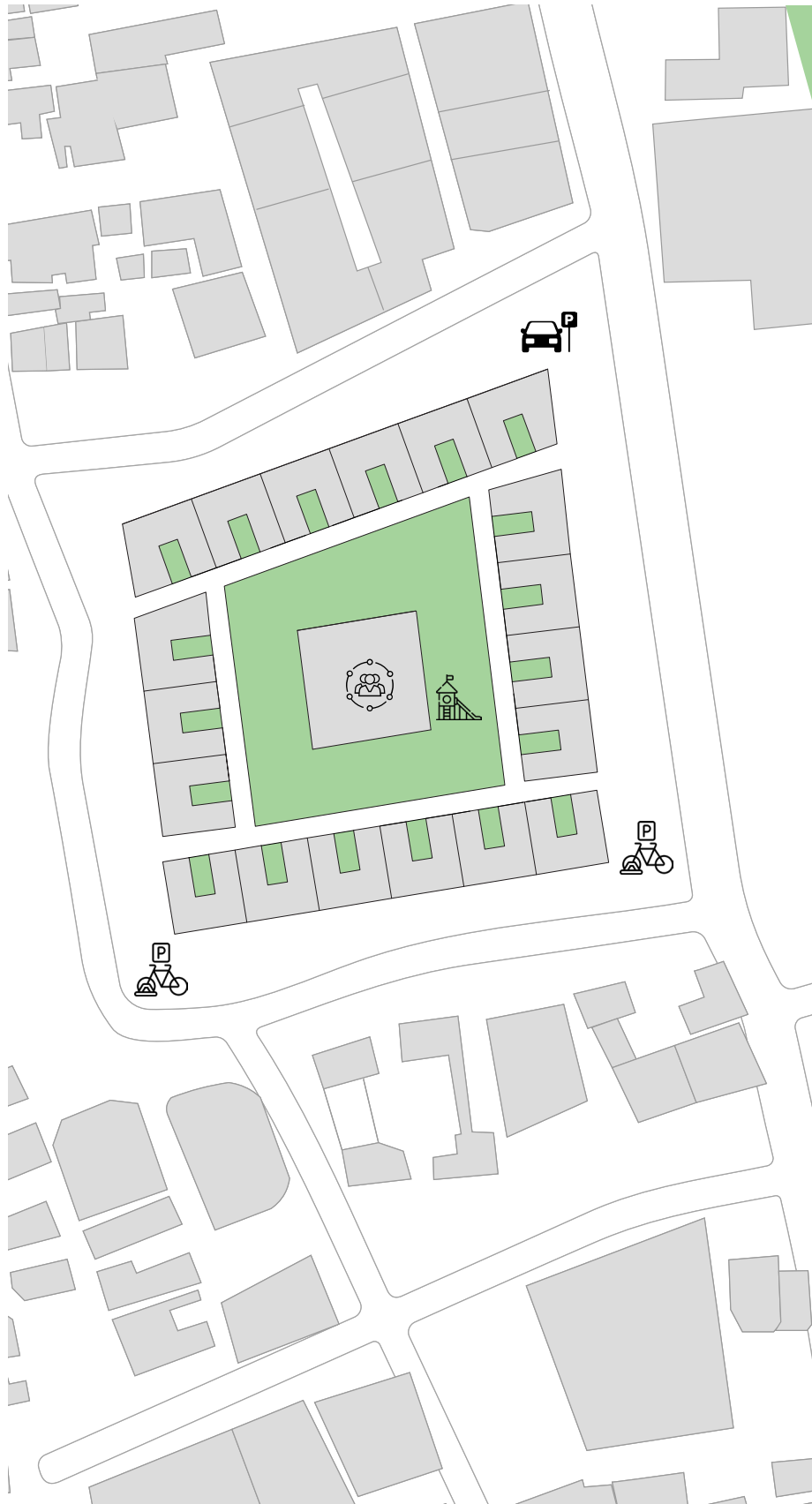
sense of visual continuity and accessibility. The dwellings are organized around one central area that accommodates a communal space, a green playground, and other shared facilities. This central space becomes a communal hub, fostering interaction and shared activities among the residents.

By situating the courtyard at the front, variant 2 aims to break away from the conventional inward-facing nature of traditional courtyard houses. Instead, it embraces a more extroverted and community-oriented design. This modification aligns with the goal of post-war reconstruction, where community building and social cohesion play crucial roles in revitalizing neighbourhoods.

Moreover, the central communal area, strategically positioned within the cluster, serves as a gathering point not only for the residents but also for individuals from nearby housing clusters. This approach establishes a sense of interconnectedness and shared resources, creating a vibrant and lively neighbourhood. The green playground and facilities enhance the overall livability of the cluster, making it a dynamic and inclusive space for residents to enjoy.



Figure 64 : Zoning of variant two courtyard house typology



Scale 1:1500

Figure 65 : Variant two master plan



8.3.3 VARIANT ONE

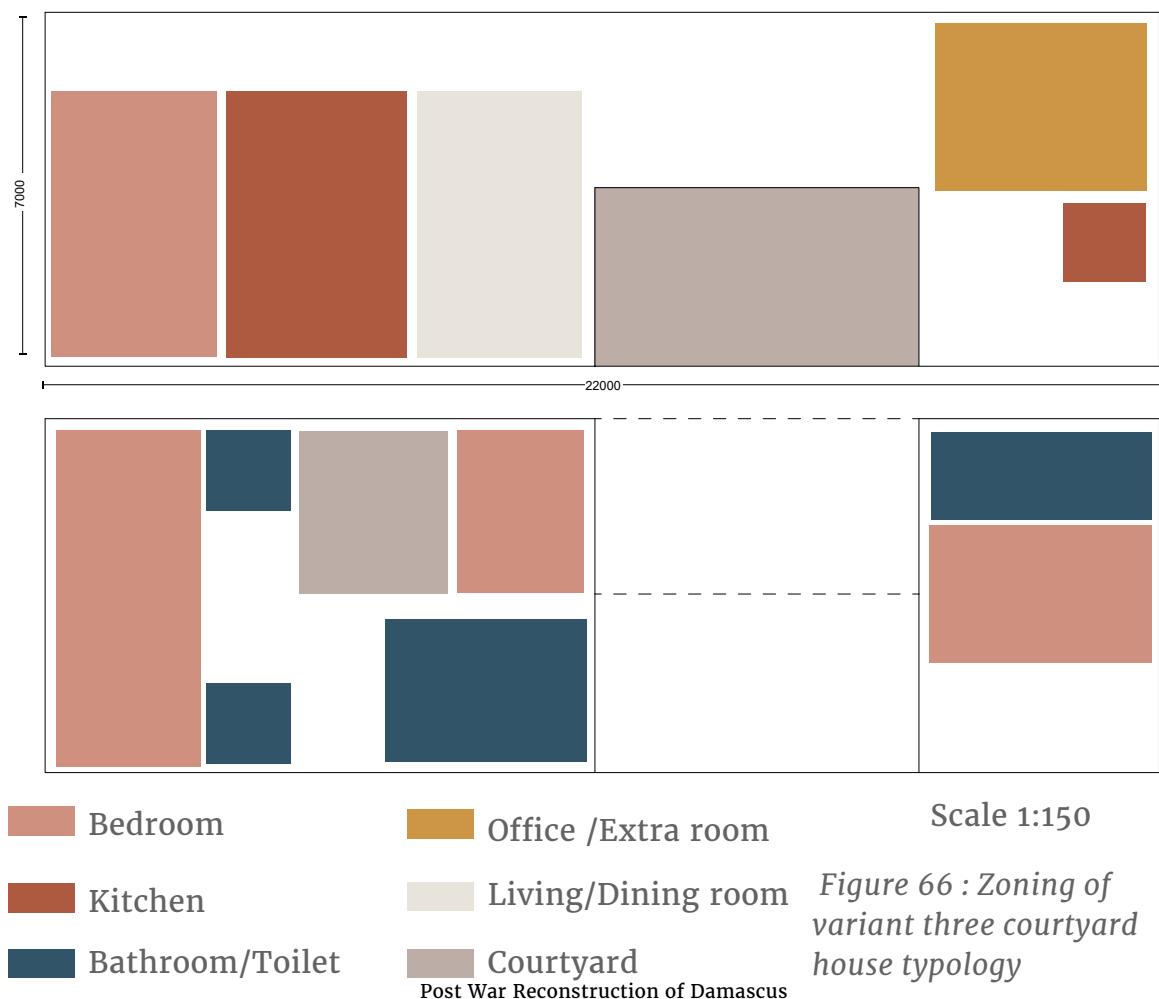
Variant 3 of the design intervention takes a unique approach to the courtyard housing typology, introducing modifications that emphasize privacy and a structured grid layout within the cluster. In this variant, the courtyard is situated at the back of each dwelling, functioning as a private backyard space. This distinctive placement aims to create a sense of seclusion and personal space within the cluster.

Unlike the more traditional inward-facing courtyard houses, where the courtyard is typically located in the center, variant 3 adopts a backyard concept. The factors within the courtyard, such as greenery and amenities, are not

as visible or easily accessible from the outside. This design choice fosters a more private and intimate environment for the residents, allowing them to enjoy their outdoor space with a sense of seclusion.

The arrangement of the clusters follows a strict grid pattern, formalizing the layout while providing a clear structure to the neighbourhood. The communal space, green area, and communal building are strategically positioned toward the borders of the cluster. This design decision aims to maintain a balance between formalization and communal living. The structured grid layout reflects an organized and planned approach, contributing to the post-war reconstruction goal of rebuilding neighbourhoods with a sense of order and stability.

The private nature of the courtyards in variant 3 also caters to individuals who prefer a more secluded living environment. The modification of the courtyard to a backyard aligns with the idea of creating diverse housing options within the cluster, catering to varying lifestyle preferences and needs.





Scale 1:1500

Figure 67 : Variant three master plan



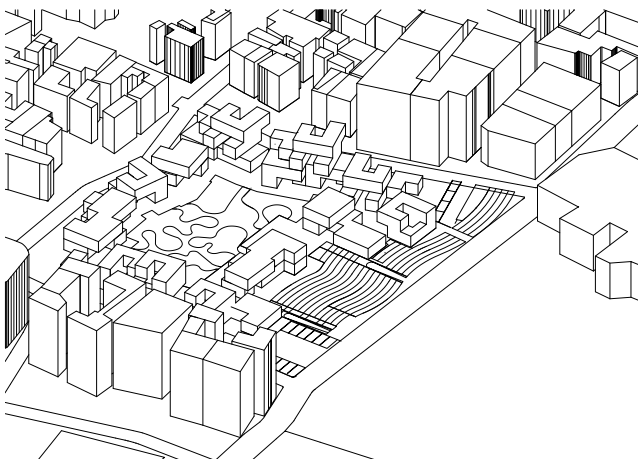
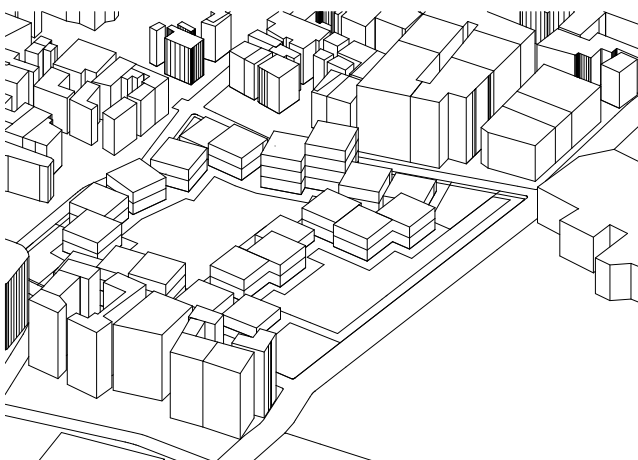
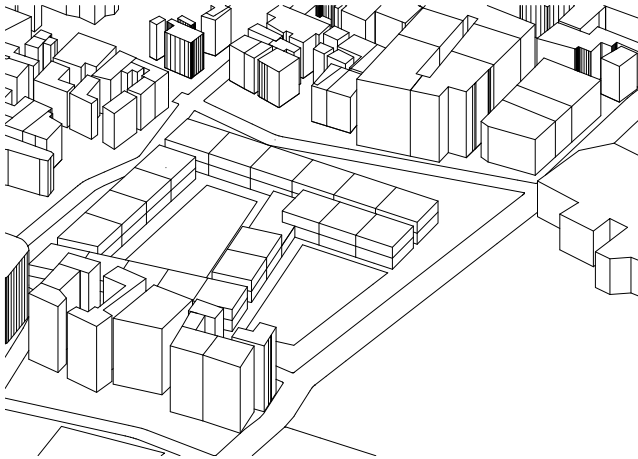
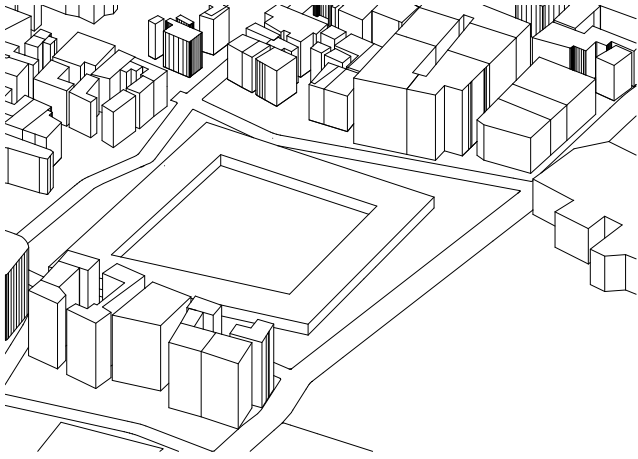
CONCLUSION

This chapter presents a design program and intervention proposal for the post-war reconstruction of Jobar. By incorporating principles of adaptability, sustainability, and community engagement, the proposed intervention aims to not only rebuild physical structures but also foster a resilient and vibrant community. The three design variants showcase the versatility of the courtyard housing typology, addressing different preferences and needs within the community. As Jobar prepares for a new chapter, this design proposal serves as a blueprint for a community-driven and culturally rich future.

09 | BAIT BYOOT

REBUILDING HOMES, RECREATING MEMORIES AND RENEWING HOPES

When dealing with post-war reconstruction, particularly when the focus is on communities, the focus must begin with the human element. The design process should be an iteration of the needs and wants of the people and how these are reflected in a post-war reconstruction that serves the country on all scales—politically, economically, and socially. Designing an informal settlement has several complications, such as ownership, avoiding formalization, and ensuring people feel at home. Based on the research conducted on informal settlements and input received from the Syrian community, the design program consisted of a minimum of 20 houses with a variation of car (14 parking lots) and bike parking spaces (75 spaces). The program also included green spaces and communal areas, offering a place for people to meet. Communal spaces were crucial, given the community size of 20 households, and distributing it over a larger area where the typical typology of two houses along a narrow street (alley) is lost.



9.1 DESIGN VARIANTS

The volume developed for the site was greatly influenced by the investigation into the surroundings. Although all surrounding buildings have been destroyed in the current time, the study was based on the situation before the war. The northern and southern areas of the site are surrounded by tall buildings with floor levels above six, while the western side is surrounded by low-rise buildings up to four floors. The site has a strategic location at the border of the neighbourhood, acting as a transitional plot between two separate neighbourhoods. For this reason, the eastern side of the development was left open to create a connection with the other neighbourhood. The empty neighboring plot has the potential to be developed into an agricultural plot or farmland.

Figure 68 : Volume Development



Figure 69 : Master Plan



Figure 70 : Section showing urban thresholds

9.2 A VISION FOR JOBAR

The design intention was to create an atmosphere similar to that of informal settlements so the residents would not feel foreign. This idea was emphasized on multiple scales. For the site development, the housing blocks were arranged organically, giving the impression that the cluster design was not overly planned and structured but developed over time. A main aspect of the site zoning was distributing the houses around a large communal square, which acts as the heart of this design. The square is intended to also be used by people living in other clusters within the same neighbourhood, allowing interaction with people from outside their community. The clustering of the houses around the communal square and their position relative to the site and the context have created different thresholds within the project. These thresholds vary from public to semi-public to private, ranging from sidewalks to galleries and alleys to private gardens and dwellings.

9.3 FRAMING EXPERIENCES

The semi-public thresholds consisted of alleys and galleries that access different parts of the site. The alleys have been varied in design to create different experiences and to distinguish different target groups. The northern, southern, and western alleys are supposed to be used by residents and people from nearby clusters. The alleys have been materialized with light materials such as wooden sidings and greenery to make them inviting and reduce the darkness created by having them closed from both sides and covered from the top. The only alley that has not been designed in a very inviting manner is the eastern one. This alley has been created by a narrow opening in the terrain. It contrasts the other alleys as the user does not have any view into the communal square, and therefore the communal square cannot be seen from the outside.

The galleries on all floors are very open, allowing the user to closely experience the materialization of the dwellings as those are narrow pathways while still viewing the communal square from all angles.



Northern Alley



Southern Alley



Eastern Alley



Courtyard Gallery

Western Alley



9.4 EVERY TURN, A STORY: DAILY ENCOUNTERS

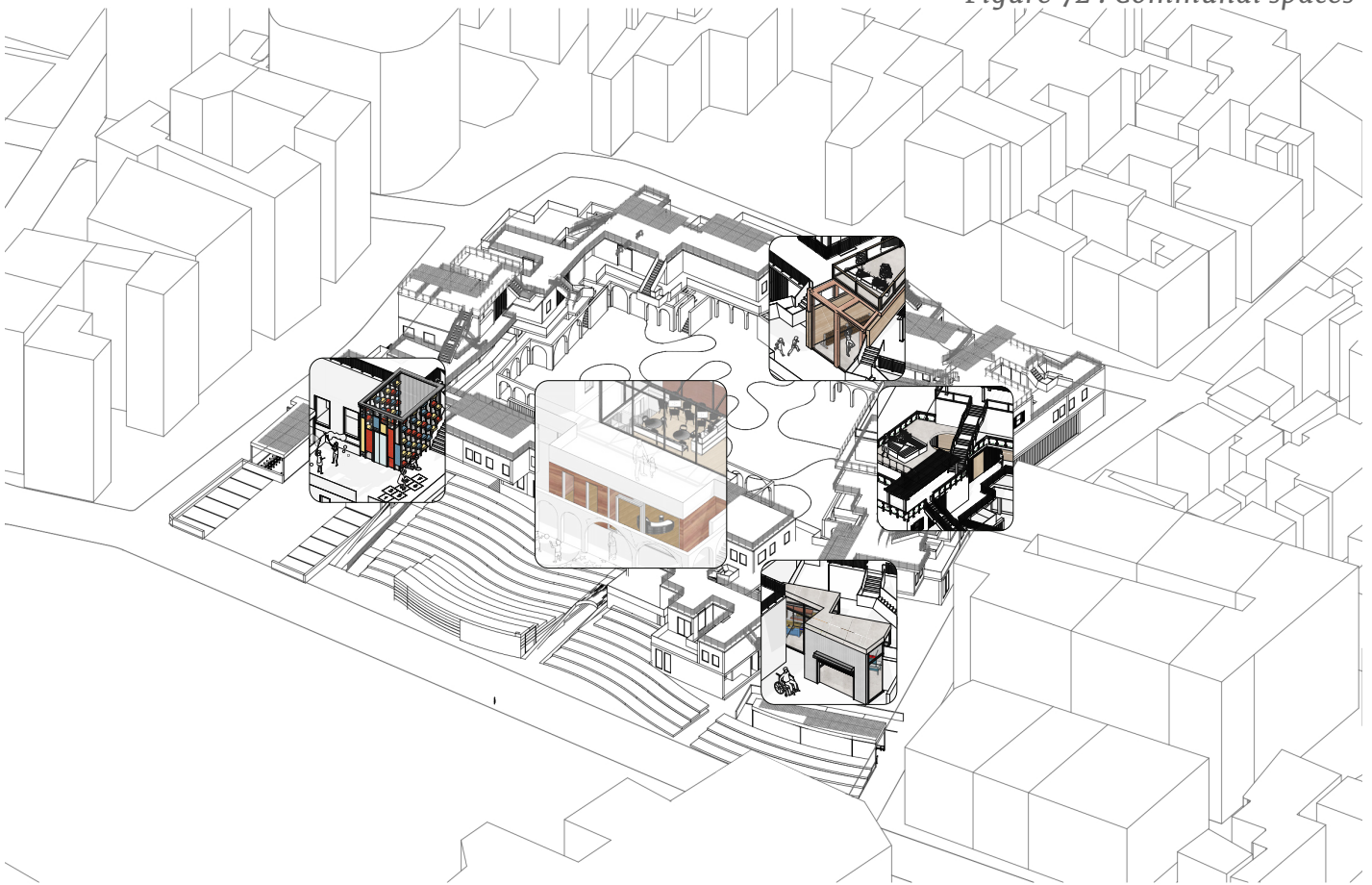
Besides emphasizing ensuring communal encounters with the design of Bait Byoot, attention is paid to the recovery of communities post-war. After years of war, destruction, and trauma, it is important to carefully study the possibilities for communities to rebound. In the case of Bait Byoot, this begins with giving purpose, where people feel like they are contributing to society and are active members of it regardless of their mental or physical well-being.

For this, communal activities and functions have been distributed across the housing blocks on different levels to allow people to move from one side of the devel-

opment to another. On the ground level, there is a wheel and harvest hub. The wheel hub is a repair shop to fix appliances, cars, and bikes. The harvest hub is a communal space meant to host the largest number of people, with varied spatial functions. On the ground floor, the hub consists of an open-plan space that can be used for different activities throughout the day. Ideally, it will be used as a sewing or crafts workshop for artisans and craftsmen and women. In the afternoon, this space transforms to provide educational lessons and help students with their studies. In the evening, it hosts activities or celebrations. The second level of the hub consists of a greenhouse, which is a food production center using the harvest to produce different products for sale.

On the second floor are play blocks and an active hub. Play blocks serve as an indoor play area for kids, while the active hub is a sports room for various activities. The third floor houses a reading room for group readings and a study room open all day. The communal spaces on the second and third floors are solely for the residents of this cluster.

Figure 72 : Communal spaces



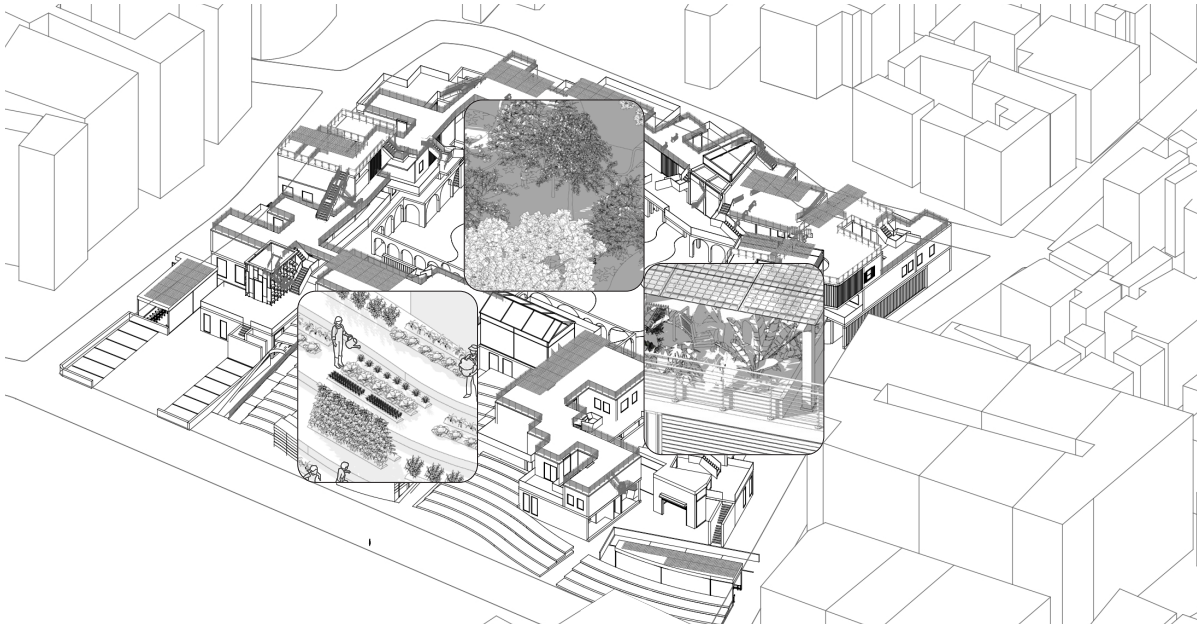


Figure 73 : Types of green spaces

9.5 FROM PLOT TO PLATE

The sounds of the milk truck and the fruits and vegetable truck are familiar to many Syrians. The concept of creating self-sufficient communities is becoming more prevalent in architecture as it is seen as a way of fostering a sustainable society. This has been integrated into Bait Byoot through three different green spaces. Planters for herbs have been allocated along the railings, in front of some houses, and in some seating spaces, making them easily accessible for care and use. The second type of greenery is found in the communal square, where fruit and vegetable trees provide shade and a cool environment in the heart of the development. Lastly, the green terrain, the connecting green, mitigates the zone between two different neighbourhoods. The terrain also contains fruit and vegetable plants and shrubs, located along a major road for easy access by trucks to load the produce.

9.6 CONTEXTUAL CON- VERGENCE

The materiality of Bait Byoot is a play between old and contemporary materials and textures. The finishing layer of this design influences the people's experience by stimulating different senses when walking around. The variety of materials also resembles the individualism of households reflected in each dwelling.

A contrast between dark and light materials is seen as one approaches Bait Byoot. The outside of the building blocks, facing the street, is made from textured and smooth concrete to imply a play of materiality on the inside. The interior of the project is completely light, with a gradient of materials used. The ground floor consists of

heavier materials such as rammed earth, mud, and rocks, while upper floors have smoother mud and flatter stone cladding, wooden panels and sidings, and mesh panels made from natural fibers. This gradient is also reflected in the railings and windows. The ground floor consists of larger windows compared to upper floors to create a cooler environment at the top since the sun is at a sharp angle. The railings vary from closed ones to almost completely transparent glass railings.

The variation in material density is also reflected in the structural setup of the dwellings. The ground floor consists of mud, stone, and concrete walls. The second floor consists of a wooden framework, while the third and fourth floors have a steel framework. The distance between the columns increases to reduce the actual amount of materials used.

When dealing with post-war reconstruction and housing, the types of users can vary greatly. For this, a diversity of dwelling types has been designed to provide different options for people. Three dwelling typologies are for the elderly, start-ups, and families. A horizontal and/or vertical connection between these typologies was made to create extended dwellings that can be shared by different target groups. For instance, two blood-related families or the elderly with one of their children's family.

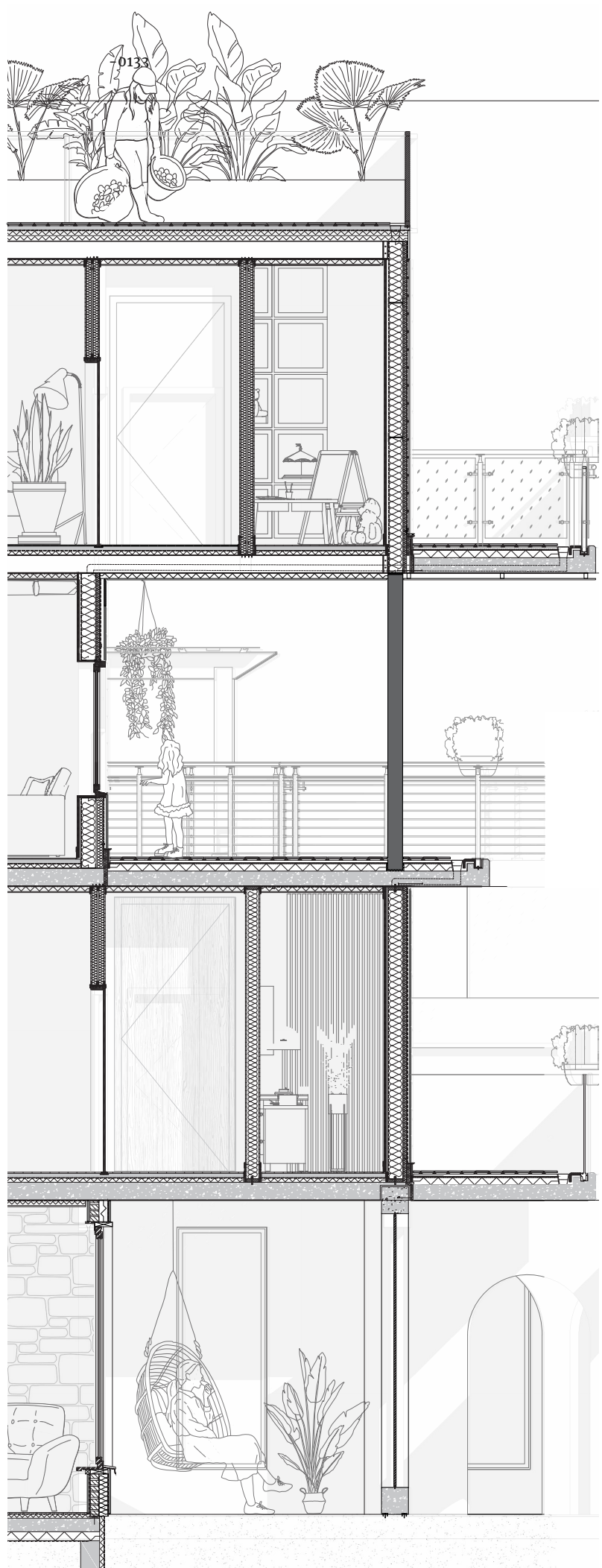
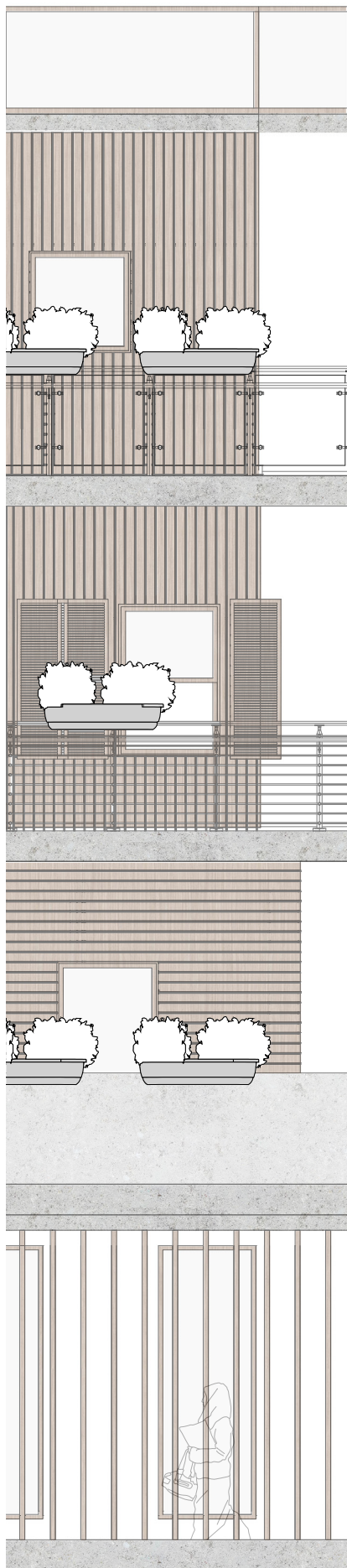
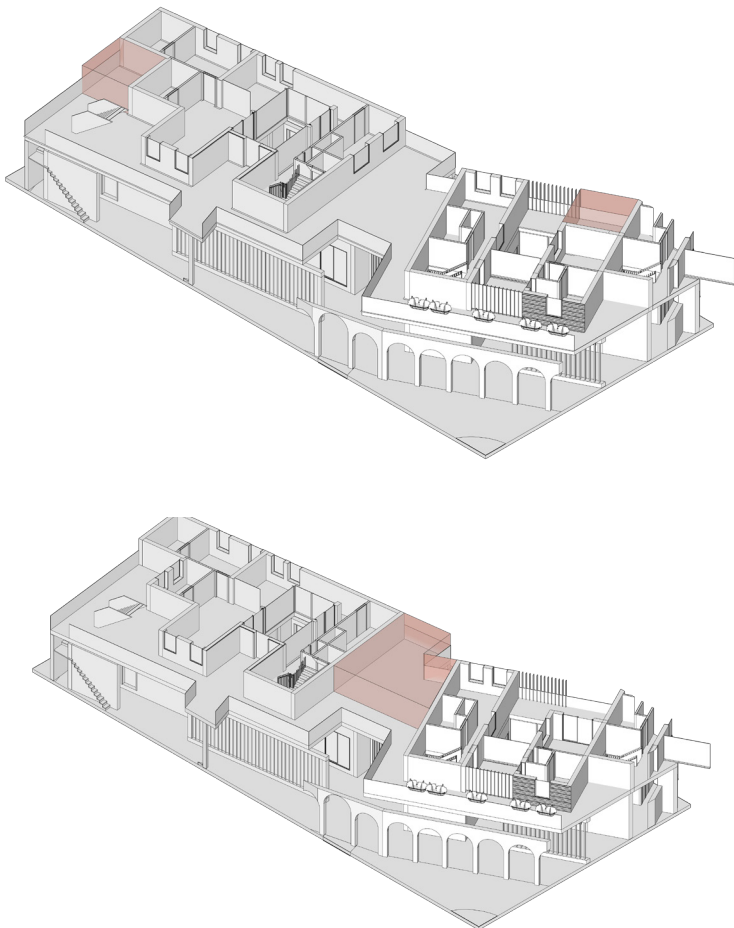


Figure 74 : View from communal square

9.7 BUILDING FOR TOMORROW



With post-war reconstruction, reflecting on the future is crucial at all stages to create a flexible design that can accommodate future needs. With Bait Byoot, the maximum height consists of four floors; in the future, all parts of the design can extend vertically to reach up to six levels, the maximum that can be supported by the ground floor structure (in the case of mud walls). In terms of horizontal expansion, it is possible for an additional room to be added to dwellings or for two dwellings to merge.

Figure 75 : Horizontal expansion of dwellings

10 | CONCLUSION

The scars of conflict and the reverberations of civil war in Damascus laid the foundation for a comprehensive exploration of post-war reconstruction, cultural preservation, and the intricate relationship between tradition and modernity. The analysis of informal settlements in Damascus served as a lens into the adaptability of contemporary dwellings, drawing a significant parallel with the historic archetype of courtyard houses.

As the exploration deepened, the attention shifted to Jobar, a neighbourhood marked by conflict and the canvas for ambitious post-war reconstruction plans. Here, the clash between modernization aspirations and the preservation of a unique cultural identity became apparent. The narrative of Jobar unfolded as a testament to the complexities of post-war recovery, where spatial impacts of violence intersected with societal memories, creating a delicate tapestry of challenges.

The survey, a community-based research initiative, brought forth the diverse voices and aspirations of individuals spanning different geographies and age groups. The diverse perspectives revealed a tapestry of preferences, resonating with the intricate essence of community living.

It was a testament to the significance of memories associated with home, the yearning for resilience, and the layers of human connection that transcend physical structures.

The design intervention, rooted in the philosophy of home-making, sought not only to rebuild structures but also to foster a sense of community and resilience. The design and reconstruction of post-war communities must center around the human element, reflecting the intricate needs and desires of the people. Bait Byoot serves as a testament to the power of thoughtful, community-focused design, drawing from the organic and informal characteristics that foster a sense of belonging. By incorporating elements such as varied green spaces, communal hubs, and a gradient of materials, the project not only addresses immediate housing needs but also lays the groundwork for sustainable and flexible growth.

Bait Byoot is a design that pays homage to Syrians in informal settlements. Its name comes from a game children would play, making makeshift forts and homes from cushions and blankets. This playful yet profound inspiration underscores the project's dedication to creating spaces that feel inherently familiar and comforting to its residents.

Ultimately, Bait Byoot is more than just a housing project; it is a blueprint for revitalizing war-torn communities, providing a foundation for healing and growth. By honoring the traditions and experiences of its residents, it bridges the past and future, creating a space where new memories and opportunities can flourish.

11

REFLECTION

Embarking on my graduation project journey, I was driven by a passion to investigate the complexities of post-war reconstruction, particularly within the context of Damascus' informal settlements. As a student enrolled in the MSc AUBS program, specializing in architecture, my project topic served as a natural extension of both my academic pursuits and personal interests. The alignment between my graduation project topic, master track, and master program underscored a cohesive approach to addressing real-world challenges within urban environments.

My graduation project aimed to investigate the reconstruction of Damascus following the devastation of the war, with a specific focus on informal settlements. The intention was to involve the community throughout the entire process, serving as the basis for the design. However, community involvement did not occur as extensively as intended. This was primarily due to hesitancy and reluctance among community members, as revealed in the initial survey phase. As a result, the approach pivoted towards less community involvement than initially planned.

In terms of research and design, decisions were heavily influenced by

data availability. Challenges arose due to the lack of information on the pre-war urban landscape of Damascus, impacting site selection and research precision. Nonetheless, the chosen site—a completely destroyed area—proved instrumental in navigating these limitations. Research primarily focused on informal settlements, reflecting the project's emphasis on responding to current and future challenges rather than historical planning.

A diverse range of methods, including analytical analysis, surveys, and interviews, enriched both the research and design phases. This comprehensive approach allowed for the integration of subjective and objective data into the final design. While the design prioritized the objective necessities of reconstruction, such as infrastructure and housing needs, it also incorporated elements reflecting the subjective desires of the community—a balance crucial in meeting the needs of the people.

The project's significance lies in its explicit focus on post-war reconstruction in informal settle-

ments, positioning its results as a foundation for future research in this field. Moreover, its emphasis on community-centered design underscores its potential to produce tangible outcomes that cater to marginalized populations.

In the final stages, the project design was completed and presented to the community for feedback. Minor adjustments were made based on this feedback, ensuring alignment with community needs and preferences. This iterative process of design refinement further underscored the importance of community engagement in shaping the final outcomes.

Assessing the academic and societal value, scope, and implications of my graduation project, I recognize its significance in contributing to scholarly discourse and informing practical applications in post-war reconstruction. By shedding light on a critical issue in urban development, the project has the potential to influence further research engaged in reconstruction efforts worldwide. Ethical considerations, such as safeguarding participant anonymity and ensuring the integ-

rity of the research process, underscored a commitment to ethical research practices, strengthening the project's credibility and societal impact.

Furthermore, in evaluating the transferability of my project results, I am encouraged by its potential to inform future research and design endeavors in similar contexts. By documenting the challenges and lessons learned, the project serves as a valuable repository of knowledge for people involved in post-war reconstruction challenges. Its emphasis on community engagement and designing for the needs of the people enhances the applicability of its findings to diverse urban contexts facing similar challenges, amplifying its impact and relevance.

In conclusion, while the project encountered obstacles along the way, its completion signifies a significant milestone in my academic

journey. Through critical reflection and continuous learning, I am committed to refining my methodologies, deepening engagement with affected communities, and further enhancing the impact and relevance of future endeavors in this vital area of research and practice.

12

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APPENDIX

APPENDIX A: SURVEY QUESTIONS

Demographic Information:

1. What is your age?

- 18-25
- 25-35
- 35-45
- 45-55
- 55-65
- Older than 65

2. Where do you currently reside?

- In Syria
- Outside Syria

3. What is the name of your neighbourhood?

4. How long have you lived in the neighbourhood?

- Less than a year
- 1-5 years
- 5-10 years
- More than 10 years

Neighbourhood Conditions:

5. How would you best describe your neighbourhood?

Accessibility and Transportation:

6. How would you best describe the accessibility of your neighbourhood?

7. Was there a bus stop or designated pick-up point in your neighbourhood?

2

3

4

Abundant

- Yes
- No

8. Were there designated parking lots in your neighbourhood?

- Yes
- No

9. What type of accessibility did you use?

- Walking
- Cycling
- Car
- Public bus

10. What improvements or changes would you suggest to enhance the accessibility of your neighbourhood?

12. What type of greenery was available in your pre-war neighbourhood?

- Trees
- Vines
- Grass
- Shrubs/bushes
- Flowers

13. How was the type of green spaces in your neighbourhood?

Public parks

Private gardens

Mix

14. Please describe how you perceived the greenery in your neighbourhood:

Greenery and Public Spaces:

11. How much greenery was available in your pre-war neighbourhood?

15. What specific types of greenery would you like to see in your neighbourhood?

Score

1

Utilities and Public Services:

16. How much public spaces were available in your neighbourhood?

- 1 Scarce
- 2
- 3
- 4 Abundant

17. What type of services were present in your neighbourhood?

- Schools
- Healthcare
- Supermarkets
- Library
- Restaurants

18. Which facilities/ amenities do you think are missing in your neighbourhood and would like to have them available?

Community and Social Life:

19. What type of community spaces were present in your neighbourhood?

- Religious institutions
- Community centers
- Outdoor seating areas
- None

20. Which communal activities do you like doing in your neighbourhood?

21. How would you describe the composition of households in your neighbourhood?

- Single individuals
- Families
- Retirees

Housing and Accommodation:

22. What type of dwellings were dominant in your neighbourhood?

- Houses
- Apartments

23. Was your house/apartment owned or rental?

- Own
- Rental

24. How many people lived in your household? How many bedrooms did your household have?

25. Do you think that the number of bedrooms in your household is appropriate for your needs?

- Yes
- No

in your neighbourhood? Please write a detailed description.

26. Did you have family members living in the same house as you?

- Yes
- No

If my questions have not covered everything or if you would like to share more information on your neighbourhood or how the reconstruction of neighbourhoods should be please leave them below:

27. What does home mean to you?

Contact Information (Optional):

28. What did you like and dislike about your house?

Please provide your contact details if you wish to further participate in this research:

29. If you were to design your house how you would envision it? How big would you want it? What type of rooms would you like to have? How would you design it from inside and outside. Please write a detailed description.

Future Neighbourhood Design:

30. What did you like and dislike about your neighbourhood's design?

31. If you were to help with the design of a neighbourhood, how would you recommend future neighbourhood designs? What would u like to see and experience

APPENDIX B: SURVEY RESPONSES

What does home mean to you?

- Shelter: A place of refuge and protection.
- Emotion: A space filled with emotional connections.
- Family Gathering: A location where family members come together.
- Memories: A repository for cherished memories.
- Artistic Expression: A canvas for personal expression and creativity.
- Security: A source of safety and security.
- Homeland/Patriotic Symbol: A representation of one's homeland.
- Comfort and Warmth: A source of comfort, warmth, and coziness.
- Friendship Hub: A setting for socializing and friendship..
- Nurturing Environment: A nurturing space, filled with care and affection.
- Stability and Peace: A symbol of stability and peace.
- Cup of Morning Coffee: A place associated with the comforting ritual of morning coffee.
- Community: A gathering place for loved ones and friends.
- Motherly Embrace: Symbolic of a motherly embrace and security.
- Psychological Well-being: A source of psychological well-being and comfort.
- Unity and Connection: Symboliz-

es unity and connection with family and loved ones.

How would you reconstruct a neighbourhood?

-Wide Streets: Design wide streets for easy mobility.

-Coordinated Houses: Ensure coordinated and aesthetically pleasing house designs.

-Underground Utilities: Avoid overhead electric poles; bury utilities underground.

-Green Spaces: Incorporate gardens and public parks.

-Bike Lanes and Pedestrian Walkways: Include dedicated lanes for bicycles and pedestrians.

-Street Lighting: Implement effective street lighting for safety.

-Varied House Heights: Avoid stark differences in house heights.

-Utility Lines Concealment: Conceal and organize utility lines underground.

-Shopping Centers: Establish shopping centers within the neighbourhood.

-Public Gardens: Integrate public gardens for communal use.

Parking Facilities: Design adequate parking spaces in strategic locations.

-Organized Buildings and Apartments: Ensure organized layouts for buildings and apartments.

-Modern and Simple Design: Adopt a modern and simple architectural design.

-Green Planting Requirements: Mandate the planting of plants or shrubs by residents.

-Public Facilities and Activities Areas: Include spaces for public activities and gatherings.

-Community Libraries: Establish libraries for book borrowing.

-Convenience Stores: Integrate small convenience stores for essential needs.

-Children's Play Areas: Designate areas for children's play.

-Cultural and Event Spaces: Provide spaces for cultural and celebratory events.

-Privacy Consideration: Ensure adequate spacing between residential units for privacy.

-Arab Identity Preservation: Incorporate Arabic architectural elements to maintain cultural identity.

-Wider Green Spaces and Outdoor Sports Fields: Increase the size of green spaces and provide outdoor sports fields.

-Traffic Flow Management: Or-

ganize entry and exit points for smooth traffic flow.

-Mixed-Use Buildings with Green Spaces: Integrate large buildings with green spaces and communal areas.

-Public Transportation Infrastructure: Develop public transportation networks such as trams.

-Entertainment Venues: Include nightclubs and entertainment venues.

-Professional Project Management: Entrust neighbourhood development projects to professional and non-corrupt entities.

-Focus on Technological Infrastructure: Prioritize telecommunications, internet, and healthcare services.

-Educational Facilities: Ensure the presence of good-quality educational facilities.

-Neighborly Spacing: Keep residential units spaced apart for a sense of community while maintaining privacy.

How would you design your house?

-Moderate Size: A house that is not necessarily large but spacious enough to accommodate residents or visitors. Includes a designated

area for personal use and another for guests.

-Functional Facilities: Well-equipped facilities, whether in the kitchen or bathrooms, with modern amenities.

-Outdoor Greenery: Incorporate simple landscaping with flowering shrubs along the sides of the house.

-Challenges Due to Current Living Conditions: Difficulty in envisioning a dream home due to the challenging circumstances of the current world.

-Spacious Layout: A larger house with multiple bedrooms for children, sitting room, reception area, and a large garden with trees.

-Private and Well-Designed Spaces: Separate and private spaces for each family member, including private bathrooms. Emphasis on good interior and exterior design.

-Comfortable Living Space: Preference for a comfortable and spacious living room, large kitchen, balcony, and a separate bathroom from the toilet.

-Entrance Considerations: Importance of a wide and modern entrance, creating a sense of comfort upon entering the house.

-Kitchen Design: A preference for a large kitchen, with the living room

having a white and black color theme.

-Unique Interior Design Elements: Specific details such as a large kitchen, a garden with a variety of flowers, a master bedroom with a large bed, and artistic furniture.

-Balcony and Decorated Terrace: Desire for a beautiful terrace overlooking the street, with a well-decorated balcony.

-Small Home with a Garden: Desire for a small home with a garden containing various trees and animals.

-Private and Spacious Layout: A detached house with ample space, including a front and back garden for relaxation.

-Sunlit Rooms and Good Ventilation: A preference for rooms filled with sunlight and good ventilation, with bedrooms somewhat secluded from street noise.

-Apartment Layout Preferences: A preference for apartments with specific room allocations, sunny and ventilated kitchens and bathrooms, and outdoor gardens.

-Large House with Multiple Rooms: A desire for a large house with numerous rooms for each family member, as well as a front and back garden.

-Privacy Consideration: Impor-

tance of private spaces, including separate bathrooms for individual rooms.

-Comfortable Apartment with Balconies: Desire for a comfortable apartment with balconies providing views of gardens and children's play areas.

-Modern and Sunny Design: Preference for a modern design with sunlit rooms and separate bathrooms for each bedroom.

-Family-Oriented Spaces: A house consisting of multiple rooms for children, a sunlit and ventilated kitchen, and a garden with play areas for children.

