AMERICAN UNIVERSITY OF BEIRUT

REVIVING PUBLIC PLACES: A LANDSCAPE URBANISM APPROACH TO URBAN RECOVERY OF POST-BLAST BEIRUT

by

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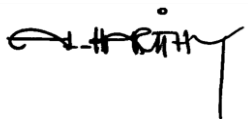

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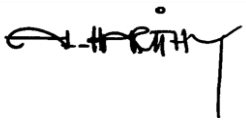

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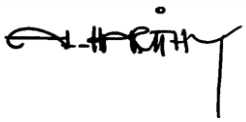

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ABSTRACT
OF THE THESIS OF

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Following the Beirut August 4 blast, a strong sense of community solidarity was observed, as large groups of volunteers and organizations gathered along Mar Mikhael's streets, sidewalks, and vacant lots to coordinate post-blast relief efforts. These gatherings were rather ad-hoc space appropriations and temporary, particularly given that volunteer efforts decrease and private landowners reinstate control overtime. Nevertheless, it is necessary to sustain socio-spatial practices that occurred before and after the blast, as activating open public spaces and vacant lots for socio-spatial practices matters for recovery, despite the scarcity and inaccessibility of most public open spaces in Mar Mikhael. This thesis explores how landscape urbanism as an approach could provide tools and strategies to sustain community-centered practices that emerged after the blast in Mar Mikhael's public domain. This thesis ultimately aims to present an urban recovery strategy for Mar Mikhael through a landscape urbanism approach, building on the sense of community that was observed after the blast. With this thesis' proposed design intervention, landscape urbanism would be reinterpreted, as a possible urban recovery approach, rather than a tool for mere beautification, as criticized by previous literature.

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INTRODUCTION

A. Context

On August 4 2020, Beirut was rocked by an explosion that hit the port of Beirut, causing hundreds of deaths, the wounding of thousands, and significant destruction of the city. This occurred amidst political, public health, and economic turmoil. The blast is one of "the largest nonnuclear explosions in history" (Kerbage, 2021), and Mar Mikhael and Gemmayze were two of the worst hit neighborhoods (El Hajj, 2020). Mar Mikhael is a small peri-central neighborhood at the Northeastern edge of Beirut, neighboring Gemmayze's Gouraud Street to its west, the Beirut River and Bourj Hammoud to its east, the Charles Helou Avenue and the Beirut Port to the North, and Achrafieh Hill to the South, bordered by Rmeil and Medawar (Ghaddar, 2020). Although general repairs and reconstruction were most needed (World Bank, 2020), the blast revealed the need to approach other problems too. Not only was the neighborhood physically hit from the blast, but its residents were personally affected, whether emotionally, mentally, or psychologically. Other than homes and memories, "the loss of the past" (El Hajj, 2020), in many different forms, is at risk of never being restored or recovered. People's psychological state was also destructed, by "reliving trauma daily" (El Hajj, 2020). The trauma caused from the explosion is "long-standing and omnipresent" (El Hajj, 2020), particularly when this experience is shared by the nation as a whole, with no proper closure or reconciliation conductive to recovery. This was further revealed when the World Bank conducted surveys across residents and found that residents emphasized the need for mental health services (World Bank, 2020).

Therefore, mental health was found to be a priority for residents, and women in particular (World Bank, 2020). As expressed by Dr. Hala Kerbage from the School of Medicine at Saint-Joseph University, beyond treating people individually, it is important to regard the collective healing over the long term. This would be approached by offering mental health services, which advocate for reconstructing and sustaining the affected communities, social safety, and health (Kerbage, 2021). Also as suggested by Kerbage, this could be done by combining interventions for mental health conditions with community interventions that can target social distress and promote the recognition of the social, political and economic hardships that Lebanese people are facing collectively (Kerbage, 2021). This suggestion of approaching mental health conditions following the blast with community interventions is appropriate in this case, particularly when a sense of community was strongly reflected directly following the blast.

Despite the people's distrust towards the Lebanese government and bleak outlook in leadership, many showed community solidarity as people from all over the country volunteered in the aftermath of the explosion, engaging with a range of organizations, and coordinating relief efforts like distributing food, cleaning debris, providing medical and mental health services, donating, and linking affected residents with suppliers and contractors (World Bank, 2020). This community solidarity was more pronounced amongst those aged 18-29 (World Bank, 2020). Not only were people helping on the streets, sidewalks, and setting up tents and NGO workstation on un-built plots, but people were also opening their houses the newly homeless, setting up donation drives, raising money, and organizing volunteer cleanups (El Hajj, 2020). A strong sense of community and togetherness was thus demonstrated following the August 4 blast. Therefore, a significant impact on people and places from the blast was observed, and

the absence of Beirut's public and shared spaces were "compensated by residents through ad-hoc appropriations, temporary occupations of vacant lots and sidewalks, as well as heavy use of neighborhood scale commercial venues as sites of gathering" (Beirut Urban Lab, et al, 2020). Moreover, following the blast, it was also observed that fieldworkers were placing chairs and gathering around the ruins of destroyed homes, in the alleyways, along the sidewalks, in addition to children playing football in empty lots (Beirut Urban Lab et al, 2020).

In addition to sustaining post-blast public practices, sustaining activities that occurred before the blast is also important. This is particularly challenging, considering that public open spaces are either scarce, or inaccessible in a neighborhood like Mar Mikhael. For example, the train station is "previously known as a public facility", but nevertheless the site is "enclosed by high-fenced walls, and entering the premises would require a special permit", although many argue that "these stations belong to the public sector and ought to be accessible to anyone" (Malkoun, 2021). The neighborhood's "few shared, public spaces – its streets, sidewalks, and stairs – are often infringed upon by new constructions, or are used as terraces for private bars and restaurants, leaving little room for residents to walk, particularly at night" (Gerbal, et.al, 20). Moreover, Mar Mikhael's staircases, a main part of the open space network, are at risk of redevelopment by real estate developers. In addition to infringement and development contributing to the lack of public spaces, the streets are often clogged with traffic and parked cars, and even Mar Mikhael's vacant train station, although a potential source of public space, it "remains largely off-limits to Mar Mikhael's residents" (Gerbal, 2016). As public spaces are disappearing, further exclusive development is being formed in the area (Krinjen, 2018). In addition to development or high-rise buildings, the

neighborhood has seen a rapid influx of new bars and restaurants “all of which have contributed to rising rents, [and] loss of shared public spaces” (Gerbal, et.al, 2016). Due to the lack of public spaces, residents have managed to appropriate residual spaces in the neighborhood, which have a significant role for social and communal interaction in the neighborhood, comprising open green gathering spaces for the residents, and play areas for the neighborhood’s kids (Ghaddar, 2020), where many exchanges take place.

Although public spaces are scarce in the area, “activating open public spaces and vacant lots for socio-spatial practices matters for recovery” (Beirut Urban Lab et al, 2020). However, activating open public spaces in the neighborhood would be challenging, particularly considering they were already scarce even before the blast. Mar Mikhael’s public spaces require improvements, also in regard to a an inconsistent pedestrian flow on tight sidewalks, further interrupted by encroachments from parked cars and restaurants/ pub outdoor seating (Beirut Urban Lab et al, 2020). Although there are no formal public spaces in Mar Mikhael such as a bounded garden, the neighborhood is rich with residual spaces where numerous shared activities take place, including stairs, dead-ends, spaces in-between buildings, and street corners (Beirut Urban Lab et el, 2020). Therefore, activating open public spaces is vital for the recovery process, however open public spaces are and always have been scarce, or inaccessible in the neighborhood. Consequently, intervening on the numerous available residual open spaces in the area could lead to activating open public spaces for recovery, through landscape urbanism strategies.

B. Research Question

The emergence of spaces that hosted community focal points of gathering and service immediately after the blast demonstrates why activating open public spaces is vital for recovery. Spaces of gathering were dispersed across the neighborhood, but mainly centered along Armenia Street, where numerous NGOs installed temporary stations to collect donations and undergo reconstruction process, in addition to "Nusaned, a local NGO, [which] opened an office/information hub" and a Garage Souk that "allowed people to buy, sell, swap, or thrift products" (Beirut Urban Lab et al, 2020). In addition to Armenia Street, post-blast social practices on the public realm were observed on Patriarch Arida Street, Pharaon Street, and Rabbat Street; for example, Offre Joie on Rabbat Street collected and coordinated information about residents' needs and reported them to the St. Michel Maronite Church (Beirut Urban Lab et al, 2020), which organized and circulated such information to other NGOs working towards post-blast relief efforts. Despite the intention of activating open public spaces towards recovery, there is a lack of public places, and the spaces that were activated post-blast were rather temporary.

With landscape urbanism as a tool and strategy, this thesis will explore how to maintain this sense of community in Mar Mikhael by approaching the open space network, given the observation of its activation post-blast. How can the community-centered practices that emerged after the blast be sustained? How can landscape urbanism as an approach offer tools and strategies to intervene in post-blast Mar Mikhael? How can community-centered practices that emerged after the blast in the public domain recover a sense of 'public-ness' and community in Mar Mikhael, by

approaching areas of opportunity, such as vacant lots, in-between spaces, stairs, public property, and the overall open space network?

C. Thesis Hypothesis

My thesis envisions Mar Mikhael to build on the sense of community that was observed following the blast, sustaining memories of active voluntary participation and engagements rather than eradicating it, and integrating the all-encompassing advantages of landscape urbanism strategies, through the activation of open public spaces.

The activation of "open public spaces and vacant lots for socio-spatial practices matters for recovery", as the blast has caused the temporary forced displacement of residents, which may disrupt their relation to the neighborhood if they are not provided with spaces to gather (Beirut Urban Lab et al, 2020). Additionally, given the absence of open public spaces, Mar Mikhael's residents have appropriated sites like streets, markets, multiple hidden pubic and private open spaces, alleyways, stairs, building entrances, vacant lots, and more, which have been destroyed or affected by the blast. Therefore, the effort to provide more and improved open, green public spaces to Mar Mikhael's residents (Beirut Urban Lab et al, 2020) is important, as it contributes to improve their mental and physical health, public life, and attachment to place (Beirut Urban Lab et al, 2020).

Moreover, sense of community is described as "the feeling the individual has of belonging to a place (even though temporarily)" (Andersen, 1959), which is what was observed following the August 4 blast. The urban community is rendered by great agglomerations of people, although some strangers to one another, who find satisfaction in urban living and hold diverse functions, through an assemblage of organizations with

different purposes and relationships. It is important to maintain this sense of community as it is a way of identifying a local group, and it is “made up on shared sentiments and experiences”, along with sharing knowledge and “social values that are mutually understood and accepted” (Andersen, 1959). It is also important to preserve and build on communities that have a strong bond and common interest for the city’s residents, civic improvement, and growth (Andersen, 1959). Communities are behaving entities, expressive through their community behavior (Andersen, 1959), which could be revealed in crises, elections, or its residents’ everyday activities.

Without people or residents, communities wouldn’t exist, except leaving a “record of their way of life” (Andersen, 1959), which may be later envisioned from artifacts or structures left behind. Otherwise, the memory of the place and community could be eradicated and erased, which this thesis aims to prevent from occurring in the case of Mar Mikhael. Therefore, protecting the collective memory of the neighborhood is necessary as it is susceptible to being neglected overtime, if effort towards regaining and sustaining community practices is not taken. If the collective memory of inhabitants is ignored, neighborhoods would be vulnerable to neglecting its original population, its social and cultural values, and rather replaced new residents with no particular place attachment (Ardakani, Oloonabadi, 2011), which has happened earlier in the neighborhood through gentrification, and in other examples like Solidere’s plan for the Beirut Central District. This would become a social problem “in the erasure of memory or its alteration – ostensibly the erasure or alteration of local identity” (Hussein, et.al, 2020). By definition, collective memory is “the act of remembering events that are associated with objects, places, and experiences by individuals in a social framework or between groups and experiencing these events” (Hussein, et.al, 2020). Memories help

preserve past events, and the greater the number of people remembering the event the more the memory finds a collective future (Ardakani, Oloonabadi, 986). Urban memory, on the other hand, as 'palimpsest' is a concept modified by M. Boyer's 1994 'The City of Collective Memory', which expresses that "memories that can be read in significant buildings, monuments, museums, and public governmental spaces" and urban memory is "focused on the concentration of memory in the landscape of the city" (Hussein et.al, 2020). Collective memory is a social kind of memory, and sustaining it is crucial because this will inspire a lively spirit in historic cities, and "restore their urban identity, which in turn leads to the physical integrity of all parts of the city" (Ardakani, Oloonabadi, 2011). Sustaining collective memory is not only important for social and cultural aspects of the city, but also values cohesion of physical and mental integrity, necessary for the sustainable conservation of historical areas with cultural, social, physical, spatial and aesthetical potential (Ardakani, Oloonabadi, 2011). Similarly, Mar Mikhael, a neighborhood with such potential, should be approached with the intention of sustainable urban recovery, which values collective memory. Moreover, when collective memory is given importance, the identity of the place is being valued, and this in turn enhances its residents' attachment to it, increases public involvement activities, and decreases potential abandonment to its historical areas (Ardakani, Oloonabadi, 2011), all of which lead to the spatial, environmental, cultural, and social improvement of the area. Consideration of collective memory also partakes in sustainable urban conversation.

Strengthening a community bond and sustaining memory could be possible through a maturing civil society that changes the place-framing discourse, which prioritizes the conservation of communities, their health, and well being (Clark, Wise,

2018). If such initiative exists and is lead by motivated community leaders, “a place may be reborn, leading to a strong sense of community, cumulative social capital and individual well-being” (Clark, Wise, 2018). Such willingness of cooperation and livability improvement could produce a greater sense of community. Sustaining memory and community strengthening could be approached through multiple strategies, including community gardens, which could prevent crime, and contribute to the creation of a sense of community, empowerment and physical beautification of the neighborhood (Mees, 2018). Urban agriculture and community gardens could offer spaces where people practice democratic citizenship (Ghose, Pettygrove, 2014), in which residents can claim rights to the city and challenge dominant power relations. Such interest in urban community gardens as a site of condensation has grown in light of concerns on urban insecurity, poor environmental quality, and marginalization of population minorities. Community gardens could be bottom-up interventions that seek to improve place-based community development (Ghose, Pettygrove, 2014). The development of urban community gardens could also “challenge hegemonic ideologies, resist capitalistic relations, and assert rights to space” for marginalized citizens (Ghose, Pettygrove, 2014). In addition to sustaining the sense of community that arose in light of the August 4 blast for collective memory, evidently community-focused interventions reflect a multitude of other urban improvements, such as cumulative social capital, crime prevention, physical beatification, political representation, urban agriculture, and more. Such strategies could be further explored and integrated within the tool and discipline of landscape urbanism.

The all-encompassing strategies of landscape urbanism that this thesis aims to integrate within Mar Mikhael’s urban recovery approach include “responding to

temporal change, transformation, adaptation, and succession" (Waldheim, 2006). Moreover, landscape urbanism is capable of integrating "transportation infrastructure into public space" (Waldheim, 2006), in addition to being the most suitable medium that approaches "complex arrangements of urban activities" (Waldheim, 2006). Landscape urbanism is a tool that is all encompassing of the social, physical, economic, and ecological aspects of urban design, thus a suitable tool to integrate within the objectives of this thesis. Overall, this thesis aims to approach recovery to reconnect people to place through sustaining socio-spatial practices and protecting shared memories, through landscape urbanism strategies.

D. Thesis Objectives

This thesis aims to present an urban recovery strategy for Mar Mikhael through a landscape urbanism approach, building on the sense of community that was highlighted following the blast. The intention behind this strategy is to sustain the memory of post-blast activities and space activation that occurred, through reviving and reactivating public spaces and the open space network.

Through landscape urbanism strategies, urban recovery efforts could be possible. Tangible urban recovery efforts, including heritage building renovation and reconstruction, is already underway. However, retrieving the social dimension of the area is rather disregarded. With this intervention, landscape urbanism would be reinterpreted, by adding social recovery as part of its design goals, rather than a tool for mere 'beautification', as criticized by previous literature.

E. Thesis Significance

By demonstrating the potential landscape urbanism has into becoming a more developed, thorough and all-encompassing design tool for urban recovery, this thesis would be expressing that potential in landscape urbanism theory and practice. This thesis would also serve as a model or pilot project of landscape urbanism, as an urban recovery design tool, in cities of post-disaster contexts. The design proposal will also accommodate and participate in the neighborhood's recovery process, by reviving and retrieving the sense of community through such design intervention strategies.

F. Thesis Structure

In addition to the Introduction chapter, which outlines the context, research questions, hypothesis, objectives, significance, and argument, this thesis is structured into a literature review and case studies section, followed by the case study profile section, the open space network analysis chapter, the intervention section, and finally the conclusion.

The literature review will begin with an understanding on post-disaster urban recovery, followed by further investigation on post-disaster urban recovery case studies, both influential, and critical, including the case of Aleppo, post-2006 Lebanon, and post-civil war Beirut. Moreover, the literature review will present an overview on the theory and practice of landscape urbanism, in addition to related case studies such as Staten Island's Freshkills Park, the Highline in New York, Toronto Waterfront, and Millennium Park in Chicago, among many more. Intending to sustain and extend on the sense of community observed after August 4, the literature review will introduce studies

and implications on ‘sense of community’, and how this was considered in cases in South Bronx, Philadelphia, and Toronto. Moreover, in effort to sustain the memory of Mar Mikhael’s space activation, culture, and social activities, sustaining memory as a goal in the urban context will be studied, in addition to illustrating this effort through the case of Alexandria in Egypt and South Street Seaport Museum in New York.

Following an understanding of the concepts, strategies, and tools that will be approached in this thesis through the literature review, the case study profile will present a thorough understanding of the site’s boundary definition, historic urban evolution, and urban conditions.

Considering that the open space network and public spaces are the chosen areas of intervention on site, this case profile study will be followed by an analysis on the open space network, in which all open spaces will be mapped, classified, and thoroughly analyzed.

With an understanding on the concepts, tools, and design strategies in response to the research question, along with an understanding on Mar Mikhael, the urban design intervention will be presented and illustrated through two scales, the neighborhood and the block scale, followed by the conclusion, summarizing the findings and outcomes of this thesis.

CHAPTER II

LITERATURE REVIEW AND CASE STUDIES

A. Urban Recovery

Disaster recovery refers to "the resolutions and actions taken after a disaster with the goal of restoring or improving the pre-disaster living conditions of the stricken community, while encouraging and facilitating necessary changes to reduce disaster risk" (Cimellaro, 2016). According to the 2017 UNISDR (United Nations International Strategy for Disaster Reduction), recovery is defined as "the restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and 'build back better', to avoid or reduce future disaster risk" (Arefian, 2018). A fully integrated recovery process also approaches psychological recovery (Arefian, 2018), in addition to recovering damaged institutions. However, as a result of lack of long-term consideration and situations in post-conflict contexts, recovery plans have typically focused on renovating particular buildings, without consideration of an overall urban strategy that includes public spaces (Abdelmohsen et al. 2019). This is particularly the case as there is a gap in funding, management, and delivery of short-term and long-term reconstruction (Abdelmohsen, et al. 2019). For this reason, the reconstruction of sustainable economy, governance structure, civil society, and public participation should be considered.

To achieve long-term recovery, it is important to sustain a community's 'collective memory', which recognizes a community's collective experiences, and identifies the community as a social entity (Ardakani, Oloonabadi, 2011). In order to do

so, sustaining cultural practices and values within the community and their environment is necessary.

1. Role of Culture in Urban Recovery

The importance of cultural heritage and preservation during urban recovery has been underestimated; it is often not considered a priority by authorities and international support. Rather than a primary focus, it is often regarded as a luxury. Giovanni Boccardi, former chief of the Emergency Preparedness and Response Unit for the Culture Sector of the United Nationals Educational, Scientific and Cultural Organization (UNESCO), explains that people have nevertheless shown that "when there is disaster, when there is trauma, people really need to hold on to their cultural landmarks, [and] their symbols…heritage is the glue that binds people together as a community" (Minguez Garcia, 2021). However, cultural significance within urban recovery is slowly becoming recognized, as reflected by the Culture in City Reconstruction and Recovery (CURE) Framework developed by UNESCO and the World Bank, which conveyed what culture is indeed "the foundation on which cities are built" (Minguez Garcia, 2021). If culture is not considered this may "induce additional disruption of the physical and social fabrics" (Minguez Garcia 2021). Moreover, "individuals and local communities often turn to cultural expressions to cope with crisis" (Minguez Garcia, 2021). It is therefore a direct reflection and coping strategy for the people, as cultural heritage reflects "the people who created it in the past, and the people who identify with it in the present" (Minguez Garcia, 2021). Although cultural heritage conservation in times of urban recovery has shown to be impactful and significant, its limited consideration or prioritization reflects "a clear disconnection

between place-based and people-centered strategies in the urban recovery efforts" (Minguez Garcia, 2021). For this reason, the CURE framework aims to bridge the gap "between people and places by showing the value of putting people and their cultures at the center of the recovery process, connecting them with the places that strengthen their identities" (Minguez Garcia, 2021).

Role of culture in urban recovery is therefore significant as it keeps a "sense of identity and continuity" (Minguez Garcia, 2021). Not only does cultural preservation maintain identity, but "its protection is an obligation inextricably linked with the respect for the integrity of [the] past" (Belal, Shcherbina, 2021). Consequently, culture-focused urban recovery should be "integrated into all the recovery phases, as well as into the general disaster risk management discipline" (Minguez Garcia, 2021). Cultural preservation through urban recovery also binds people together, and can help strengthen socio-economic aspects of the city.

2. Urban Recovery Programs and Tools

CURE, in addition to PDNA (Post Disaster Needs Assessment) guidance, "provides the tools to assess the impact of disasters on people, communities, civil society and governments, as well as the country's physical assets and infrastructure, including cultural heritage" (Minguez Garcia, 2021). Moreover, the PDNA helps identify potential risks that may arise as a result of the disaster, in addition to observing other sectors' reconstruction's ability to affect the cultural sector, and exploring the opportunities of the cultural sector in recovery.

Another program approaching post-crisis urban recovery is First Aid Resilience to Cultural Heritage in Times of Crisis Programs (FAR), which "provides a field-tested

methodology and practical tools for protecting cultural heritage of all types (movable, immovable and intangible), before, during and after an emergency" (Minguez Garcia, 2021). It targets local communities to cooperate with cultural heritage professionals to facilitate and improve the recovery process, avoid exacerbation of the situation, and integrate traditional practices and intangible culture within the proposed social recovery framework. It is important to avoid exacerbation of the situation, as "reconstruction and recovery processes should not aim to get back to the pre-crisis condition but to incorporate improvements to reduce previous vulnerabilities" (Minguez Garcia, 2021). Hence the concept of 'building back better', defined by the United Nations General Assembly in 2016, "as the use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of nations and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment" (Minguez Garcia, 2021). As mentioned earlier, 'building back better' is a concept conveyed through the UNISDR definition of recovery, which thus provides a longer-term solution, emphasizing that post-disaster contexts should return to 'normal' "but with less vulnerability and more resilience than they had before the occurrence of the disaster" (Arefian, 2018). This creates the link between post-disaster recovery and development.

This connects to the idea of seeing crises as opportunities, as implied through Priority 4 of the Sendai Framework, "which highlights that reconstruction offers an opportunity to build more resilient societies" (Minguez Garcia, 2021). The perception of recovery "changed from replacing lost assets into an opportunity for improvement: seeing recovery as a window of opportunity" (Arefian, 2018). This means building back

stronger, faster, and more inclusive, in addition to ensuring that everyone, particularly the most vulnerable, “restore income early and access support to recover” (Minguez Garcia, 2021). Building back better implies that the situation does not return to ‘normal’, but rather improves. Additionally, this ‘build back better’ approach aims to reduce future risks. Furthermore, the Sendai Framework for Disaster Risk Reduction calls for integration of culture, understanding the disaster’s impact and risks on cultural heritage, the protection of cultural assets, and the integration of scientific, traditional, and local knowledge and skills when assessing disaster impacts.

A recovery tool for post-disaster contexts is a restoration directory, which typically includes a (1) list of surviving key monuments that should be protected, (2) mapping historic fabric, residential areas, market complexes, and public open-space structures, (3) identification of reconstruction potential, (4) different forms of interaction, (5) guidelines of different reconstruction types and needs (Belal, Shcherbina, 3).

Another post-disaster recovery tool proposed by Sultan Z. Barakat in ‘Spatial Methodologies to Support Postwar Reconstruction’ integrates “geographic/geospatial information systems (GIS), public participation, spatial decision support systems and natural language processing to offer a web-based planning tool and application that supported both agencies in the file and members of the diaspora, in addition to other representatives of the general public, to contribute effectively to the reconstruction process” (Abdelmohsen et al, 2019).

Moreover, as conveyed by Abdelmohsen et al., a cyclic process of continuous evaluation of post-conflict contexts is proposed through three phases: (1) the pre-reconstruction process, which involves “preliminary evaluation and planning of

reconstruction projects", (2) the reconstruction process, which entails management and reporting of "project progress and implementation", and (3) the post-reconstruction process, which entails management and assessment of the project in the long term (Abdelmohsen et al, 2019). This would be done through GIS databases, web-based applications, and BIM (Building Information Modeling) models, thus offering an effective, inclusive, and comprehensive framework for post-disaster reconstruction and management.

Overall, "any restoration and reconstruction program must have the goal of preserving the city by taking into account all of its components and integrating the city's historical and modern sections in a harmonious manner" (Belal, Shcherbina, 2021).

3. Intangible Urban Recovery

The general attitude towards cultural heritage in post-disaster urban recovery has usually focused on the tangible, such as rehabilitating buildings, "although the integration of intangible cultural heritage is being progressively emphasized, acknowledging that culture implies more than just monuments" (Minguez Garcia, 2021). Moreover, as implied by the first of seven CURE principles, the city is a cultural construct "where built structures and open spaces are closely linked to the social fabric" (Minguez Garcia, 2021), consequently implying the social intangible significance of urban recovery, through culture in particular. In regards to cultural intangible urban recovery, elements to sustain include "traditional practices, skills, expressions, and knowledge that are transmitted across generations" (Minguez Garcia, 2021). Other intangible and tangible elements to sustain are values such as "architectural, historical,

archeological, social, spiritual, economic, and political values" (Belal, Shcherbina, 2021). It is also important to sustain and restore "a sense of safety in the aftermath of crisis" (Belal, Shcherbina, 2021). The significance of intangible cultural urban recovery is the contribution of reestablishing the daily lives of people within the community affected. Intangible urban recovery could help sustain historic legacies and activate urban centers, but also plays a critical role in social recovery and the resilience of the affected communities. Given the value of intangible urban recovery, "it is not possible to separate tangible and intangible aspects" (Minguez Garcia, 2021), and both should be given equal attention and prioritization.

4. Stakeholders

Stakeholders in the reconstruction process typically involve funding agencies like the World Bank, "a key sponsor that aims at revitalizing societies and playing a major role in peacekeeping" (Abdelmohsen et al, 2019). However, it is important that urban recovery is people-centered, addressing and considering the needs of all social groups. Through urban recovery plans, it is vital to provide "opportunities for social inclusion and an economic development that acknowledges the specific needs, priorities, and identities of communities" (Minguez Garcia, 2021). It is also important to approach post-crisis trauma to reconcile affected communities. CURE suggests doing so through the "rehabilitation of cultural landmarks and places of significance to the local communities" (Minguez Garcia, 2021). Cultural heritage is a people-centered approach towards urban recovery as it ensures that "repairing the historic physical structures is part of an integral recovery plan, which improves resilience of both places and people" (Minguez Garcia, 2021). Moreover, the involvement of local communities "is critical to

reduce risk and strengthen resilience" (Minguez Garcia, 2021). Local community involvement, among other main ideas covered within this section, are summarized and represented in **Figure 1** below.

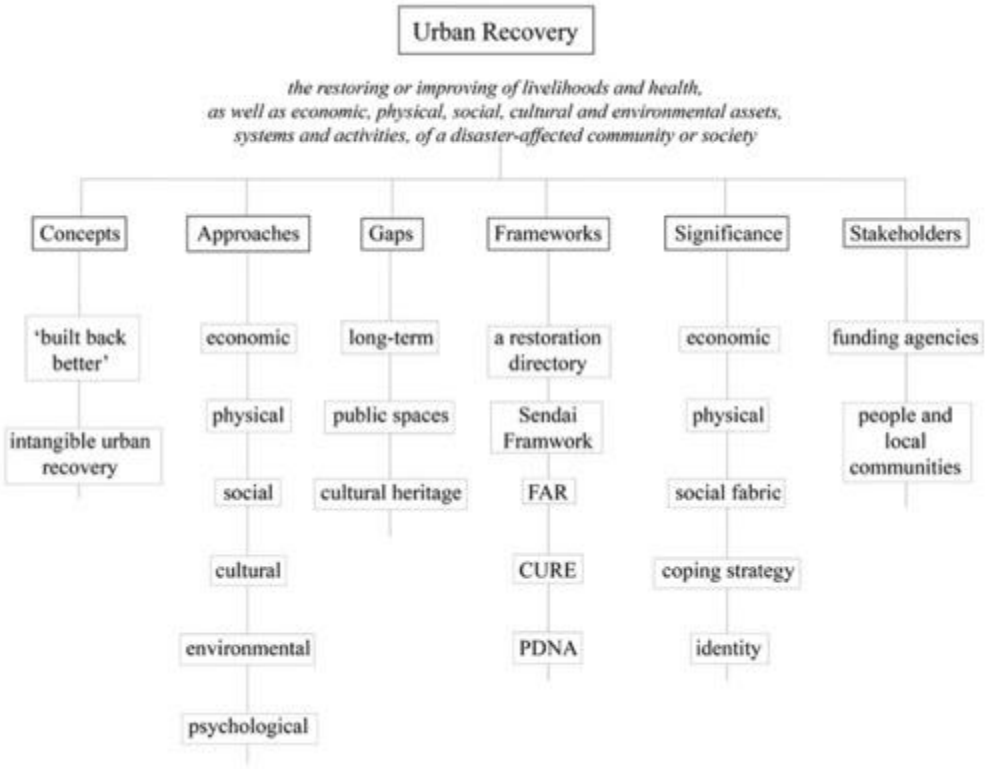

Figure 1 Concepts and ideas covered on urban recovery

B. Urban Recovery Case Studies

1. Intangible Urban Recovery Case Studies

In the case of post-disaster Kucapungane, Taiwan, "typhoon recovery plans led to the displacement of the tribe from their ancestral homeland" (Minguez Garcia, 2021), and consequently pressured the integration of cultural heritage and the local community in post-disaster recovery plan. Contrastingly, following Cyclone Nargis in Myanmar, intangible cultural heritage was preserved through the urban recovery plan, as the

traditional Myanmar marionette performance was promoted, in addition to dancing, music, sculpture, sequin embroidery, and painting. Other examples of post-disaster urban contexts that built back better through cultural investment include the Old Bridge and the restoration of "the Old City of Mostar, Bosnia and Herzegovina, or the post-earthquake cultural heritage conservation and recovery of the Old Town of Lijiang, China, to the improvement of disaster risk management for the conservation of monuments in Bagan, Myanmar, or the…rehabilitation of Mosul, Iraq" (Minguez Garcia, 2021). Consequently, it is shown that intangible urban recovery is important, as integrating and preserving intangible cultural heritage and practices, there is increased resiliency "and knowledge for addressing key challenges" (Minguez Garcia, 2021).

2. The Case of Homs, Syria

Homs is the third largest city in Syria, and is the historical center between Damascus and Aleppo. The core of Homs is the historical center, and following the conflict, it has been heavily damaged. However, pre-war, there were no plans provided for the protection of historical and archeological sites in the case of disaster or war. Although the city council identified archeological and cultural sites, "no effort towards preservation, restoration, or rehabilitation of historic buildings" (Belal, Shcherbina, 2021) has been done. The lack of protection of the historic city center has lead to the "absence of the...old town in Homs, unlike…Damascus or Aleppo, where the old city still occupies strongly a part of the city" (Belal, Shcherbina, 2021).

In response, it is recommended that through intervention, three different area levels be considered: the historic part of the city center, the neighborhood, and individual quarters. In addition, it is suggestion to implement four main themes:

documentation, damage assessment, planning, and legal framework and regulations. As reference for restoration, pre-conflict cadastral records can be used. It is vital that residents' "accommodation, land, and property rights" (Belal, Shcherbina, 2021) are protected, and urban planning guidelines formulated. Particularly in historical areas like Homs, "neighborhoods' guidelines must take into account the unique characteristics of the traditional urban fabric" (Belal, Shcherbina, 2021).

3. The Case of Kabul, Afghanistan

The historic city of Kabul contains urban heritage and cultural sites that were initially planned for protection following the 2001 military campaign in Afghanistan, funded by the Greek, US, Canadian, and UK governments, and the World Bank, through the Agha Khan Trust for Culture foundation and its Historic Cities Programme (HCP) (Kazimee, Najimi, 2017). Also under this program, craftsmen and artisans were trained in traditional building construction, and other crafts to promote and support employment across affected communities. Conservation of the old city has increased awareness among residents of the significance of urban heritage preservation.

4. The Case of Post-2006 War Lebanon

As a result of the 2006 Lebanon-Israel war, "1,183 civilians were killed…4,054 left wounded, [and] 262,174 were permanently displaced" (Al Harithy, 2010). The war also resulted in "the loss of 125,000 housing units, 612 schools, 97 bridges, and 850 commercial enterprises" (Al Harithy, 2010), according to the Council for Development and Reconstruction (CDR), with damage estimating at around $3.6 billion. Due to the government's limited role of fundraising and distributing compensation, and lack of

coordination or a reconstruction plan, nongovernmental actors stepped in for reconstruction efforts, including prevalent efforts of Hezbollah's Jihad al-Bina NGO. Moreover, also due to limited governmental support, Gulf States and other international organizations played roles in post-war reconstruction. The Reconstruction Unit (RU), formed by a multidisciplinary group of planners and architects affiliated with the American University of Beirut (AUB) Department of Architecture and Design, also contributed to the recovery process. Their envisioned to approach the condition with physical reconstruction in addition to social and economic revitalization, through a "participatory and community based" (Al Harithy, 2010) approach. The Unit tacked conceptual planning, technical aid, and assessment and problem definition, in direct cooperation with municipalities, and other individuals to collect data "and assess needs" (Al Harithy, 2010), to later define intervention proposals, which are effective, site-specific, and sustainable. Accordingly, work was divided among four task teams approaching different sites, Haret Hreik, Bint Jbeil, Aita al-Cha'b, and al-Qleileh and Siddiqine.

5. The Case of Post-Civil War Lebanon

Following the 1975-1990 Civil War in Lebanon, destruction struck the city, leaving it with 144,000 killed, 184,000 injured, 13,000 kidnapped, and at least 17,000 missing. In addition, "about 175 towns were partially or completely destroyed, and over 750,000 Lebanese were internally displaced. The physical damages in the country were estimated at $25 billion" (Ghosn, Khoury, 2011). The amount of destruction that affected the city center during the war and after the war is shown in **Figure 2** below.

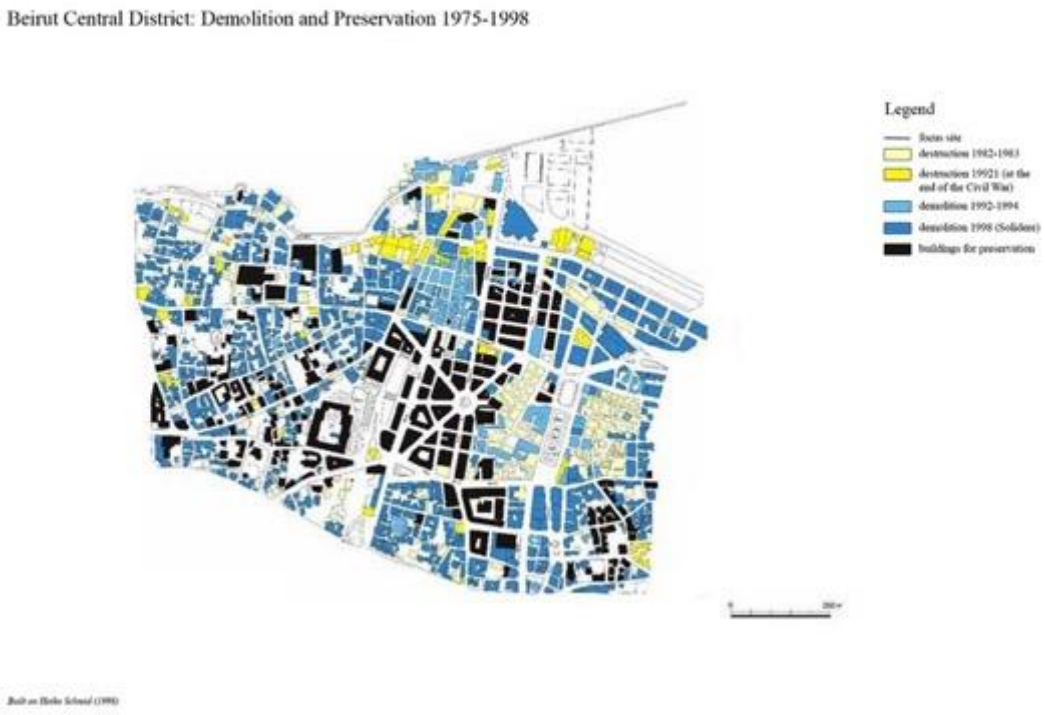

Figure 2 Beirut central district demolition and preservation map (Schmid, 1998)

In response and following the traumatic events of 1975-76, arose “the first official plan, in 1977, commissioned by the CDR” (Makdisi, 1997), but with continuous war and damage, “in 1983, [Hariri’s] OGER Liban…took over the reconstruction project and commissioned a master plan from…Dar al Handasah” (Makdisi, 1997). Nevertheless, until fighting ended and attention to post-war reconstruction returned, “it was in this context that several developments took place that enabled the resumption of the kind of planning that had first begun with the unofficial demolitions of 1983-86 and that ultimately led to the formation of Solidere” (Makdisi, 1997). By 1991, Solidere was provided with legal framework, through Law 117 of 7 December 1991, for the constitution of a company in which “a single private real estate firm expropriate[s] all the land in the city center and take[s] over the rebuilding process” (Makdisi, 1997).

Hence, Solidere and post-war downtown Beirut reconstruction emerged, eventually leading to modern downtown Beirut.

The priority of post-war Beirut reconstruction was a “hope of an economic upturn initiated by the reconstruction”, in which Prime Minister Rafic Hariri had a desire “for prosperity to create his strategic vision of a Lebanese Hong Kong” (Schmid, 2006). Such economic goals were achieved by neglecting the “pre-war property right holders- some 40,000 owners, tenants and investors who lived, worked and played in the pre-war city center” (Hourani, 2015), and whose lands and businesses were forcibly taken in return for an insignificant compensation. Solidere supporters state that ‘pre-modern’ conceptions of property and associated economic practices in the suq prevented modernization of the city” (Hourani, 2015). Therefore, protecting the economic state of the reconstructed city center was a more valuable priority to Solidere than the profit of original landowners, and inclusivity.

Solidere has also shown that investment and development is a more valuable priority than environmental concerns. They are focused “on catalyst projects that will attract investment by others as and create new markets in the downtown” (Gavin, 2015). For example, Solidere’s Beirut Marina hosts boardwalk restaurants, a center for the arts, clubs, and such developments (Gavin, 2015). In addition, Phase 2 of the project constitutes further building development, and a city park on what used to be a public open accessible seafront, as shown in **Figure 3**. Nonetheless, this Beirut Marina is situated on a “landfill” (Makdisi, 1997), hence the prioritization of investment and development over environmental and social concerns in this case.

Figure 3 Current Solidere Master plan (Solidere, 2004)

The prioritization of modernization over conservation is also a pattern seen through Solidere's post-war reconstruction. The exploitation ratio applied for BCD was Built Up Areas (BUA's) of five times the plot area, as compared to Lebanon's standard, thus much of the "historical fabric…disappearing fast, due principally to zoning regulations that permit 10 to 12 story development" (Gavin, 2015). Moreover, "in the months since reconstruction officially began in earnest (summer 1994), more buildings have been demolished than in almost twenty years of artillery bombardment" (Makdisi, 1997). Such modernization is shown through their interest in 'star-chitects', such as "Moneo, Maki, Rogers, Foster, Hadid, Piano, Nouvel and Herzong & de Meuron" (Gavin, 2015). Therefore, it is evident that modernization rather than conservation was indeed a priority for Solidere.

C. Landscape Urbanism

James Corner, landscape architect and theorist describes the landscape urbanism practices through four main themes, those of which are "ecological and urban processes over time, the staging of horizontal surfaces, the operational or working method, and the imaginary" (Waldheim, 2006). He depicts Landscape Urbanism as a practice concerned with "surface strategies and the creation of vast organizing field that establish new conditions for future development" (Locke et al, 2019). However, Charles Waldheim originally coined the term at the Landscape Urbanism symposium and exhibition in 1997, which was followed by a range of studies and publications. He describes landscape urbanism as "landscape conceived and designed as the primary ordering element for decentralized urbanism" (Locke et al, 2019). He expresses that landscape urbanism provides a medium of social and spatial order, through "an urbanism almost wholly conceived, unburdened of the 'weighty apparatus' of traditional urban form" (Locke et al, 2019). Landscape urbanism is a "relatively new discourse that brings together theoretical and practical approaches rooted in landscape architecture, urban design, architecture, landscape planning, and urban planning" (Vicenzotti, 2017). Urban landscapes have the capability to "function as important ecological vessels and pathways" (Waldheim, 2006), such as the hydrological and storm water system of Boston Back Bay Fens, or Stuttgart's greenway corridors. These two examples are representative of landscape urbanism's capability to exist within different scales, contexts, and to connect environmental processes with the urban. Landscape urbanism can constitute many faces of urban surfaces, including sidewalks, streets, and more. Stan Allen, the former dean of the School of Architecture at Princeton University, argues that "landscape is emerging as a model for urbanism" (Waldheim, 2006), by

organizing horizontal surfaces' materiality and performance to "activate space and produce urban effects without the weighty apparatus of traditional space making" (Waldheim, 2006). Indeed, it has "emerged, across a range of disciplines, as a model and a medium for the contemporary city" (Vicenzotti, 2017). As such, landscape urbanism implies that "landscape should be the fundamental building block for city design" (Steiner, 2011), as compared to traditional city design in which walls, roads, and building led design development, and green spaces were rather ignored. Landscape urbanism is capable in undergoing temporal change, transformation, adaptation, and succession. The significance of landscape urbanism is also that "cultural and natural processes help the designer to organize urban form" (Steiner, 2011). Landscape urbanism' focus would also be "incorporating, connecting, and intensifying in a systemic (often ecological) way" (Mikadze, 2020). The objective of landscape urbanism projects, particularly those like guerilla gardening, has not been physical and focused on aesthetics, but rather its programs and response to local needs. Overall, scholars and practitioners of landscape urbanism have confirmed its capability of being a significant form of urbanism, accommodating for ecological, social, spatial, and cultural values through a myriad and combination of design tools and strategies, as shown in **Figure 4** below.

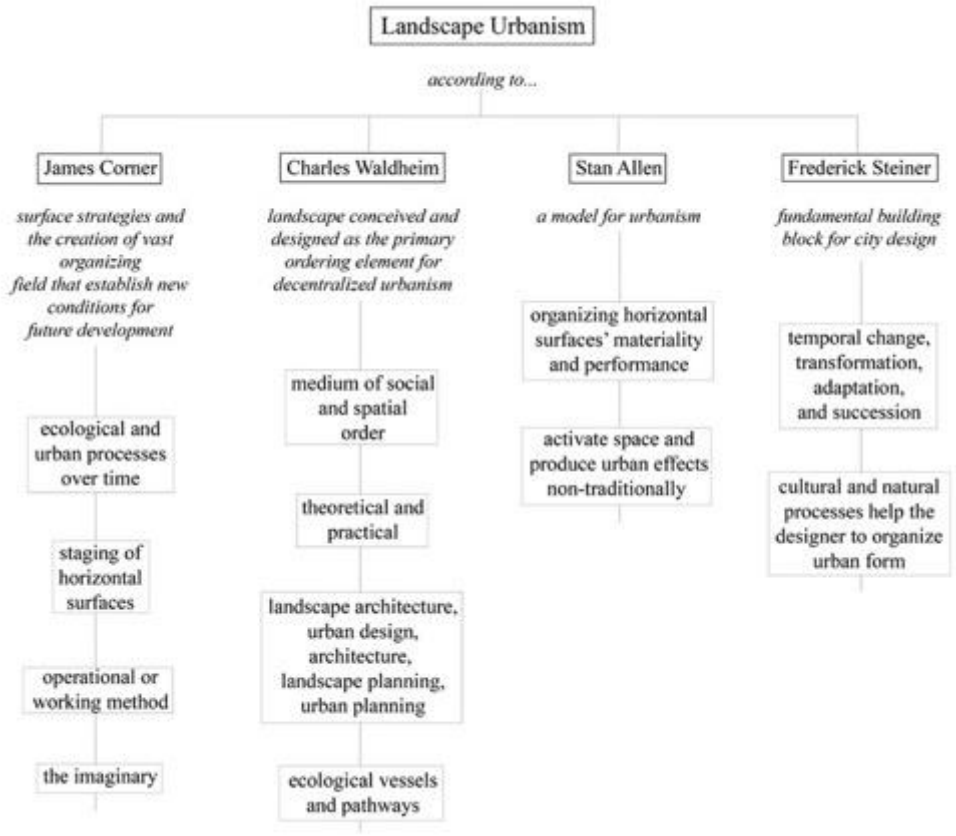

Figure 4 Concepts and ideas covered on urban recovery

D. Landscape Urbanism Case Studies

1. Parc de la Vilette

Among the first projects designing in the urban through landscape was the 1982 Competition for Parc de la Vilette, a 125-acre site and the former site of Paris' largest slaughterhouse. La Vilette had required an urban transformation through landscape, transforming a part of a working city "left derelict by shifts in economies of production and consumption" (Waldheim, 2006). This competition "began a trajectory of postmodern urban park, in which landscape was itself conceived as a complex medium capable of articulating relations between urban infrastructure, public events, and indeterminate urban features for large post-industrial sites" (Waldheim, 2006). The

winning proposal for the competition was by the office of Bernard Tschumi, which "formulated landscape as the most suitable medium through which to order programmatic and social change over time" (Waldheim, 2006). Nevertheless, the second prize proposal, by the Office of Metropolitan Architecture and Rem Koolhaas, was also significant, with the integration of various park programs within, and specific design of strips (**Figure 5**), and planting combinations (**Figure 6**).

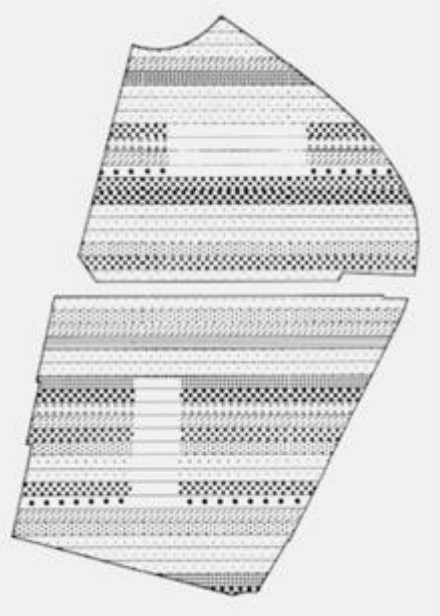

Figure 5 Parc de la Vilette diagram of strips (Waldheim, 2006)

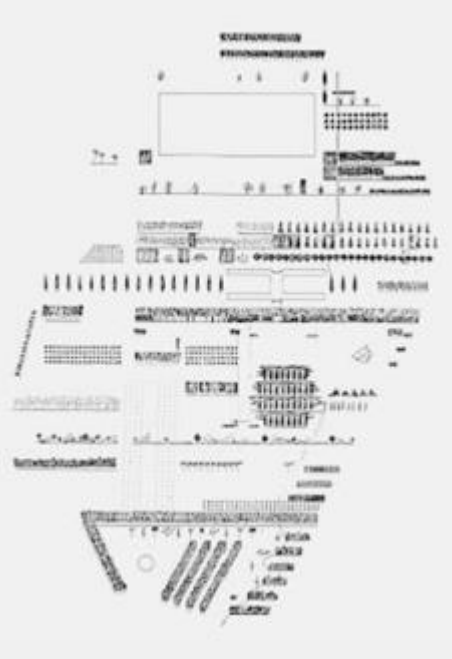

Figure 6 Parc de la Vilette planting diagram (Waldheim, 2006)

2. Downsview Park

Downsview Park is a former underutilized military airbase in Toronto, and a significant example of landscape urbanism as an urban strategy for post-industrial cities in North America. Landscape Urbanism as a post-industrial design strategy was indeed prevalent as “performative urbanism that emerges from the bottom up, geared to the technological and ecological realities of the postindustrial world” (Locke, et al, 2019). Landscape urbanism schemes like that of Downsview Park integrates “detailed diagrams of phasing, animal habitats, succession planting, and hydrological systems” (Waldheim, 2006). This project successfully intertwines natural ecologies “with the social, cultural, and infrastructural layers of the contemporary city” (Waldheim, 2006).

The winning scheme for the Downsview Park competition is that of Mau and Koolhaas/OMA, titled ‘Tree City’, although Bernard Tschumi’s proposal was also significant with “richly detailed diagrams of succession planting and the seeding of

ambient urbanity" (Waldheim, 2006). Both his projects for Downsview Park and Parc de la Vilette were based on the Olmstedian model, of landscape merged with urbanism. However, as compared to the la Vilette project, only one lead architect orchestrated the design, whereas this project included landscape architects on interdisciplinary teams of consultants. This is important as the ecological and design concerns were equally regarded.

3. Fresh Kills

Fresh Kills, covering around 2200 acres, is located on the site of the world's largest landfill in Staten Island, New York, also representative of landscape urbanism practices applied to industrial cities in North America. Much of the debris following the 9/11 attacks in New York was deposited there. With much space and need for transformation, "the Field Operations plan suggests how the landfill can be converted into a park three times larger than Central Park" (Steiner, 2011). This proposal plan, represented in **Figure 7** and **8** below, is a 30-year plan involved restoration of a large landscape, and focused on "reclaiming much of the toxic wetlands that surround and penetrate the former landfill" (Steiner, 2011). Similarly to Downsview Park, such projects are also ecology-focused and consist of integrating animal habitats, succession planting, hydrological systems, and more, all the while integrating social, cultural, and infrastructural aspects to the city. Moreover, also as in Downsview Park, this project was lead by an interdisciplinary team rather than a single lead architect.

Figure 7 Proposed plan (James Corner Field Operations, 2001)

Figure 8 Site diagrams (James Corner Field Operations, 2001)

4. Lafayette Park

Lafayette Park is a 78-acre postwar urban renewal project adjacent to downtown Detroit, Michigan, designed by Ludwig Hilberseimer, with a landscape architect, Alfred Caldwell, and architect Mies van der Rohe. Lafayette Park neighborhood accommodates for parking areas, public transportation, residential towers, residential townhouses, a school, a shopping center, a suburban style shopping plaza, and other businesses and services. Lafayette Park is a result of collaborative and interdisciplinary efforts (Locke, 2019). According to Charles Waldheim, the post praise-worthy element of the design is its modern suburban character despite its proximity to downtown Detroit. Also according to Waldheim, "landscape urbanism, as seen in the precedent of Lafayette Park, is a socially just and progressive form of urbanism" (Locke, 2019). Landscape urbanism, as perceived through the lens of Lafayette Park, "is realistic about the imperatives of modern lifestyles, and the spatial configurations they require for socioeconomic success" (Locke, 2019), in addition to being an ecological form of urbanism.

5. Weigong Channel

The Weigong Channel was built in 1930, and is located in the Tiexi Industrial Zone of Shenyang, China. Initially, the space was primarily industrial, and sacrificed environmental values, with "environmental pollution, fragmentation of pedestrian space, urban infrastructure and single vitality of streets" (Kang and Wan, 2). This urban canal renewal project was undergone through the perspective of landscape urbanism, with a 7-kilometer long linear park system, connecting 1.14 million local residents, in addition to other economic, environmental, physical, and mental health benefits. In

regard to ecological benefits of this project, the space is transformed from a hard river bank into a natural river bank, using “green land to discharge flood in flood season and create natural landscape” (Kang and Wan, 2021), expanding flood discharge to surrounding areas, in addition to the radiation range. In terms of circulation and mobility changes within the proposal, in the first stage, river road is combined with the riverside landscape. In the second stage, accessibility on both sides of the riverbank is improved by connecting the slow path. In the third stage, a slow traffic system is implemented in parallel to the future subway station. In regards to improving the industrial layout of the area, firstly the auto parts industry is improved, followed by improving education and commerce among communities and office space expansion, and finally space occupying auto-parts industry is replaced by commerce. In terms of activity layout, cultural activities are located in the north, markets in the middle, and sports-related venues in the south, which includes a park, and waterscape, thus the integration of landscape infrastructure as a tool for design. Consequently, landscape elements were chosen carefully; a bridge was designed for increased connectivity, along with providing activities along the bridge for improved flow of people and attraction, and functional spaces were provide for the marginal industries, such as a “multi-purpose semi outdoor activity space” (Kang and Wan, 2021). Accordingly, the proposed design layout is significant as “the design principle of landscape infrastructure units is flexible assembly and year-round use” (Kang and Wan, 2021).

6. High Line Project

The High Line Project was initially an abandoned rail line covering 22 blocks in New York City, and following advocacy by the Friends of the High Line, was converted

into a 6.7 acre green corridor park, which had become “a recreational amenity, a tourist attraction, and a generator of economic development” (Steiner, 2011). The project was designed by Field Operations and Diller Scofidio + Renfro in 2009, integrating paved and panted surfaces, and is now a “model for how abandoned urban territories can be transformed into community assets” (Steiner, 2011). The project integrates varying relationships between paving (hardscape) and planting (softscape), as shown in **Figure 9**.

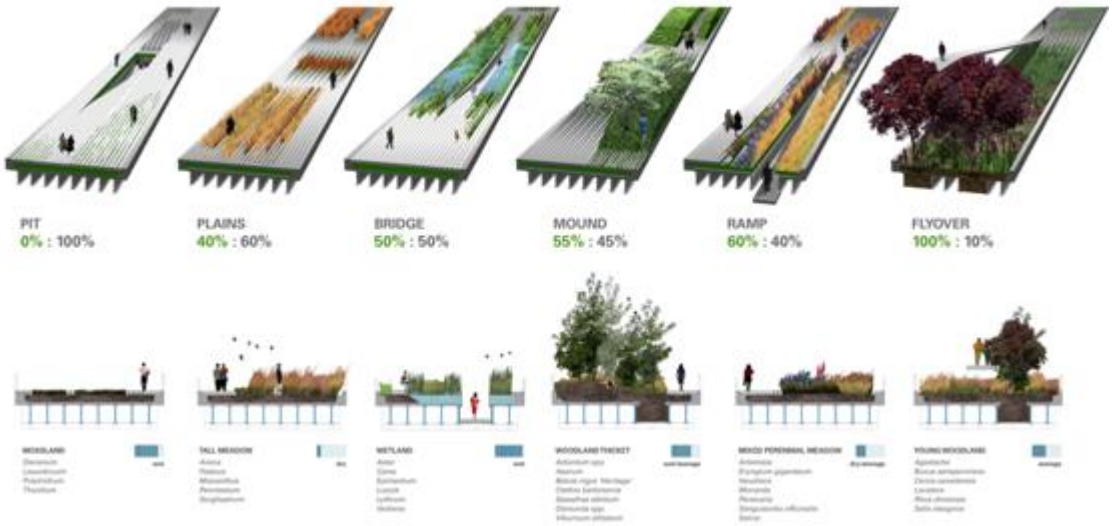

Figure 9 Hardscape and softscape relationship in High Line Project (James Corner Field Operations and Diller Scofidio + Renfro, 2004)

7. Lower Don Lands

The Toronto Waterfront Revitalization Corporation organized a design competition for the Lower Don Lands, in which Chris Reed and his colleagues proposed a design. Covering 300 acres, the site was initially mostly unoccupied, and a former port land, near downtown Toronto. The restoration and renewal proposal included “flood protection, habitat restoration, and the naturalization of the Don River mouth”

(Steiner, 2011), in addition to added development, an improved transportation system, and fish breeding ground for fish ecology integration.

8. Parc Jeanne-Mance

Parc Jeanne-Mance, in Montreal, Canada, is a park where a group of locals underwent a guerilla gardening project. Guerilla gardening is essentially "gardening without permission, on someone else's (usually municipal) property" (Mikadze, 2021), and could range from installing single plants to implementing complex garden designs. Initially an abandoned and inaccessible municipal composting site, the group revived and returned the space to the public. This composting site later became part of a communal garden, 'Villa Compostela'. However, the municipality removed the garden and composting site in 2015, arguing that not only was it illegal, but "neither the unauthorized garden nor the legal composting site belonged within the ambit of the park's functions, aesthetics, and expected modes of engagement" (Mikadze, 2021). They therefore failed to recognize the "mesh of three different spaces as a single entity made coherent by one essential agent – vegetation – and one common narrative – green public space" (Mikadze, 2021).

In 1994, in reflection of Par de la Vilette, Bernard Tschumi described 'disprogramming', which implies the "major shift from classic architectural approaches towards new ones: architecture as urbanism by means of landscape", thus the concept of landscape urbanism, exemplified by Parc de la Vilette in this case. Similarly, such a guerilla gardening approach in Parc Jeanne-Mance adopts this concept of 'disprogramming', through "major design principles and techniques of landscape urbanism as well" (Mikadze, 2021).

Guerilla gardening, as demonstrated through Parc Jeanne-Mance, approaches both the social and recovery aspects of the urban environment. Firstly, in regards to its social aspect, “guerilla gardening is one of those grassroots spatial practices that aims to build social capital, to claim the right to the city or to ignite community capacity building in the context of neighborhood improvement” (Mikadze, 2021). Moreover, guerilla gardening is socially beneficial as it involves the engagement of locals, connects and overlays different spaces, activating and programming spaces, and the design of spaces for the people rather than for aesthetics, as compared to the ‘tactical’ vision and approach of spaces by municipalities, for example. Ultimately, Parc Jeanne-Mance is a “realization of the Park Movement in North America” (Mikadze, 2021), influenced by Frederick Law Olmsted, advocating for green space in the city that was designed for a reason, possibly “as a means of bringing people of different classes together” (Mikadze, 2021), thus promoting social values and cohesion.

Secondly, in terms of recovery, guerilla gardening is effective tool as it was shown following post-industrial site revitalization projects, that “landscape urbanism has great potential for becoming a general framework for all new urban redevelopment” (Mikadze, 2021).

Moreover, environmental values were instilled within the community following this initiative, as “the appearance of the composting site represented a shift within Montreal-area municipalities towards more environment-sensitive waste disposal practices” (Mikadze, 2021).

Furthermore, in addition to social, recovery, and environmental values reflected by such a project, the communal garden, Villa Compostela, represented sustainability. It “evolved from its own interpretation of the public purpose of vegetation in the city,

through the narrative of greenery for food production (rather than greenery for leisure or greenery for recycling)" (Mikadze, 2021).

Together, Parc Jeanne-Mance and Villa Compostela represented various benefits and objectives of guerilla gardening and landscape urbanism. Villa Compostela represented the values of urban green public space and production, and it "provides an illustration of landscape urbanism done radically" (Mikadze, 2021).

E. Landscape Urbanism as Urban Recovery

The landscape approach towards urban recovery "provides a dynamic framework that humanizes recovery by integrating tangible, physical reconstruction and intangible community needs" (Makhzoumi, 2010). By combining environment and people, "landscape designers expand the recovery discourse temporally and spatially beyond the built fabric of villages to embrace environmental, socio-economic and cultural development objectives" (Makhzoumi, 2010). Landscape as a tool and strategy for post-war recovery is suitable, as it has the capability to expand temporally, embrace continuity from local to region, and "programmatically to include people and place in post-war recovery" (Makhzoumi, 2010). The significance of landscape as urban recovery is its ability to frame "rural culture, [and unfold] local perception and [decode] traditional valuation of place" (Makhzoumi, 2010), thus becoming "a medium for configuring multifaceted, humanized recovery narratives" (Makhzoumi, 2010). Moreover, landscape as a tool for urban recovery is also concerned of the tangible and intangible values of the post-war environment, thus expanding its recovery objectives.

Also within landscape as a tool towards urban recovery is the integration of community gardens, which are land plots, made accessible to community members to

grow their own plants, and this "can support individual and community resilience in a post-disaster environment" (Okvat, Zautra, 2011). Such an intervention is rather community-based, and thus contrasts with other traditional top-down green space interventions like botanical gardens and city parks, as mentioned in **Figure 10** below, along with other concepts and elements within the understanding of landscape urbanism as urban recovery.

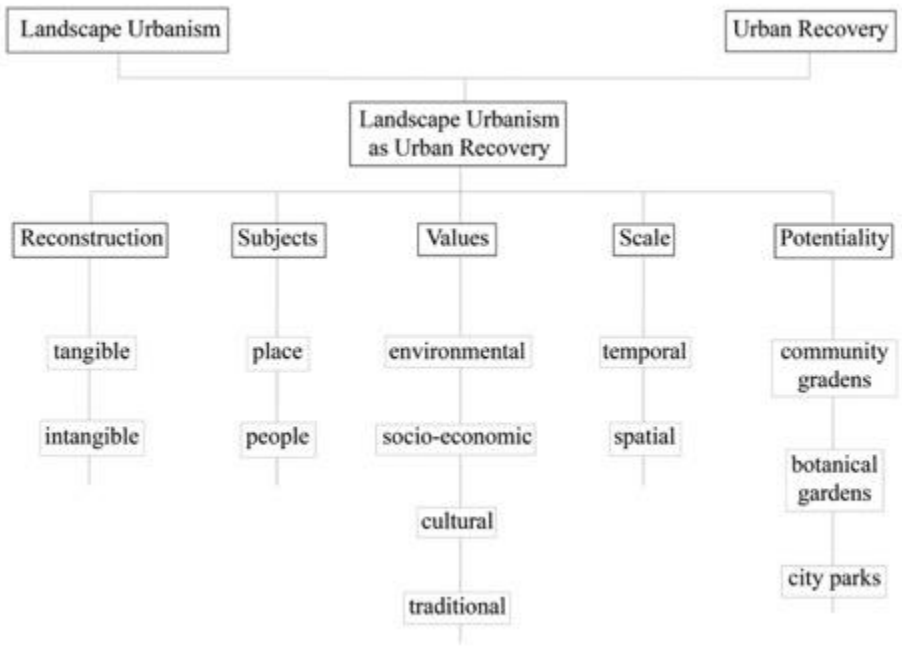

Figure 10 Landscape urbanism as urban recovery concepts

1. The Case of Al-Qleileh

Al Qleileh is a village in southern Lebanon, south of Tyre, which was approached by the Reconstruction Unit following the 2006 Lebanon-Israel war. A total of 246 houses were destroyed, and another 99 were partially damaged, so the area was heavily affected following the conflict. As mentioned earlier, the Reconstruction Unit (RU), formed by a multidisciplinary group of planners and architects affiliated with the

American University of Beirut (AUB) Department of Architecture and Design, contributed to the recovery process. The recovery process is the first step towards long-term recovery that entails social, economic, and psychological readjustment. Landscape as urban recovery was explored in this context, as "a landscape approach contextualizes recovery narratives, thereby responding to the specificity of place and culture in Southern Lebanon" (Makhzoumi, 2010). This village particularly focuses on agriculture and fishing as main sources of livelihood.

With the task of approaching post-war recovery through a landscape lens, the initial objective entailed "how to provide public spaces for the community to congregate pending the clearing of cluster bombs from the village open landscapes" (Makhzoumi, 2010). However, this objective was challenging, due to the absence of public land, and hesitation of whether the concept of public space, public parks, and public gardens is appropriate in such a context. Moreover, the locals' reconstruction priorities were also questioned. Consequently, the methodology of ecological landscape design and a comprehensive landscape reading was applied "to secure an in-depth assessment of the village's physical setting and equally to understand post-war socio-cultural dynamics in the village" (Makhzoumi, 2010).

Through a landscape design studio project, the comprehensive landscape reading studied different space typologies, including the village landscape, built and open, natural and agricultural, private and communally owned spaces. Four Ecological Landscape Associations (ELA's) were therefore identified, which included the "natural landscape of al-Qleileh beach, the agricultural landscape of the coastal plain, the marginal landscape of the school complex, and the cultural-religious landscape of Maqam Nabi 'Umran in the upper foothills" (Makhzoumi, 2010). It was found that

olive groves and orchards were valued in the area, and the people and surrounding landscape are very well integrated with each other, with farmers working in the fields, women harvesting lands, and children walking or cycling to school, thus the concept of walkscapes integrated within the proposed landscape studio projects.

The project brief for the landscape studio projects at the Landscape Design and Ecosystem Management Department at AUB were multi-functional post-war community landscapes, resulting with 4 different narratives each tackling different areas within al-Qleileh. The first site was al-Qleileh main road, where citrus and banana plantations are key elements of the village's economy, thus the narrative proposing the rehabilitation of the road into an agricultural wholesale during weekdays, and a walkable and accessible space during weekends. The second site approached Maqam Nabi 'Umran, a heritage and cultural area, in which connective walkscapes were proposed, in addition to improved mobility and tour buses. As for the third narrative of al-Qleileh School, in response to the spatial and visual separation of the school with the landscape, a series of activated open spaces were suggested, in addition to relocating the school, improving connectivity and mobility within and between the school and the village through vegetated paths. The fourth narrative in al-Qleileh coast, which is a significant area for migratory birds and sea turtles, proposed a multifunctional landscape with a community protected site by the beach, thus providing economic benefits through nature-tourism job opportunities, in addition to environmental benefits. Overall, the landscape proposals for each site were sensitive to the rural context, tackled the built, open, and natural environments, and highlighted the neighborhood's character and identity. Therefore, the "landscape approach to post-war recovery, as the al-Qleileh case study demonstrates, extends beyond the immediacy of the post-war condition and

beyond the physical reconstruction to serve in initiating development to benefit rural communities" (Makhzoumi, 2010), simultaneously improving the political, social, and economic aspects of the area, through careful consideration of the local context. The landscape urban recovery approach to post-war al-Qleileh helped integrate the tangible, spatio-physical and intangible, and socio-economic recovery objectives. This approach to recovery also helped propose solutions that empowered marginalized rural communities, and integrate a regenerative process that restores, repairs, and reconnects "war-disrupted socio-cultural and environmental linkages" (Makhzoumi, 2010). More significantly, such an outlook on urban recovery undergone through landscape tools and strategies breached the divide between literature and practice of post-war recovery.

2. The Case of New Orleans

Common Ground Relief, established in response and support of community rebuilding following Hurricane Katrina, focused their efforts on restoring agricultural sufficiency through urban farming, which "involved building new community gardens and restoring many that had been flooded, providing gardening advice, and organizing a local garden club" (Okvat, Zautra, 2011). These community gardens also enabled community members to grow produce independently, before grocery stores had reopened, in addition to strengthening community bonds.

CHAPTER III

CASE STUDY PROFILE

A. Introduction to Mar Mikhael

Mar Mikhael is a neighborhood located in Beirut, between the Medawar and Rmeil cadastral, as shown in **Figure 11**. However, despite being located within multiple administrative sectors, as shown in **Figure 12**, the area is commonly known as 'Mar Mikhael', as represented in **Figure 13**, a map of administrative sectors as shaped by individual accounts, reflecting the "extent to which city knowledge is individual and blurred, with myriad overlapping clusters where neighborhoods are sometimes contained within one another and sometimes too intricately connected to be told apart" (Fawaz, et al, 2018). **Figure 14** identifies the focus site boundaries selected for the purpose of this thesis' study and case profile analysis. These boundaries were chosen according to the understanding of administrative sectors as shaped by individual accounts, as previously shown in **Figure 13**. The edges of the site boundary are further selected according to the beginning of Armenia St., following the intersection of Pasteur and Gouraud streets on the west side, the Pierre Gemayel highway on the East, and one block of buildings by the North and South side of the focus site boundaries. The neighborhood is located above sea level, and on a hill, as shown in **Figure 15**, which connects to Achrafieh through stairs and hills. These stairs "were constructed in the Ottoman period along a steep north-south slope to enable access to plots and houses"

(Puzon, 2017).

Figure 11 Beirut cadastral map (Built on AUB Neighborhood Initiative, 2015)

Figure 12 Administrative sectors (Built on Fawaz et al, 2018)

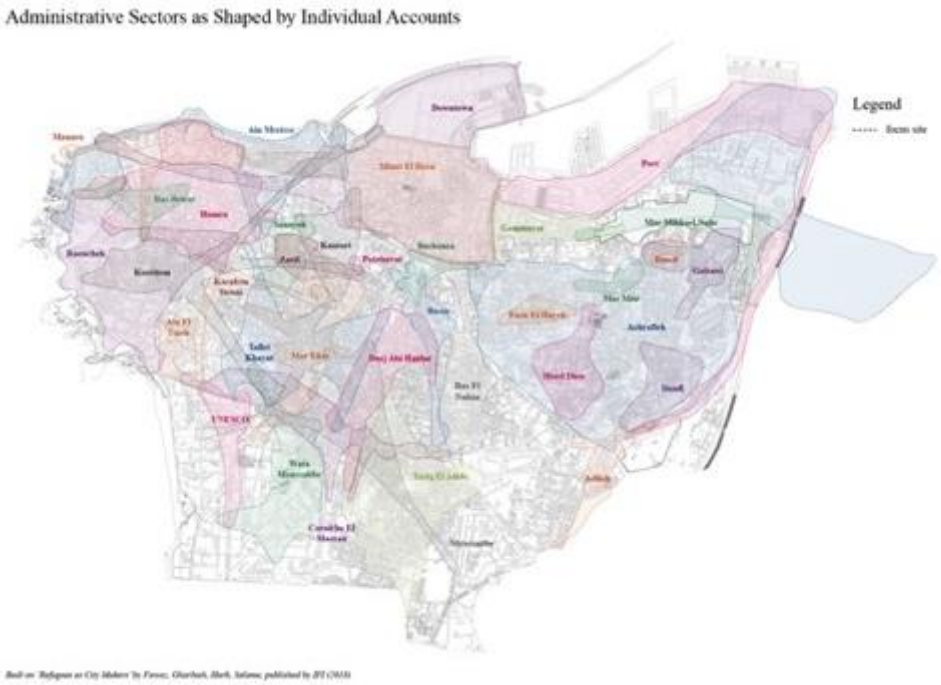

Figure 13 Administrative sectors as shaped by individual accounts (Built on Fawaz et al, 2018)

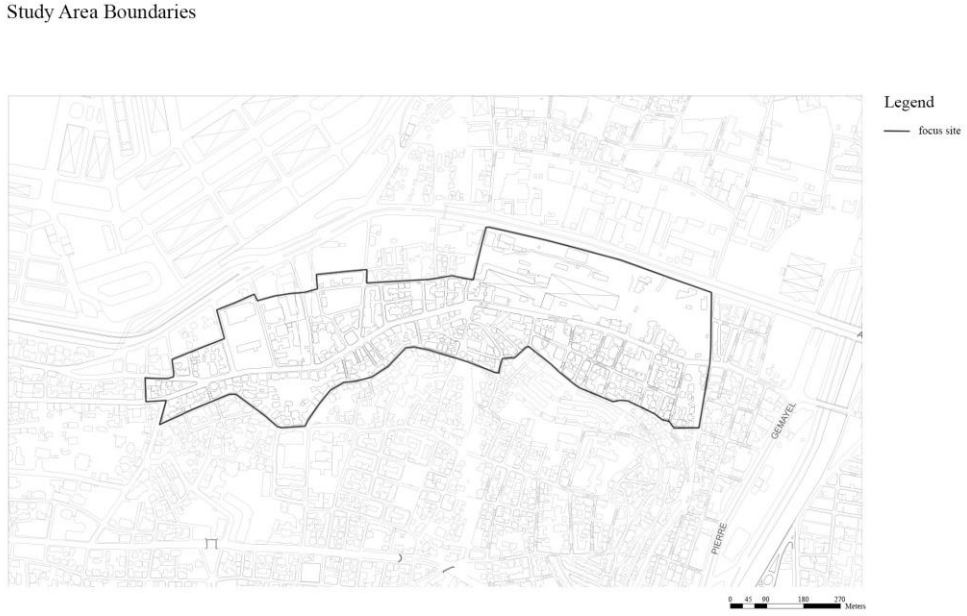

Figure 14 Study area boundaries

Figure 15 Topography

The neighborhood falls within 5 different zones, Zone 2, 3, 4, 6, and 7, as shown in **Figure 16**. As presented in **Figure 17**, notable landmarks within the area include the train station and Electricite Du Liban (EDL). Mar Mikhael's train station was demolished during the civil war, and since then never revived (Nagle, 2017).

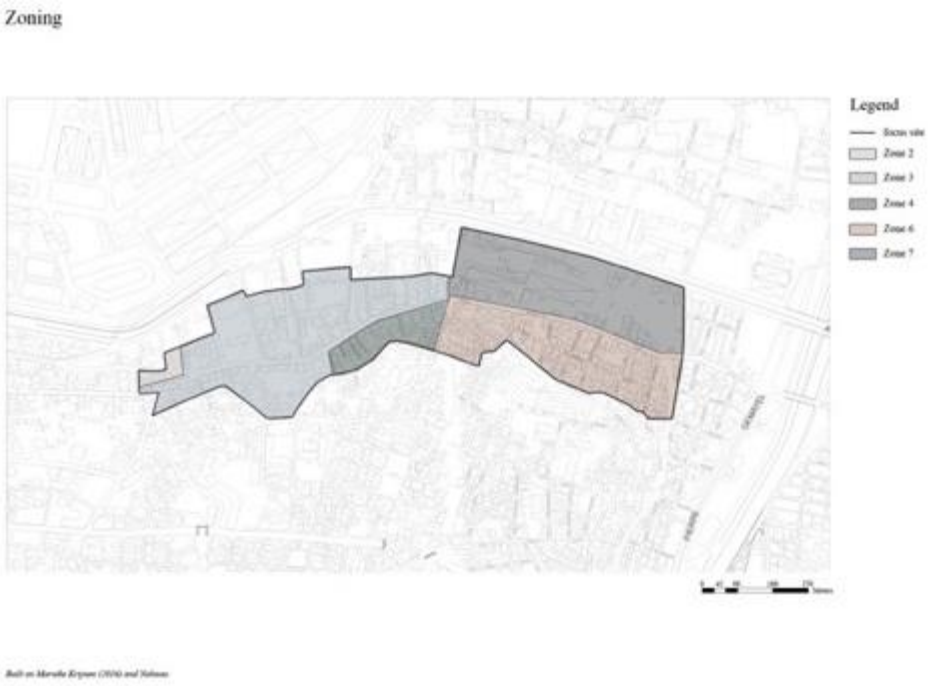

Figure 16 Zoning (Built on Krijnen, 2016)

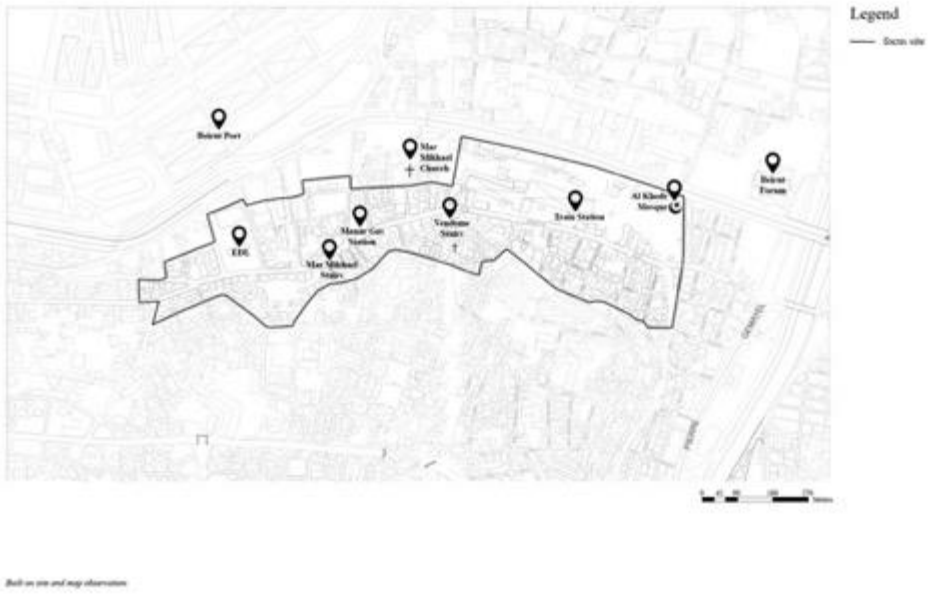

Figure 17 Landmarks

One of the severely damaged neighborhoods from the Beirut August 4 explosion is Mar Mikhael, as shown in **Figure 18**, a former bustling and lively neighborhood that was renowned for its hub of bars, restaurants, and creative industries, represented in **Figure 19**. The Beirut Blast "caused material damage to an estimated 77,000 apartments located across 10,000 buildings within a 3 km radius of the blast, impacting around 300,000 people" (Aouad and Kaloustian, 2021). However, prior to the blast, the neighborhood was bustling with activity, as the ground-floor level of the neighborhood's streets hosts "a hub of bars and restaurants with 'creative industries', including small-scale designers and art galleries invading the secondary streets of the area" (Fawaz, et al, 2018).

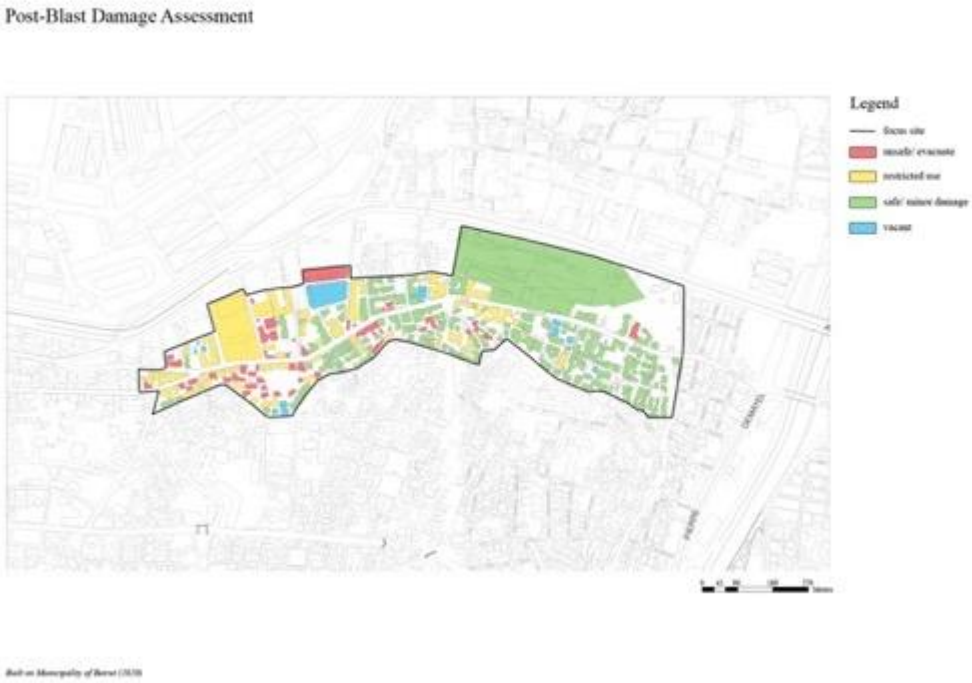

Figure 18 Post-blast damage assessment (Built on Municipality of Beirut, 2020)

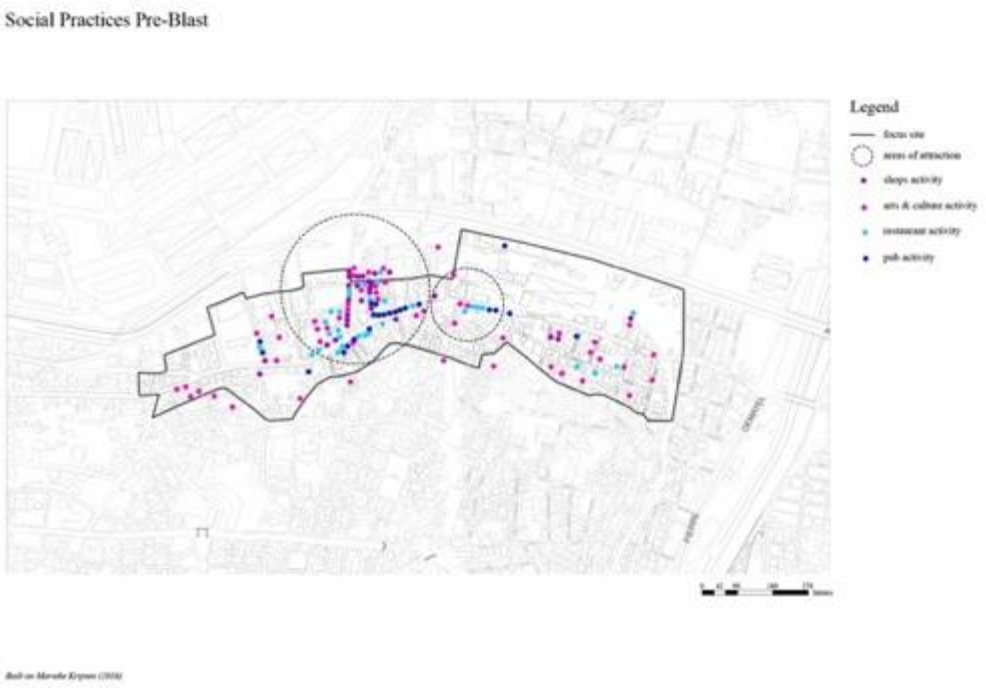

Figure 19 Social practices pre-blast (Built on Krijnen, 2016)

It was historically "occupied by car mechanics, small-scale industrial facilities, and local grocery stores" (Fawaz et.al, 2018). It is currently residential, as shown in **Figure 20** and **21**, and has been heavily gentrified over recent years. In addition to its residential quality, the area also hosts institutional, religious, governmental, mixed use, and commercial activities on the ground and upper floors. Gentrification is distrupting the residential character of the neighborhood, with consistent destruction of older buildings replaced by new ones; over the past years, "no less than eleven construction projects have been launched, causing the destruction of seventeen buildings, while at least another dozen have been emptied and are awaiting demolition" (Fawaz, et al, 2018). Its demographics consist of "a diverse social mix of older, long-time residents…and young newcomers" (Gerbal, et.al, 2016), those of which are mostly

Armenian and Lebanese Christian, as shown in **Figure 22**.

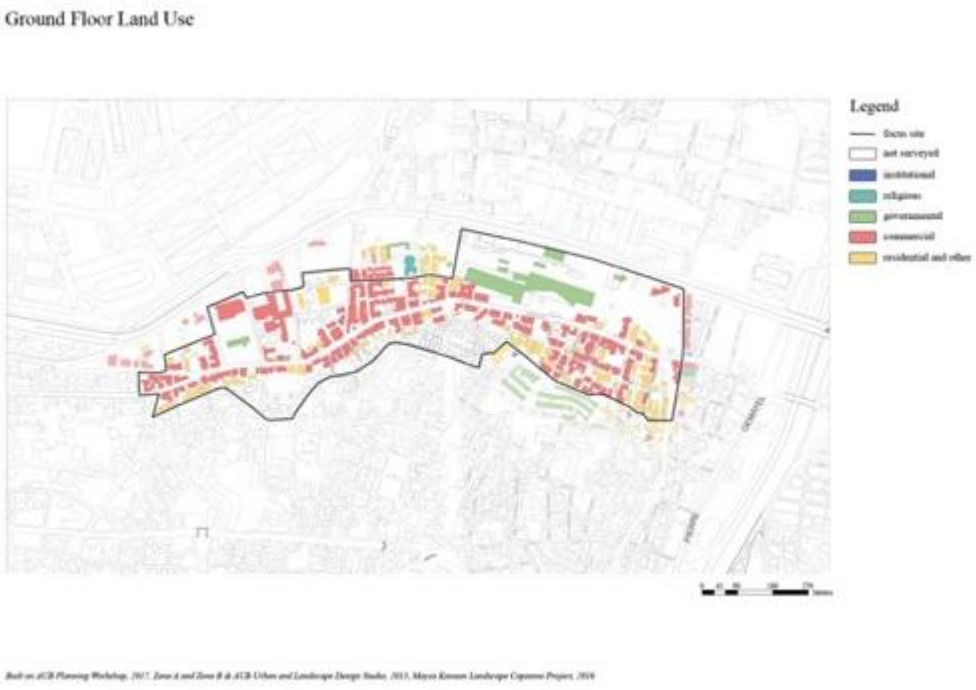

Figure 20 Ground floor land use (Built on AUB Planning Workshop, 2017; Urban and Landscape Design Studio, 2013; Kanaan, 2016)

Figure 21 Upper floor land use (Built on AUB Planning Workshop, 2017; AUB Urban and Landscape Design Studio, 2013)

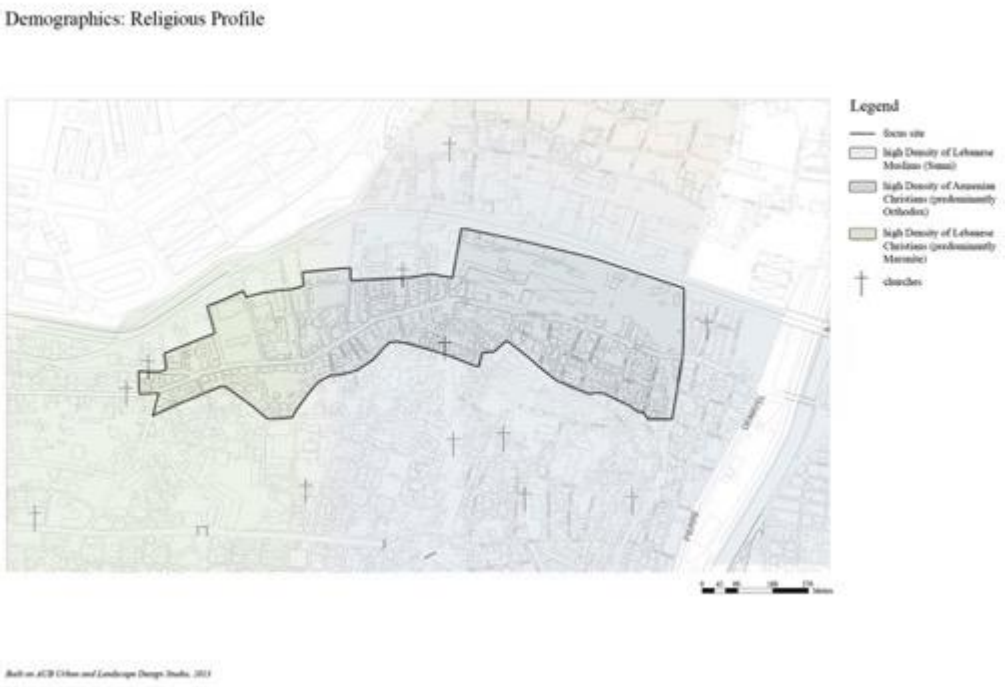

Figure 22 Demographics, religious profile (Built on AUB Urban and Landscape Studio, 2013)

This age gap is also reflected in socio-economic studies of the neighborhood, which denote that newcomers are not the children of the neighborhood's original population, but are rather attracted to the area's trendiness and have greater financial means, as the original younger generation could not afford rising rent rates. Due to the blast, more than 600 historic buildings were damaged according to estimates from the Beirut Heritage Initiative. This adds to the area's initial infrastructural challenges including "the poor state of the sidewalks and stairs, as well as larger lack of visibility" (Gerbal, et.al, 2016). Mar Mikhael is bordered by Avenue Charles Helou to the north, the old train station to the east, narrower and mostly single-lane roads within, and is connected with neighboring areas by stairs and alleyways. The few shared, "public spaces- it

streets, sidewalks, and stairs- are often infringed upon by new constructions…leaving little room for residents to walk" (Gerbal, et.al, 2016). In conclusion, Mar Mikhael, a treasured neighborhood in the heart of Beirut, is one with urban challenges that have only worsened in light of recent disaster; this thesis will propose and explore urban recovery design solutions for the area.

B. Socio-Economic State

Mar Mikhael is estimated to house approximately 20,000 residents, compromised of a largely older population, with individuals at 40 years or older, which is higher than the national average. Approximately, 32% of the residents are 55-70 years old and 15% are older than 70 (Buccinati-Barakat, Hariri, 2007). The neighborhood continues to experience an increase in new residents, usually younger than 40 years old, who are attracted to this emerging creative popular hub. Not only is this neighborhood attracting a generation of newcomers, but preventing the older generation's children to continue living in the area because "they couldn't afford the neighborhood's rising rents" (Gerbal, et.al, 2016). However, 23% of the residents have been living in Mar Mikhael for over 50 years, while 64% of the residents were born in the neighborhood. This shows that a significant portion of the neighborhood's older residents is native to the area. Moreover, approximately 52% of residents rent their apartments, as shown in **Figure 23**, while 48% are owners; these renters are "of course more susceptible to eviction and displacement from the neighborhood" (Goulordava, 2021) due to being

under old rent contracts when the new rent law goes into full effect.

Figure 23 Building ownership (Built on AUB Planning Workshop, 2017)

Furthermore, the high number of old renters, which are “almost 80% of the renters” (El Samad, 2021) also created greater possibility for a rise in the rent gap “one explanation for the continued gentrification in the neighborhood as landlords seek to capitalize on their properties after having received meager income often for decades” (Goulordava, 2021). In addition to this significant age gap in the neighborhood, “Mar Mikhael witnessed proliferation of cultural and commercial industries accompanied by the rapid spread of leisure activities, all of which considerably changed the rhythm of the neighborhood” (Ghaddar, 2020), which had caused conflicts between longtime residents and newcomers. Nevertheless, neighborhood relations are well connected through familial relations, economic relations, labor relations, or leisure relations, as

shown in **Figure 24**.

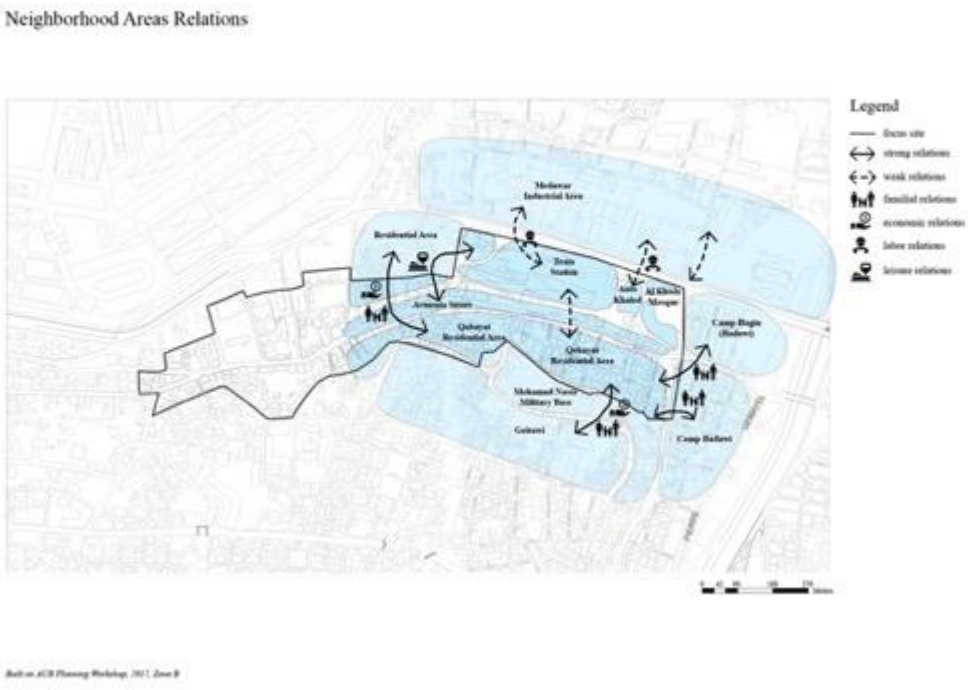

Figure 24 Neighborhood areas relations (Built on AUB Planning Workshop, 2017)

Such change of neighborhood character was apartment as many of the smaller more traditional shops on street level were replaced with new pubs, restaurants, and designer boutiques, attracted by the low rents. These creative businesses were predictably followed by restaurants and nightlife venues, and finally by investors and real estate developers, particularly after 2008" (Ghaddar, 2020). However, the neighborhood is not exclusively identified by the entertainment zone, but rather features multiple neighborhood characters, including the business zone, the creative zone, the

residential zone, and more, as shown in **Figure 25**.

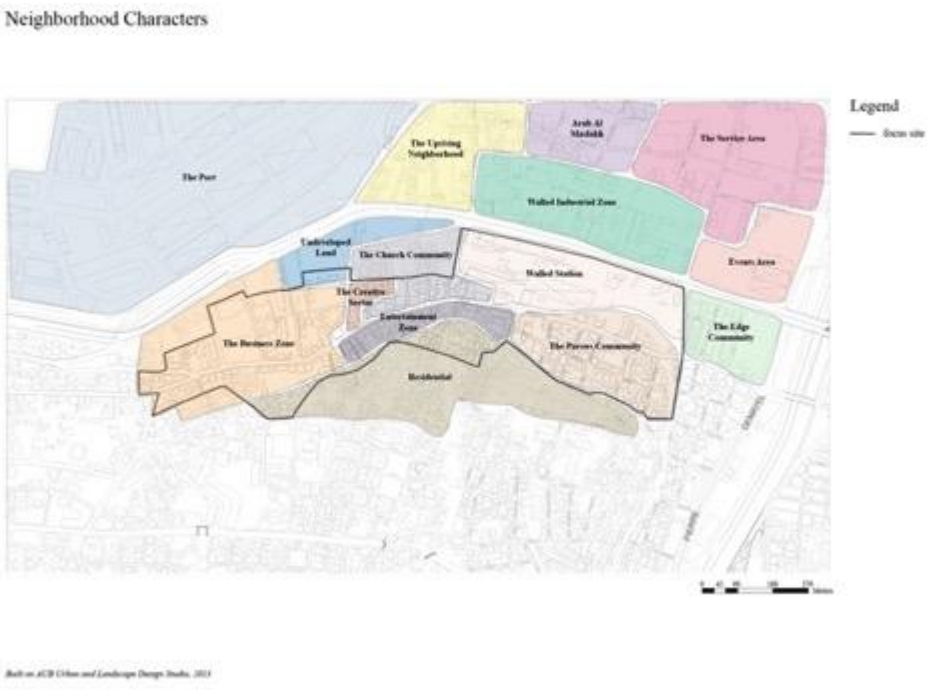

Figure 25 Neighborhood Characters (Built on AUB Urban and Landscape Design Studio, 2013)

It is also important to realize that the rent-gap and the economic shift in the area "are two components that gradually escalated in parallel" (AUB Planning Workshop, 2017). Nevertheless, Mar Mikhael's demographic also includes non-residents such as shop-owners, most of which come from "other parts of Beirut's agglomeration such as Daoura, Jounieh, or Ain Saadeh. Also, most shop tenants described themselves as belonging to lower to lower-middle class socio-economic backgrounds" (Krijnen, 2018). There is also a significant amount of shop tenants under the old rent law, also at risk of being evicted. The majority of the shops in the area opened recently, which derived a shift in "the type of clientele- from low-medium to medium-high end

consumers" (AUB Planning Workshop, 2017). Moreover, most of the local businesses are vanishing "due to the increase in rent prices and the decline of their business or in some cases the purchase of the building by developers (leading to their eviction)" (AUB Planning Workshop, 2017).

Therefore, one can undoubtedly say that Mar Mikhael is a gentrified neighborhood that hindered the continuation of generational continuity by dissuading children of longtime residents to persist reside in the area due to rising rent rates, but rather attracting newcomers captivated by the area's trendiness and growing creative hub. Nonetheless, particularly after the blast, further gentrification continues to be a risk for the area, especially if "aid and capital were to flow without consideration for people" (Beirut Urban Lab, 2020).

C. Mobility and Infrastructure

As a brief historical introduction to Mar Mikhael's infrastructure profile, during the French mandate and independence period, "urban regulations were introduced for the sake of enabling large-scale infrastructural projects such as building highways, ring roads and streets, in addition to establishing crucial public services and amenities (such as Electricite du Liban in Mar Mikhael" (Ghaddar, 2020). Also during this period, the port was an integral part of the city's growth and significance in global trade, regional exchange, and local markets. Such growing importance of the port thus required "the development of local infrastructure" (Ghaddar, 2020), to maintain the city's role of being "the link between the Mediteranean and the Gulf region" (Ghaddar, 2020). It was then when Mar Mikhael transformed into a major infrastructure hub with national and regional importance, featuring the now-abandoned train station and train track, which

was “the point of intersection between the port, the coastal axis, which connected Syria to Palestine passing by Beirut, and the continental axis, [connecting] Beirut to Damascus and the rest of the Gulf” (Ghaddar, 2020), as represented in **Figure 26** and **27**. Moving from the Mandate period, the 1943 Independence era featured expansions in the infrastructure of the neighborhood due to an economic boom “that manifested itself in the rise of the construction sector, the increasing expansion of the Port, and the concentration of industries along Armenia Street, making it an ideal site for industries seeking cheap labor and cheap land” (Ghaddar, 2020). Also in the mid-1940’s, the government’s intention for building a service-based national economy was further reflected in their development projects for modernizing road infrastructures as arteries to provide quick access and mobility for goods and shipping material; this included building expressways, such as the peri-central expressway, also known today as the ‘ring’.

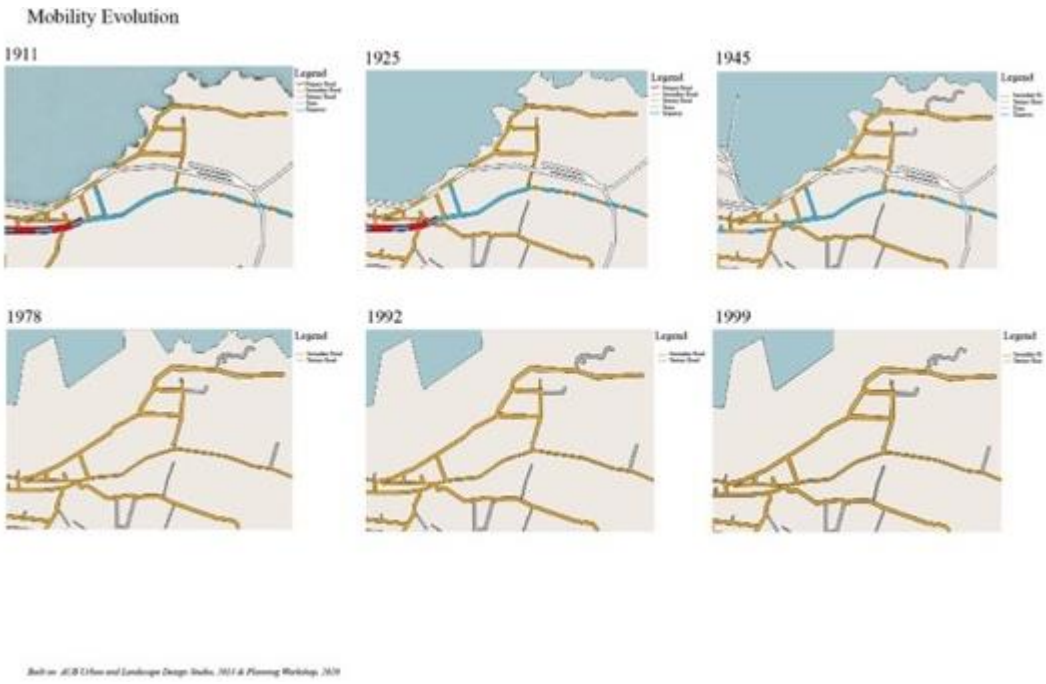

Figure 26 Mobility evolution (Built on AUB Urban and Landscape Design Studio, 2013; Planning Workshop, 2020)

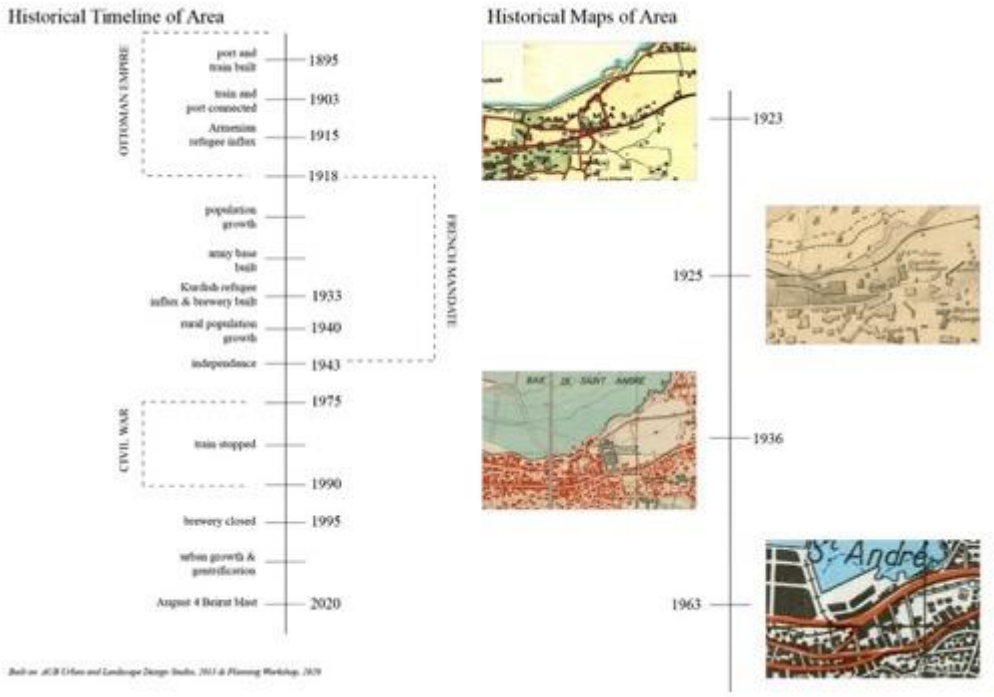

Figure 27 Historical timeline of the area (Built on AUB Urban and Landscape Design Studio, 2013; Planning Workshop, 2020)

This highway, till today, divides two different neighborhoods from one another- a start to urban fragmentation in the city. Despite all such historical development between 1895 and 1936 in the neighborhood and its growth through infrastructure, Mar Mikhael's infrastructural services gradually came to a collapse. It is no doubt that "the collapse of all [these services]…played a key role in the changed of the neighborhood, including less employment an economic opportunities and the creation of vacant spaces" (Goulordava et al). The port, once a prominent area of trade, "became less accessible as it [became] blocked by the Charles Helou Highway" (Goulordava et al). This highway is among many infrastructural obstacles that eventually lead to the

fragmentation of the neighborhood, as illustrated in **Figure 28**.

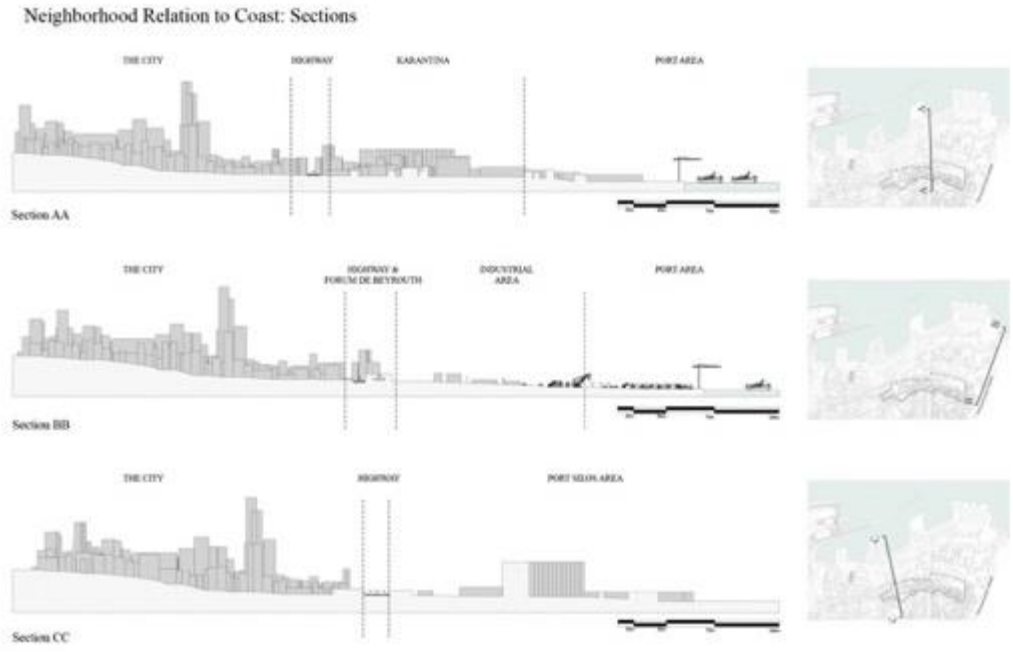

Figure 28 Sections portraying neighborhood relations to coast

Services and infrastructure in Mar Mikhael are also “unevenly distributed in terms of availability and maintenance, as old heritage buildings are not provided with sufficient services such as water, electricity, or parking spaces” (AUB Planning Workshop, 2017). Old heritage buildings are indeed prevalent in the neighborhood, as shown in **Figure 29** and **30**. However, even prior to the blast, heritage buildings are not well protected due to “building regulations that allow developers to build higher and larger buildings, inefficient heritage protection frameworks” (Fawaz, et al, 2018), and incentives that encourage developers to demolish existing buildings and replace them. Nevertheless, “the few heritage buildings that remain under protection today are often illegally demolished by landlords and developers alike, without prosecution” (Krinjen,

2018).

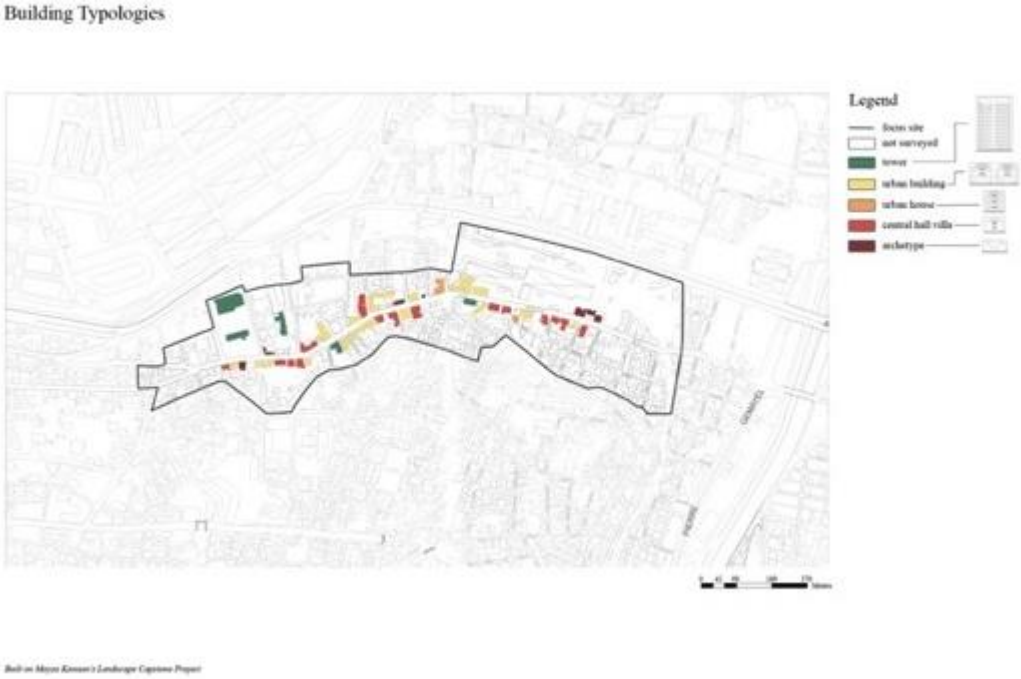

Figure 29 Building typologies (Built on Kanaan, 2016)

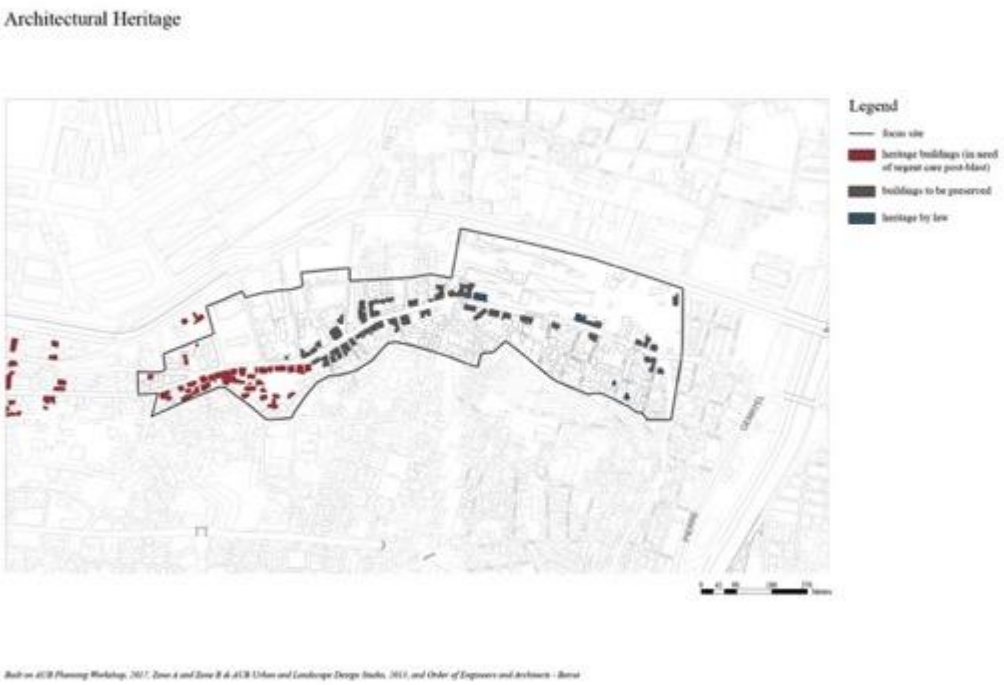

Figure 30 Architectural heritage (Built on AUB Planning Workshop, 2017; AUB Urban and Landscape Design Studio, 2013; Order of Engineers and Architects, 2020)

Nevertheless, even when these services are available, they lack maintenance and are neglected by the municipality, as compared to area with new development where contrastingly infrastructure is very well regarded. According to a study in collaboration with Gaia Heritage, arts, crafts, and design (ACD's) "cited a lack of urban infrastructure and poor state of the sidewalks and stairs, as well as a larger lack of visibility, as factors which slow their growth" (Gerbal et al, 2016), which could otherwise be strengthened by regarding such infrastructural challenges, and other required areas of improvement. Moreover, the transportation infrastructure issue not exclusive to the area, but existent on the city-scale, is lack of a public transportation system, in addition to inappropriate walkability and social services and infrastructure (AUB Planning Workshop, 2013), which will be discussed more thoroughly in the next section.

D. Public Space and Mobility

Despite historical prominence of Mar Mikhael "especially concerning mobility and exchange" (Ghaddar, 2020), with national and regional importance, this is no longer the case. Beirut lacks public and green spaces, as shown in **Figure 31** and **32**, but this is especially the case in Mar Mikhael, where green spaces and well-vegetated walkways is deficient, as illustrated in **Figure 33**. Public spaces and proper circulation

is lacking in Mar Mikhael.

Figure 31 Green spaces in Beirut (Built on Francis Landscapes Ltd/Habib Debs Architects - Urbanists, 2012)

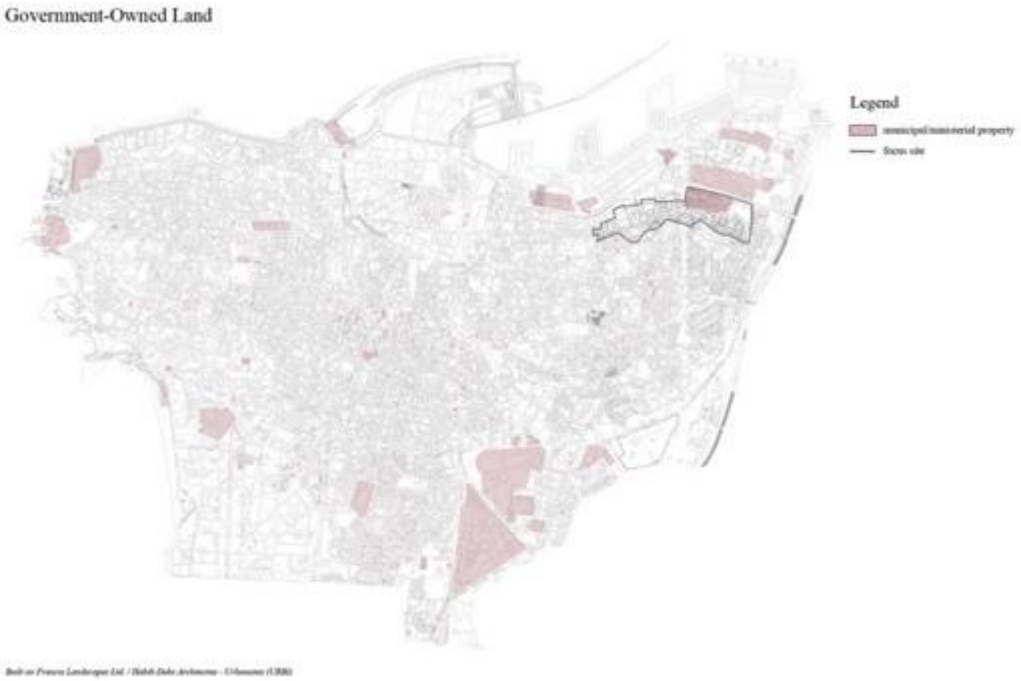

Figure 32 Government-owned land in Beirut (Built on Francis Landscapes Ltd./ Habib Debs Architects - Urbanists, 2012)

Figure 33 Urban vegetation in Mar Mikhael

As mentioned earlier, Mar Mikhael has seen a rapid influx of new bars, restaurants, and development, “all of which have contributed to rising rents, a loss of shared, public spaces, increased nighttime noise and traffic” (Gerbal etl.al, 2016), as shown in **Figure 34**, in addition to the displacement of residents. Prior to the blast, Mar Mikhael, and particularly Armenia Street contributed to noise pollution during the nighttime, whereas daytime noise pollution normally comes from the neighboring Charles Helou highway.

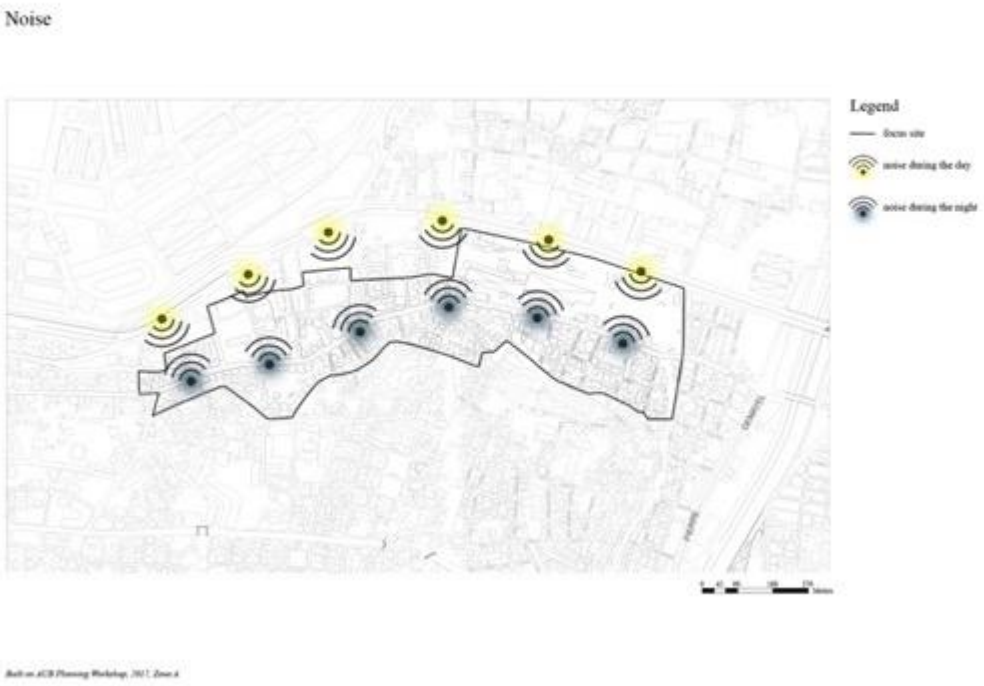

Figure 34 Noise in Mar Mikhael pre-blast (Built on AUB Planning Workshop, 2017)

It has thus been found that accessibility to public space is lacking, particularly as sidewalks are insufficient, in addition to being inadequate as vehicles commonly park on sidewalks, as shown in **Figure 35**, leaving very little compromise for the pedestrian, and rather greater priority towards the vehicles. Cars in Mar Mikhael either intrude and

park on sidewalks, in parking lots, or by the street.

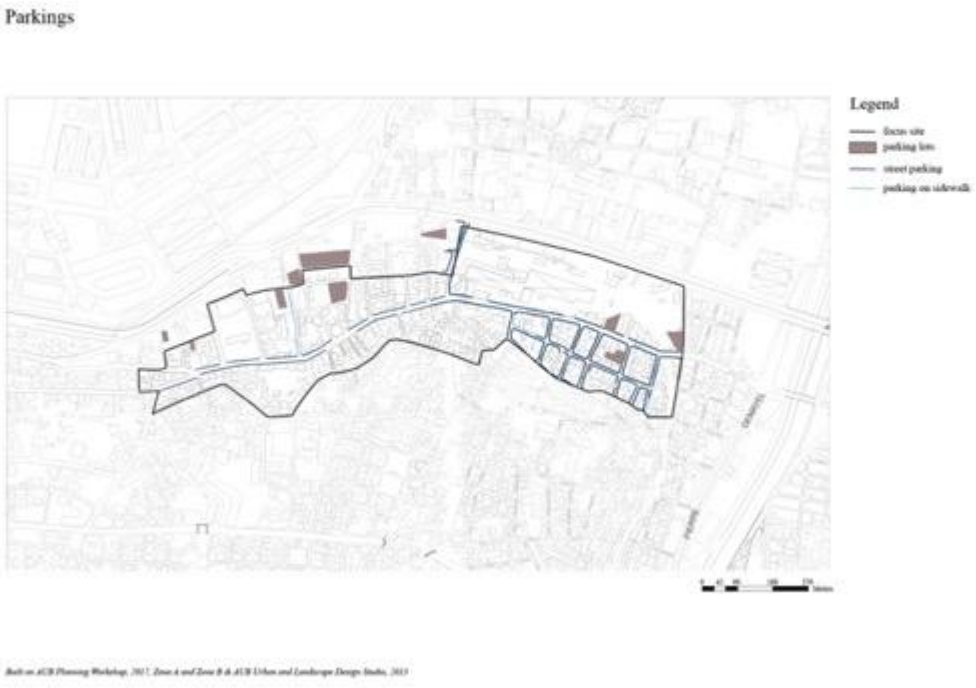

Figure 35 Parkings in Mar Mikhael (Built on AUB Planning Workshop, 2017; AUB Urban and Landscape Design Studio, 2013)

Not only are vehicles parked on sidewalks, but restaurants also use sidewalk space for outdoor dining areas, also contributing to the flawed walkability in the area. In particular, "the neighborhood's few shared, public spaces- its streets, sidewalks, and stairs- are often infringed upon by new constructions, or are used as terraces for private bars and restaurants, leaving little room for residents to walk, particularly at night" (Gerbal et.al, 2016), as expressed in **Figure 36** and **37** below. **Figure 37** also identifies Mar Mikhael's renowned stairs as part of the pedestrian network, which are structures that have over the years "acquired a certain aura, both as an object and a resource of nostalgia underpinning heritage claim-making" (Puzon, 2017). Two significant stairs in

the area are the St. Nicolas Stairs, “famous for their characteristic straightness and their 125 steps” (Puzon, 2017), where events and artistic expression is welcomed. The Vendome Stairs has similarly hosted public artistic events in the past, as part of a campaign against the demolition of the Cinema Vendome, thus the area and its activation symbolizing the people’s aim to reclaim public space. Activists to this day continue to protest and express their demand to preserve the neighborhood stairs.

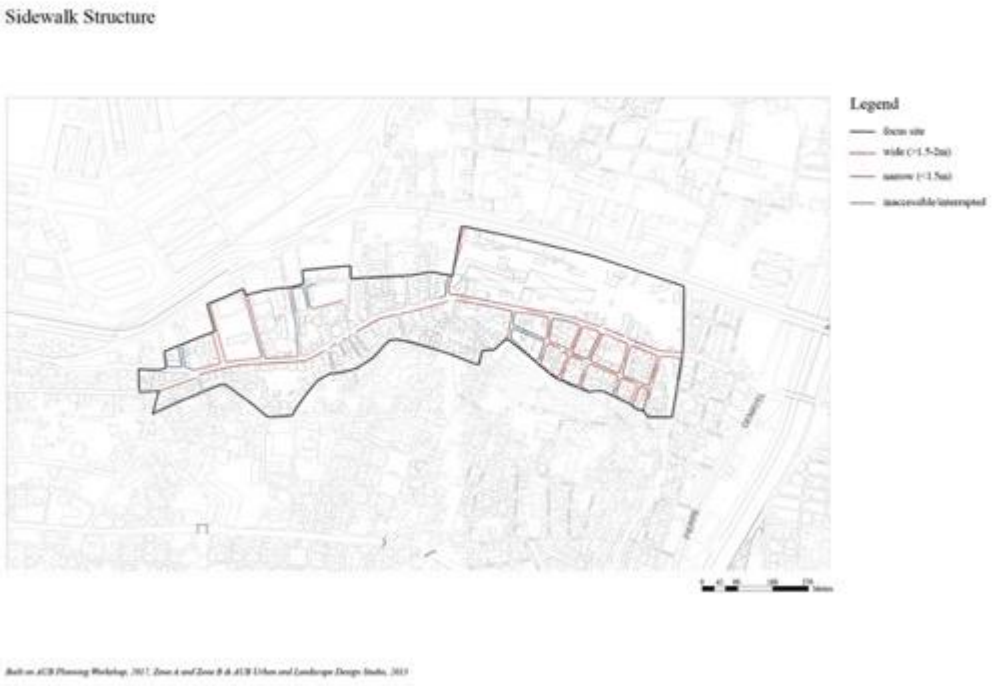

Figure 36 Sidewalk structure (Built on AUB Planning Workshop, 2017; AUB Urban and Landscape Design Studio, 2013)

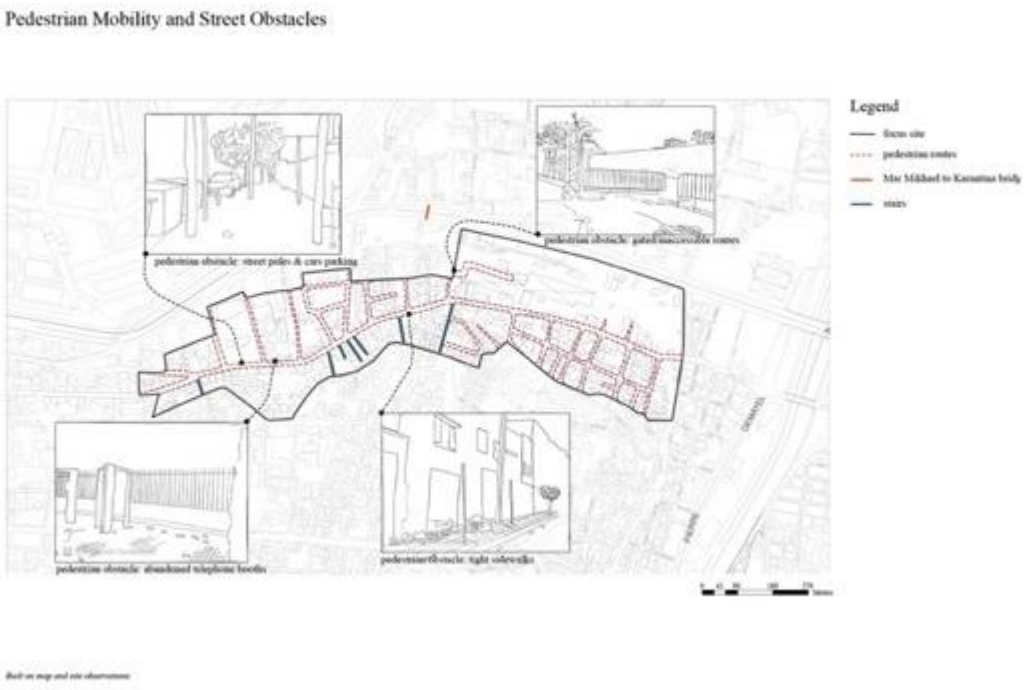

Figure 37 Pedestrian mobility and street obstacles

This has led to the re-appropriation of public spaces, where people "spend their free time on sidewalks…due to scarcity of sidewalks in the area" (Ghaddar, 2020). The area is comprised of two primary roads, Charles Helou highway, and Armenia main streets, as mapped in **Figure 38** and **39**, which are adjacent to other secondary and tertiary roads, thus creating a grid form and a rigid edge for pedestrians. Prior to the blast, pedestrian flow on Armenia Street during the weekends was mostly difficult, due

to the heavy traffic during this time period, as shown in **Figure 40**.

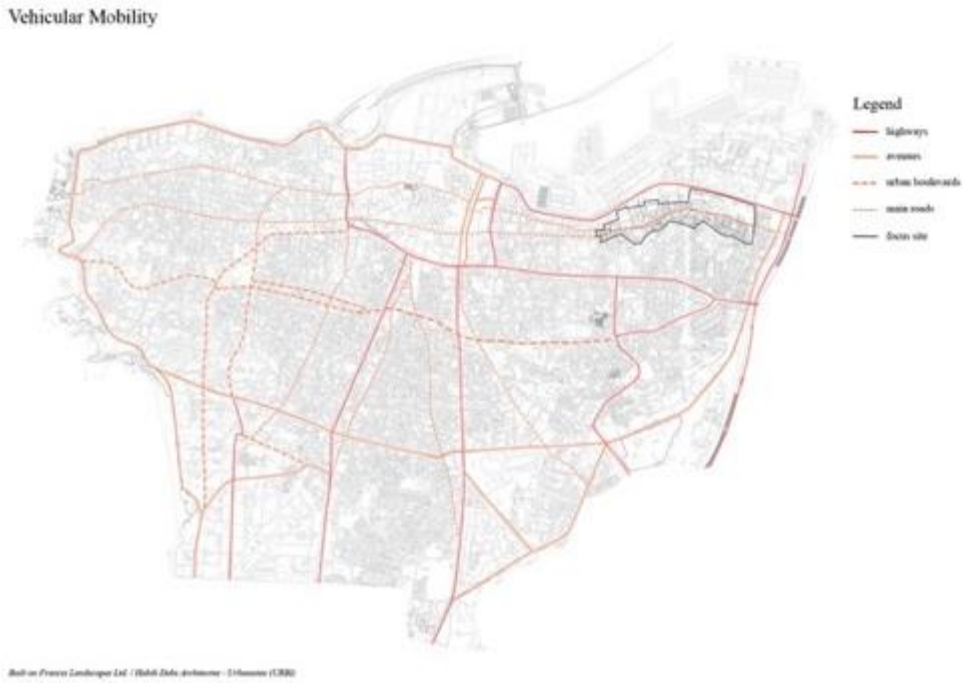

Figure 38 Vehicular mobility in Beirut (Built on Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

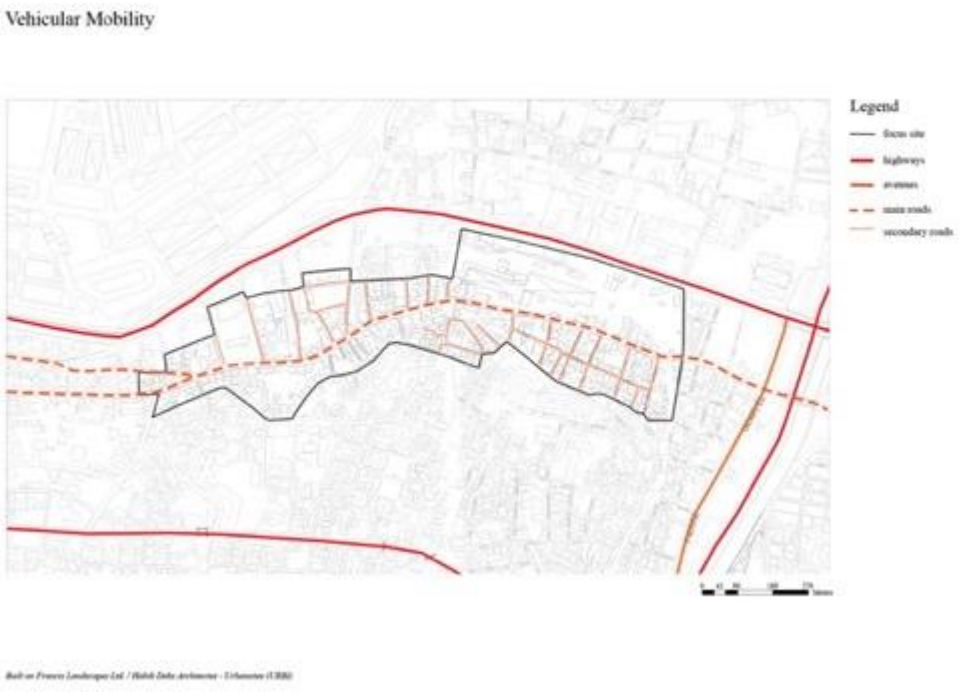

Figure 39 Vehicular mobility in Mar Mikhael (Built on Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

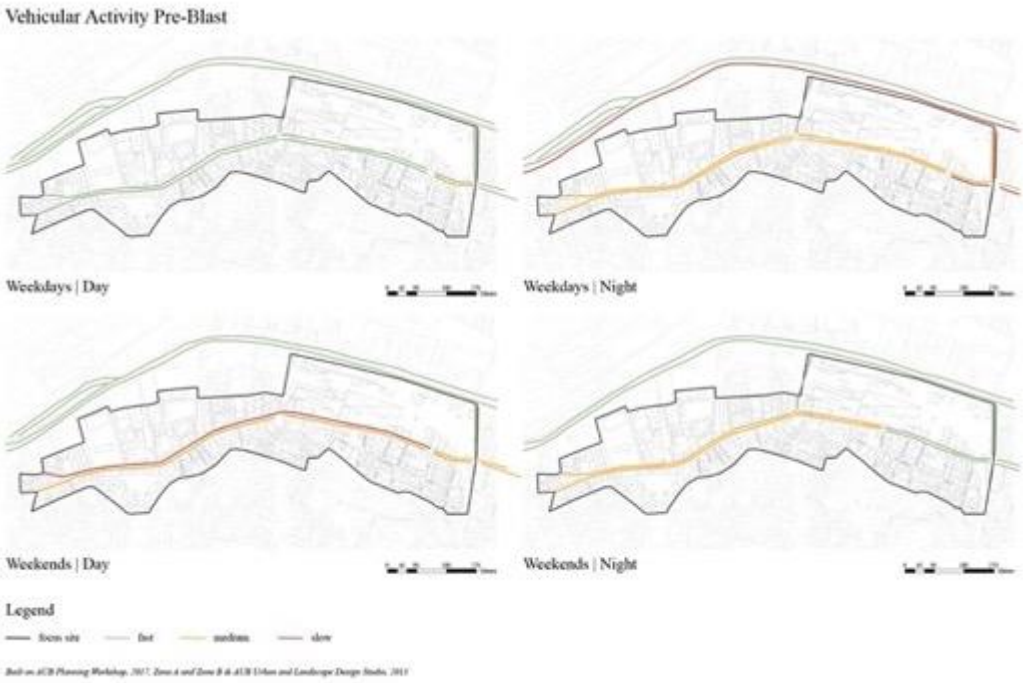

Figure 40 Vehicular activity pre-blast (Built on AUB Planning Workshop, 2017; AUB Urban and Landscape Design Studio, 2013)

The site also features "several dead-end roads that are usually found because of sudden topographical changes or along the remaining traces of the old train railway" (AUB Planning Workshop, 2017). Pedestrian and vehicular flow are intersecting and colliding frequently, which denotes improper division between the two modes of mobility; "since sidewalks are either narrow or inaccessible…[it was found] that people are forced to walk on the street resulting in an uncomfortable and unsafe pedestrian circulation as well as for a disrupted vehicular one" (AUB Planning Workshop, 2017). Moreover, with absent traffic lights or pedestrian crossings installed in the area, as conveyed in **Figure 41**, "cars represent [a threat] for the dwellers, especially with the

lack of a consistent continuity of sidewalks" (AUB Planning Workshop, 2017).

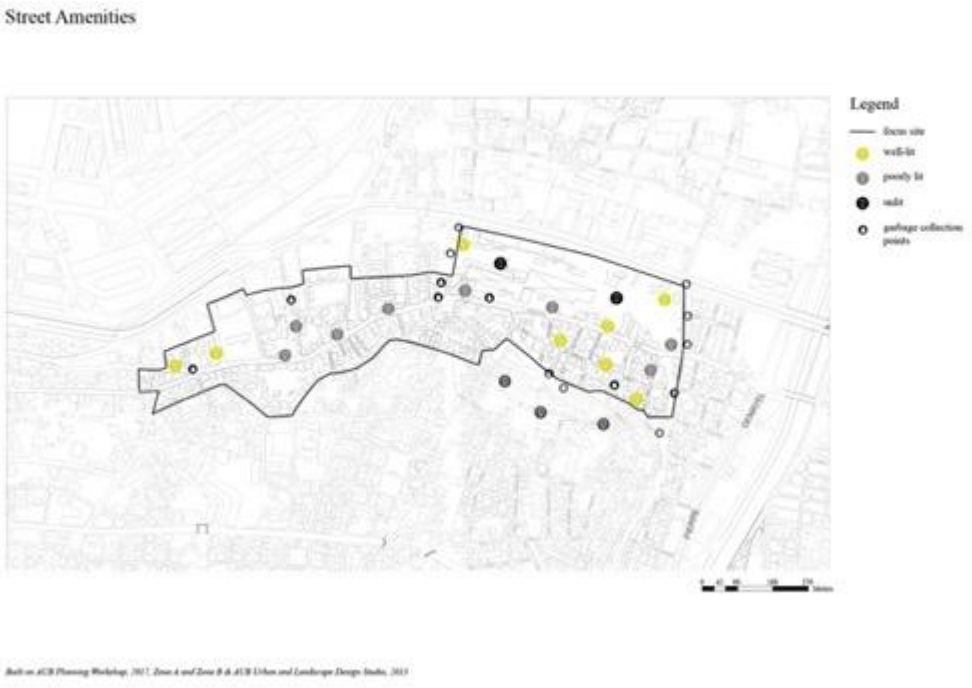

Figure 41 Street amenities (Built on AUB Planning Workshop, 2017; AUB and Urban Landscape Design Studio, 2013)

It has been found, by studying a particular area segment along Armenia street near the train station, that "45% of the total area is made of open space (even after [excluding] streets and sidewalks), but only 3% of this area is actually accessible while the majority of the inaccessible open spaces include the train station area, the army bases, the private residential courtyards, in addition to the residual spaces between buildings" (AUB Planning workshop, 2017), mapped in **Figure 42**, along with other vacant spaces in the area. Despite the numerous empty plots in the area, only a few are "communal places where inhabitants can actually meet" (Osama, 2018).

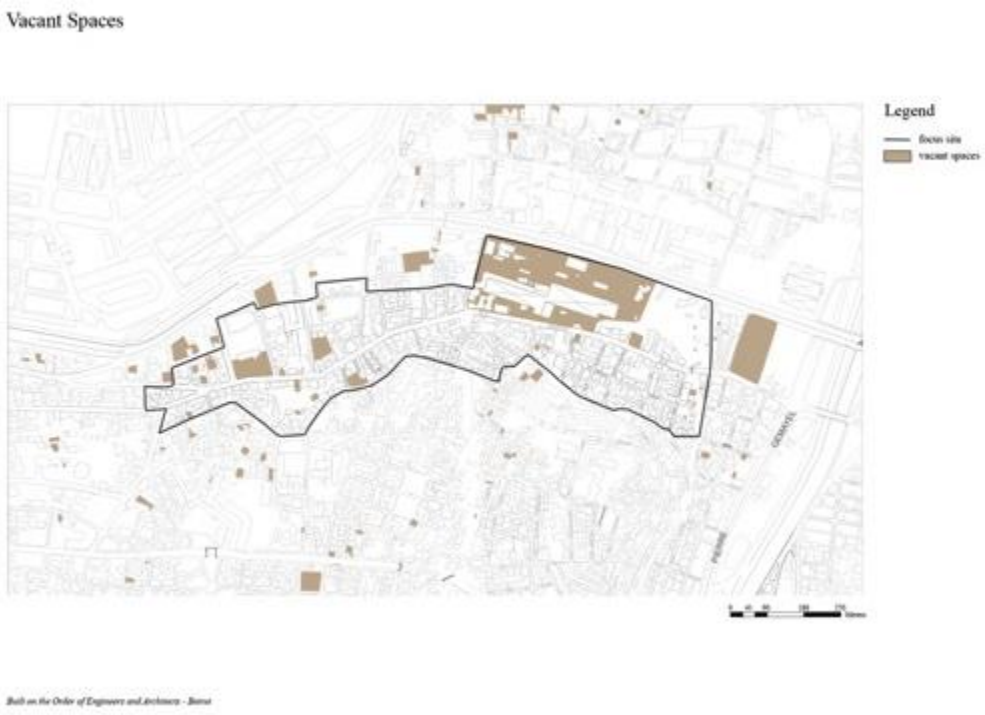

Figure 42 Vacant spaces (Built on Order of Engineers and Architects - Beirut, 2020)

Train station, despite its accessibility, is “the only true ‘green’ space in the neighborhood (and one of the few in the city)” (Gerbal, et.al, 2016). Furthermore, in regards to the area’s vegetation, green typologies found in the area include street vegetation, vegetated inaccessible spaces, and residential green facades. Mar Mikhael and its context, particularly the area affected by the August 4 blast, barely features gardens, and municipal property, whether train station or the army base, are rather inaccessible. However, when assessing the area’s public spaces and mobility, it is important to understand the actors and regulatory bodies responsible for transportation, public spaces, and such. This administration is rather fragmented, which is “a frequent situation of immobility and inefficiency” (Gerbal et.al, 2016), where projects for the improvement of the public realm and transportation are rather declined or not implemented. The train station serves as an example of this, as it is “the property of the

Ministry of Public Transport, yet so far it has launched no projects for it redevelopment" (Gerbal et.al, 2016). In synopsis, open, green and public spaces are scarce and mostly inaccessible, street vegetation is inconsistent, highways and vehicular activity overshadows the pedestrian experience, which is insufficient due to the poor conditions of sidewalks, stairs, and bridges, all of which are interrupted, compact, unmaintained, and inconsistent. As this thesis' main aims include the revival of community spaces and publicness in the neighborhood, it is important to understand the implications and significance community spaces are and the need to de-privatize and improve their accessibility, particularly for the older demographic in the neighborhood. As conveyed through interviews conducted by Ali Ghaddar, "residual spaces had an important role for social and communal interaction in the neighborhood" (Ghaddar, 2020), despite their private ownership. Ghaddar further stresses the prominent role of such residual spaces, as "these spaces comprised large vegetated social gathering spaces…for social interaction among the residents, and play areas for the neighborhood's kids" (Ghaddar, 2020). Not only were residual spaces areas for community gatherings, but also the neighborhood stairs hosted such gatherings, and "were also used as semi-public linkages and shortcuts, connecting Armenia Street to Al Khazinain, where more exchanges took place" (Ghaddar, 2020). With a look back to the areas where community gatherings historically took place, stairs and residual spaces are the opportune spaces to consider when approaching a design concept for this thesis' particular aim of preserving spaces activated post-disaster, some of which are mapped

and photographed in **Figure 43**.

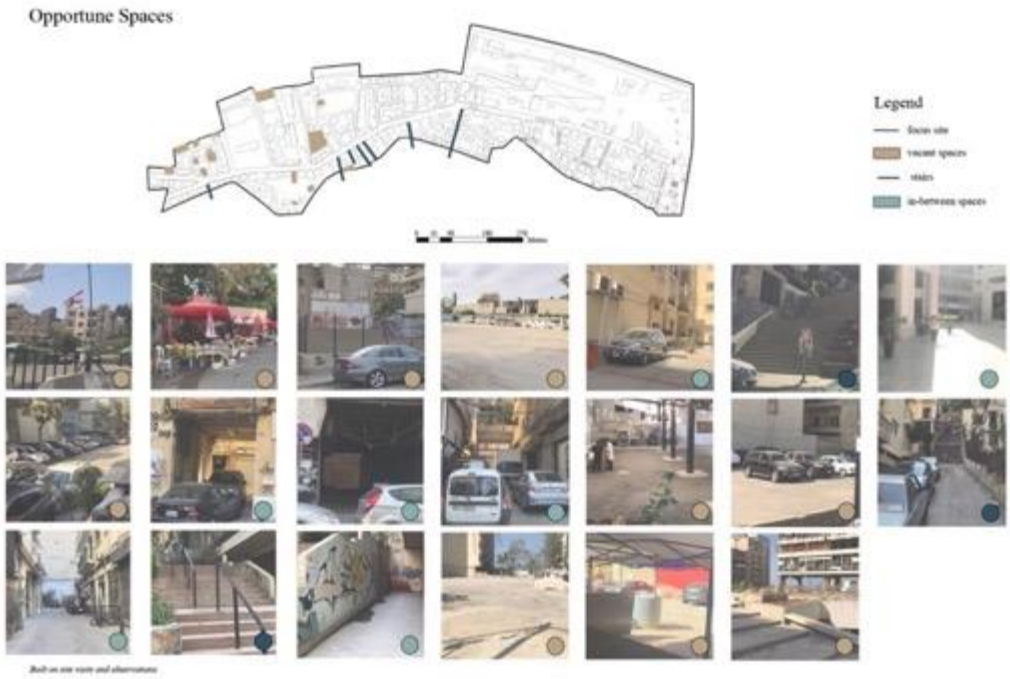

Figure 43 Opportune spaces

E. Post-Blast Public Practices

In response to the blast, numerous volunteers and organizations took to the streets to collaboratively recover the destructed neighborhood. As shown in **Figure 44**, NGO's set up workstations along Armenia Street and on vacant lots, transforming the area into an area of voluntary activity. Their initiatives approached helping children, rebuilding houses, and funding shelters. The diverse engagement also included "distributing food, cleaning debris, providing medical and mental health services, donation drives, and linking affected residents with suppliers and contractors" (World Bank, 2020). Most importantly, the people, NGO's and the private sector's efforts were not directed to governmental agencies due to the lack of trust, but rather "focused directly on the needs of the displaced and affected individuals" (El Sayed, 2020).

Indeed, “where the government has failed, non-governmental organizations have stepped up” (Hankir, Chehayeb, 2020). Although NGO’s held influential roles pre-blast, as shown in **Figure 45**, their impact post-blast was even more significant, particularly considering the various roles and activities carried out in response to the needs of the locals, including rehabilitation, food, and reconstruction, as shown in **Figure 46**. NGO’s held significant roles and great influence on space appropriation, in addition to voluntary activity involved in the recovery process following the blast. Despite the “lack of trust in leadership, many…showed community solidarity” (World Bank, 2020). People were “opening their houses to the newly homeless…setting up donation drives, raising thousands of dollars through GoFundMe campaigns, and organizing…volunteer cleanup crews” (El Hajj, 2020).

Moreover, many NGO’s were working in the area surrounding the church, along Pharaon, Rabbat, Alexander Fleming, and Lamartine streets, “where buildings are undergoing reconstruction and rehabilitation” (Beirut Urban Lab et al, 2020). Three months after the blast, some operations are still observed during site visits, in which interviews were held with a couple of members from the collective, including Djeylane Nemlich from Basecamp and Rasha Jabr from the Union of Progressive Women.

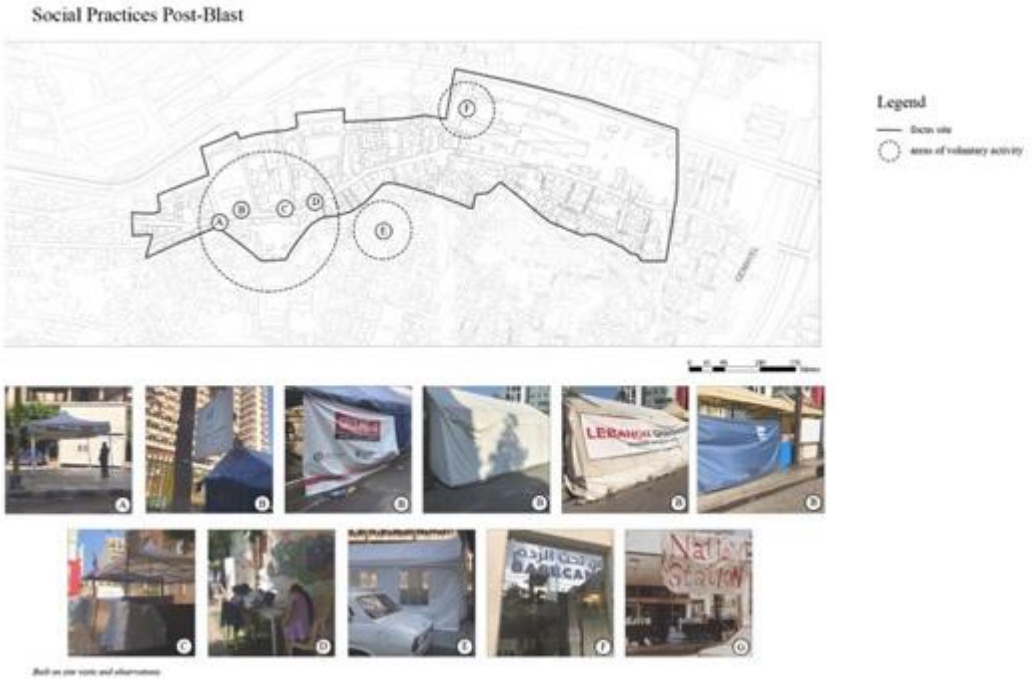

Figure 44 Social practices post-blast

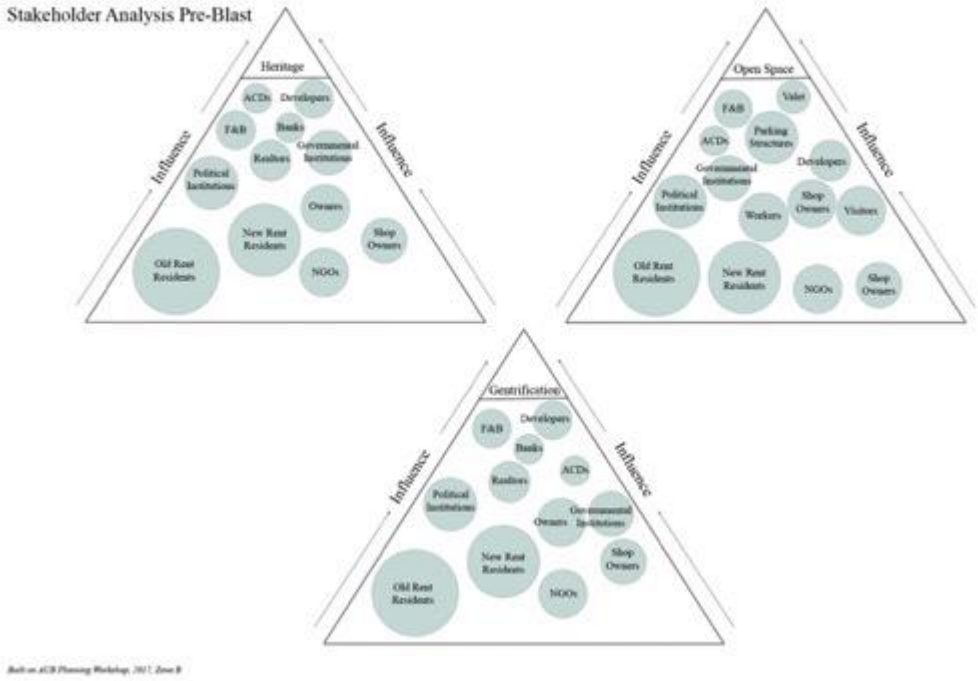

Figure 45 Stakeholder analysis pre-blast (Built on AUB Planning Workshop, 2017)

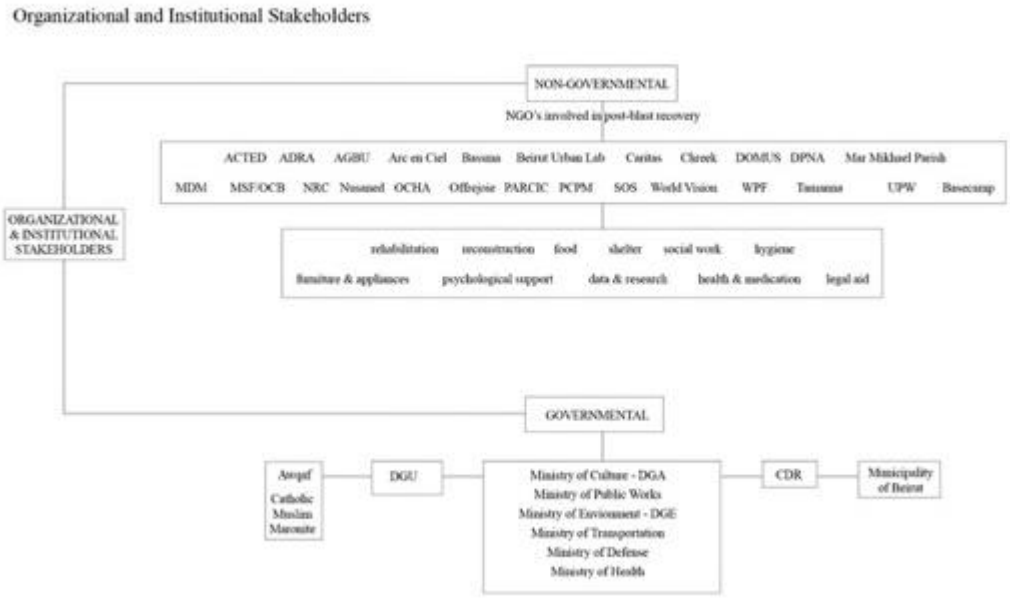

Figure 46 Organizational and institutional stakeholders post-blast

Basecamp was located in a vacant ground floor space on Gouraud Street, which was a former restaurant, now a vacant space donated by the space owner. The Union of Progressive Women, on the other hand, were located on a shaded sidewalk on Armenia street a couple of meters past EDL, where they sat on plastic chairs and tables.

In conversation about the spaces they are occupying, Nemlich explained how Basecamp had switched locations twice before. Right after the blast, they were located facing 'Skyline Tower' in Mar Mikhael before relocating to a vacant parking lot also facing the tower, followed by moving to train station, and now finally this ground floor vacant former restaurant space on Gouraud street. Their previous locations were temporary, as they were outdoors; they hope for this current location to last, dependent on donations. However, they plan for this current location to be permanent, as they have "put a lot of effort to make it livable" (Nemlich, 2020).

Rasha Jabr, on the other hand, expressed that their NGO, 'Union of Progressive Women', have located their station on the sidewalk, ever since the blast, and haven't changed their space ever since. They initially selected this space because it was the only one available from all occupied spaces on Armenia Street when NGO's had filled up the area facing EDL. Jabr and her colleagues had also gained approval from the adjacent homeowners to place their station facing their home, in addition to approval to use their parking space, which is also owned by the respective homeowners. Nevertheless, Jabr expressed how this space is rather temporary, particularly with the winter season coming up, where they would prefer a space with shelter. Similarly to Nemlich, Jabr explained that their persistence to remain on-ground depends on funding (Jabr, 2020).

The Basecamp team was composed of at least 30 members, each working in different sub-teams and tasks to aid the vulnerable community. The team members come from all around the country, meeting at this point to help and volunteer. The blast invited actors of NGO's in Mar Mikhael, thus attracting and gathering people from all different areas from the country in one space with a common goal to help. Whether it was at train station or Gouraud street, Basecamp was capable of producing spaces of community meetings and significance, thus creating urban places, which has proven to be a social construct representing the "embodiment of feelings, images and thoughts of those who live, work or otherwise deal with the space" (Cighi, 2008).

Not only were volunteer efforts focused on humanitarian aid, but designers of the built environment also initiated projects for post-disaster recovery. Architects, engineers, and recovery organizations including Beirut Built Heritage Rescue 2020, the Beirut Heritage Initiative, AUB CCECS, and more were involved. Notably, the 'Let's Play' initiative by Nada Borgi, Sandra Richani and Etienne Bastormagi, aims to help

rebuild playground for schools affected by the Beirut Blast. They initiated their intervention with a pilot project of 3 schools' playgrounds, hoping to extend their efforts to the remaining 44 schools in the destructed zone. The 3 schools selected are the Armenian Evangelical School in Geitawi, Saint Charles – Ecole Notre Dames des Filles de la Charite in Sassine, and Ecole Secondaire des Filles de la Charite in Sassine. In an interview by Ronnie Chatah from the Beirut Banyan, Nada Borgi explains their aim of transforming the traumatic experiences of the school children caused by the blast to a more positive and enjoyable experience, through design elements like 'big toys' to enhance the playful character of their design. Their designs offer students new opportunities to behave differently and have new experiences, by incorporating green or play spaces. Borgi, Bastormagi, and Richani are cooperating with university students who have volunteered with the intervention. This confirms and exemplifies the volunteer-driven reconstruction efforts of post-blast Beirut, and serves as a case study of design-lead recovery tools and strategies in the area.

To conclude this section, Mar Mikhael's vulnerability was indeed present prior to the blast, only to be exacerbated after it; the buildings' conditions were initially not

optimal, as shown in **Figure 47**, and the blast had only intensified their vulnerability.

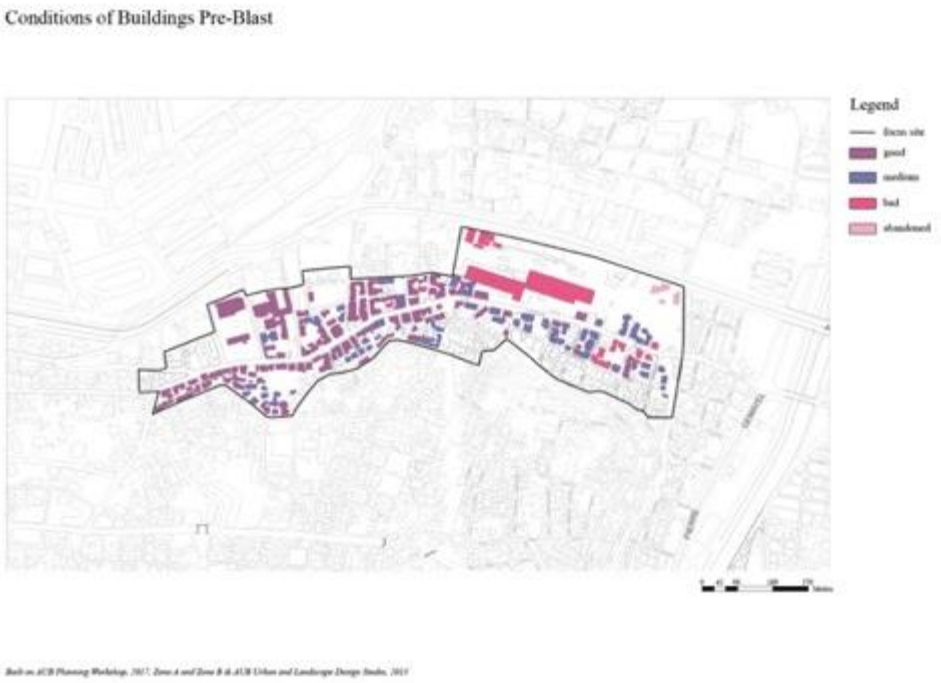

Figure 47 Conditions of buildings pre-blast (Built on AUB Planning Workshop, 2017; AUB Urban and Landscape Design Studio, 2013)

Its socio-economic challenges had included gentrification, the rent gap followed by eviction and displacement, change of neighborhood identity and character in parallel with the economic shift, in addition to the decline of local businesses. Such gentrification and socio-economic shift in the neighborhood is now at further risk following the blast, as a considerable number of the neighborhood's tenants face the danger of eviction or were informed that their building was sold, paving the way for further gentrification and demolition. There is fear of Mar Mikhael's reconstruction efforts turning into the next a 'Solidere 2.0', where a public-private company appropriated Beirut Central District's post-war destructed land into a desolate area "claimed mostly by banks and speculative investors, and unable to contribute to the life

of the country beyond acting as the site of angry protests" (Fawaz et.al, 2020), rather than a downtown reborn. Moreover, Mar Mikhael continues to face infrastructural challenges, including the lack of public transportation, the fragmentation of neighborhoods due to highways separating them, lack of public services like water and electricity, among many more. Although a public transportation system exists, as shown in **Figure 48**, it is neither optimal nor efficient, with a lack of proper bus stops, stations, and more.

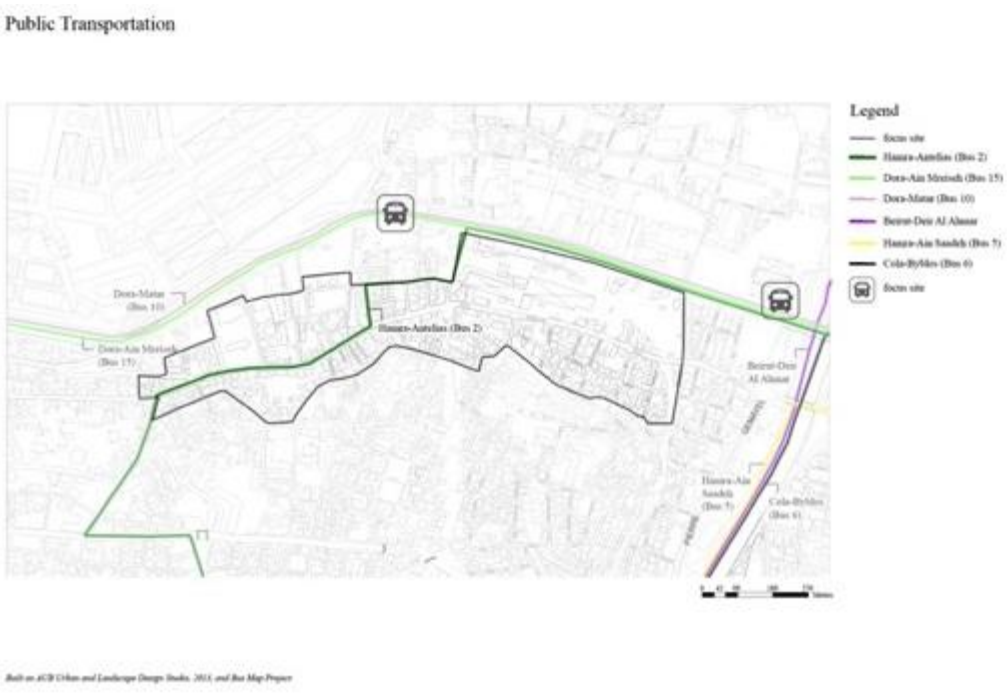

Figure 48 Public transportation (Built on AUB Urban and Landscape Design Studio, 2013; Bus Map Project)

These challenges were only exacerbated after the blast, when the port was hit, and trade activities were interrupted. The port's annihilated performance is not only detrimental to Mar Mikhael's infrastructural profile, but the city at wide. Previously prominent, the port is now at risk of losing its importance in light of local and regional

competitors, including the port of Tripoli, and Haifa, particularly following recent peace agreements with Israel and Arab countries. Furthermore, open and green spaces are lacking in the neighborhood despite existing public spaces in the area such as train station. Although such areas are municipal property, as shown in **Figure 49**, most are inaccessible.

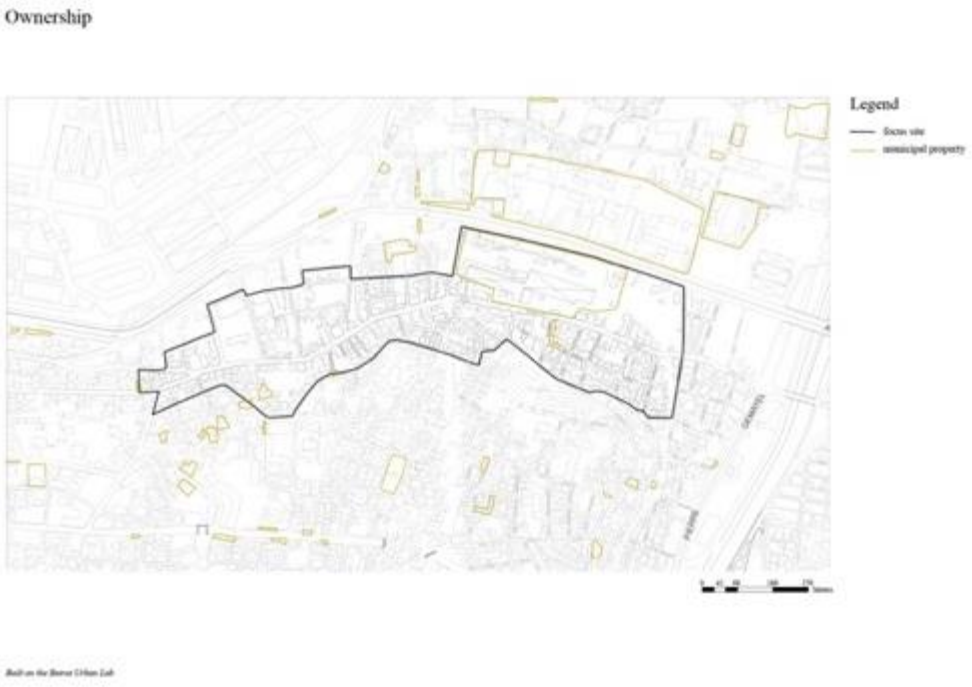

Figure 49 Ownership (Built on Beirut Urban Lab, 2020)

Proper circulation is also insufficient, with inadequate walkability and disrupted vehicular circulation. Despite the lack of public spaces, social practices and recovery efforts persisted to exist and thrive in the area, particularly after the blast which had invited a community of NGO's and volunteer workers with a common purpose as spaces became places of community meetings and significance, bringing about urban recovery efforts, a concept that will be explored in the next section, 'Post-Disaster Urban Recovery'.

CHAPTER IV

OPEN SPACE NETWORK

As mentioned earlier, opportune spaces for intervention in Mar Mikhael include vacant lots, those of which vary in regards to typology. As shown in **Figure 50**, vacant lots in the neighborhood vary, in regards to location, and their relationship with other aspects, such as zoning, landmarks, parking spaces, pedestrian flow, streets, green spaces, and proximity to municipal property. It is crucial to thoroughly analyze and understand the position and setting of vacant lots in the area, due to their potential as opportune spaces for design. For example, "using vacant lots for community gardens or 'pocket parks' are considered examples for urban acupuncture in action" (Gerbal et al, 2016), which are design strategies and solutions that propose "small-scale, yet socially catalytic interventions to remove 'stress' in the built environment" (Gerbal et al, 2016).

Moreover, it is also important to tackle vacant spaces, in addition to other spaces within the open space network in Mar Mikhael, because "one of the most pressing challenges facing Mar Mikhael is lack of shared, public spaces" (Gerbal et al, 2016). These challenges are present within "sidewalks, which are, in many places, in disrepair and are often re-appropriated by bars and restaurants for extra seating, or entirely blocked by construction activity" (Gerbal et al, 2016). Streets are also challenged within the open space network, due to traffic and parked cars. In addition, the neighborhood's stairs are also "vulnerable to redevelopment by real estate actors" (Gerbal et al, 2016). Moreover, vacant governmental lots like Train station are "a large potential source of public space" (Gerbal et al, 2016), despite its inaccessibility. Despite these spaces'

vulnerability, due to the potential of Mar Mikhael's open space network in contributing to urban recovery, each space category was identified, classified, mapped, and analyzed to further interpret potential spaces prior to the design proposal phase of this thesis. Accordingly, as presented in **Figure 51-66**, various streets, sidewalks, stairs, parking lots, in-between spaces, building setbacks, vacant private lots, and inactive governmental lots were studied.

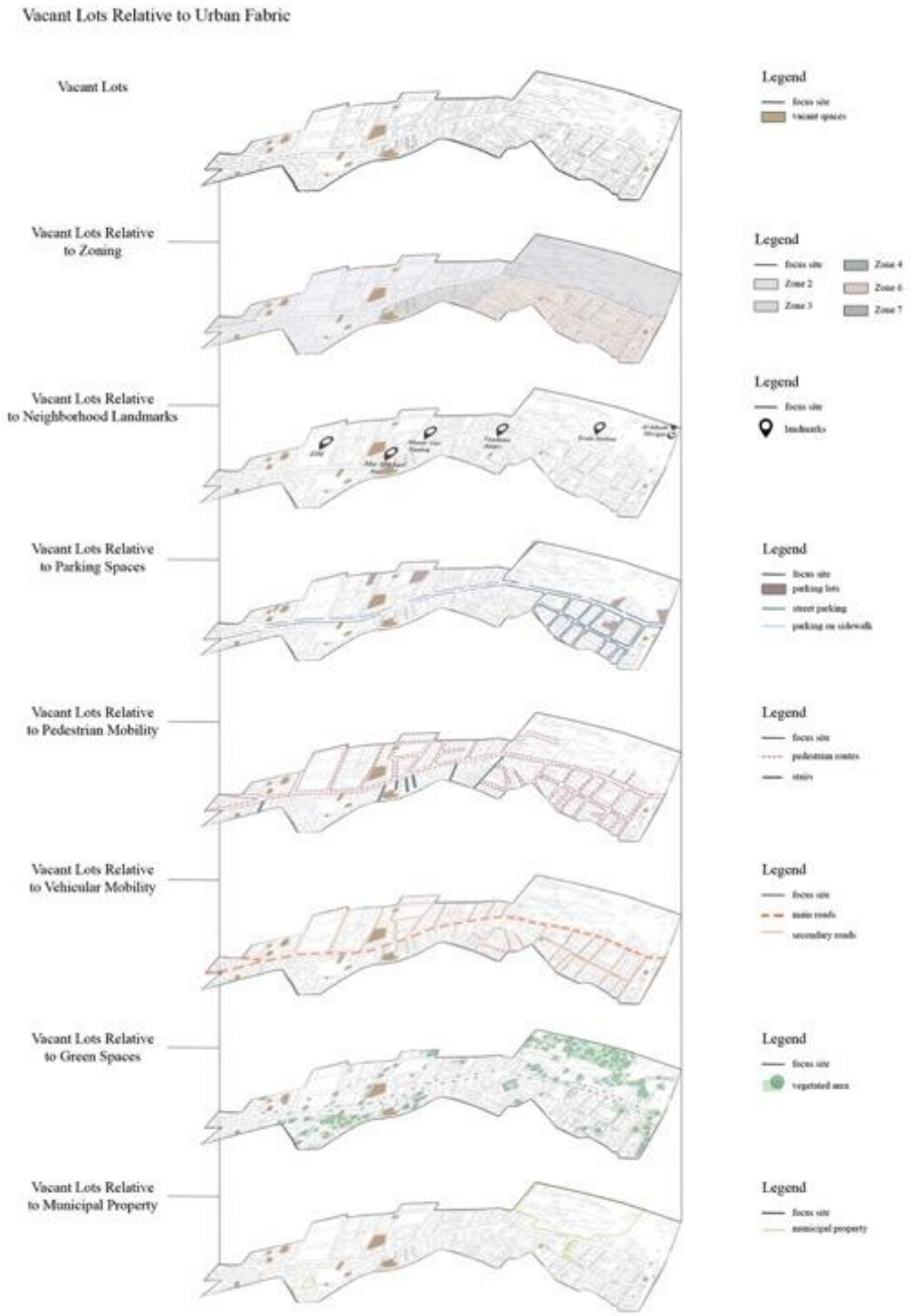

Figure 50 Vacant lots relative to urban fabric

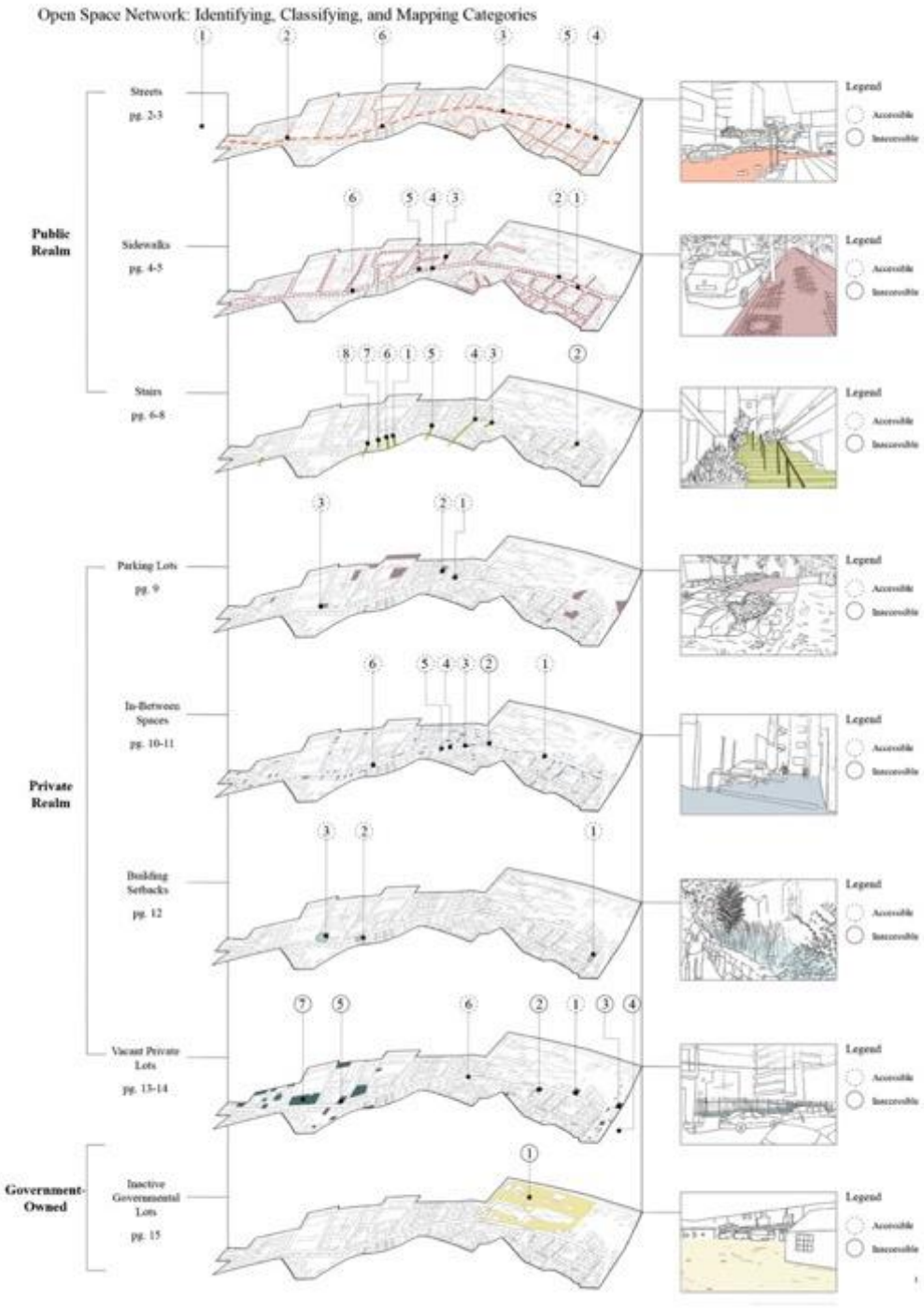

Figure 51 Open space network - identifying, classifying, and mapping categories

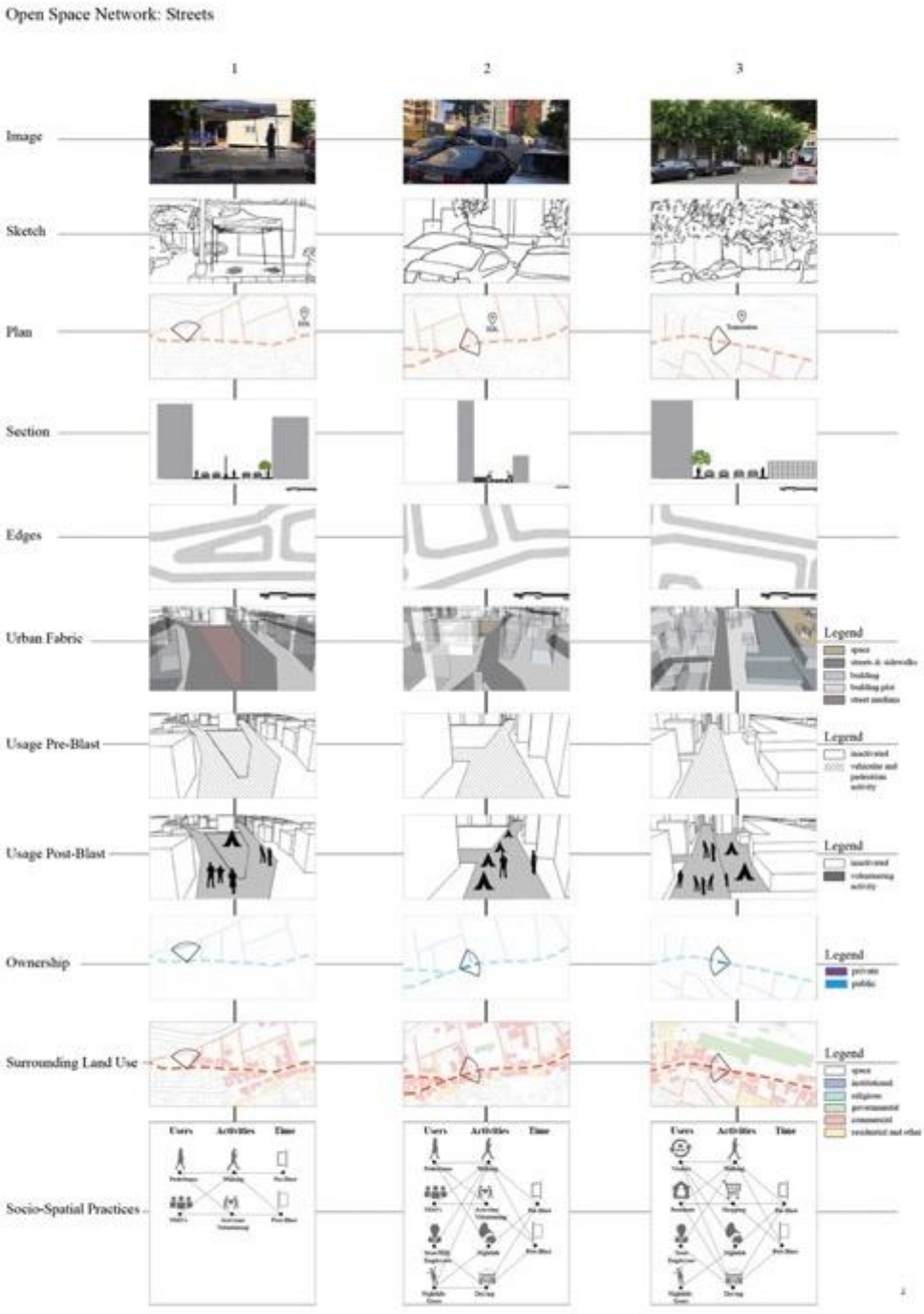

Figure 52 Open space network - streets (1-3)

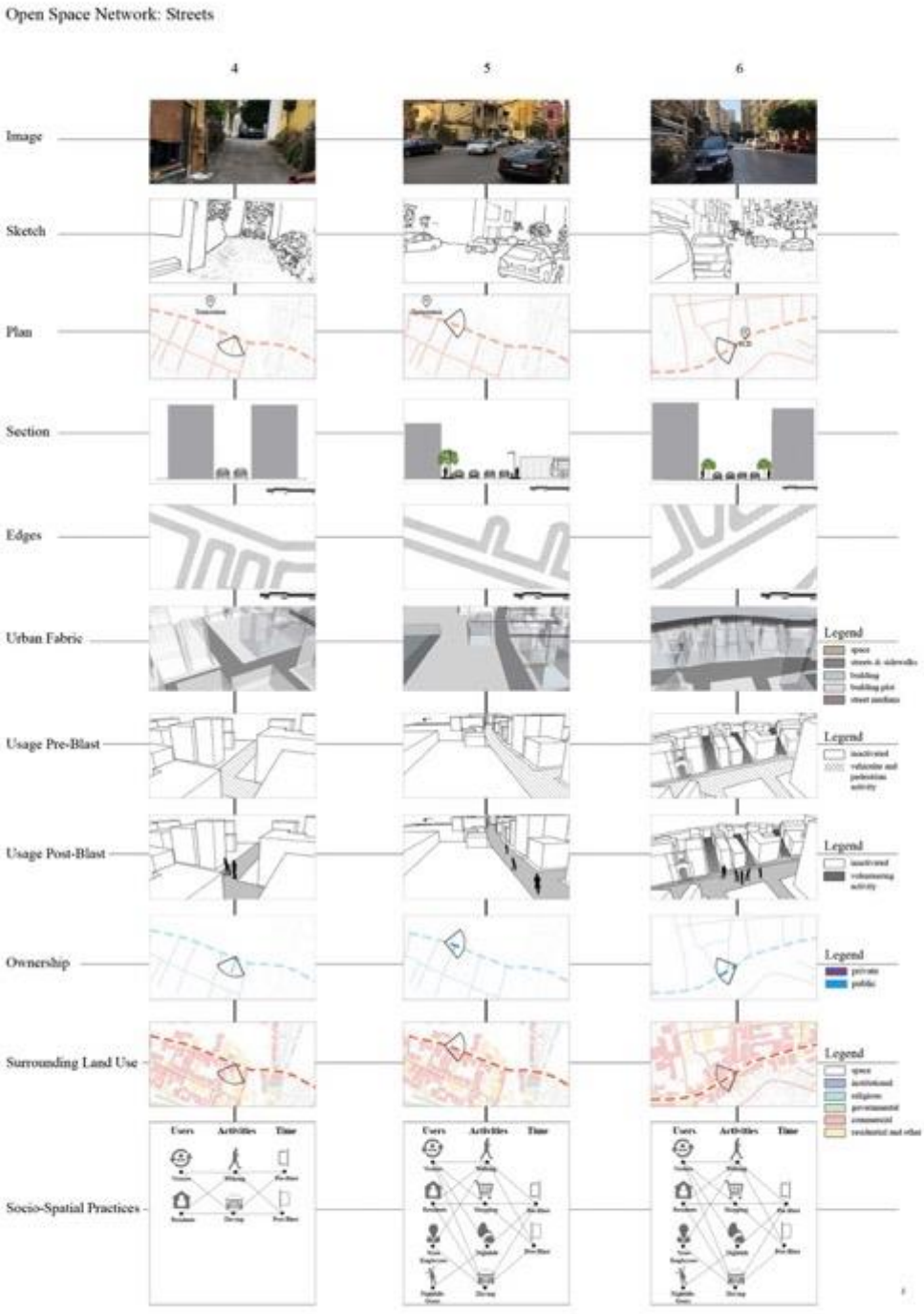

Figure 53 Open space network - streets (4-6)

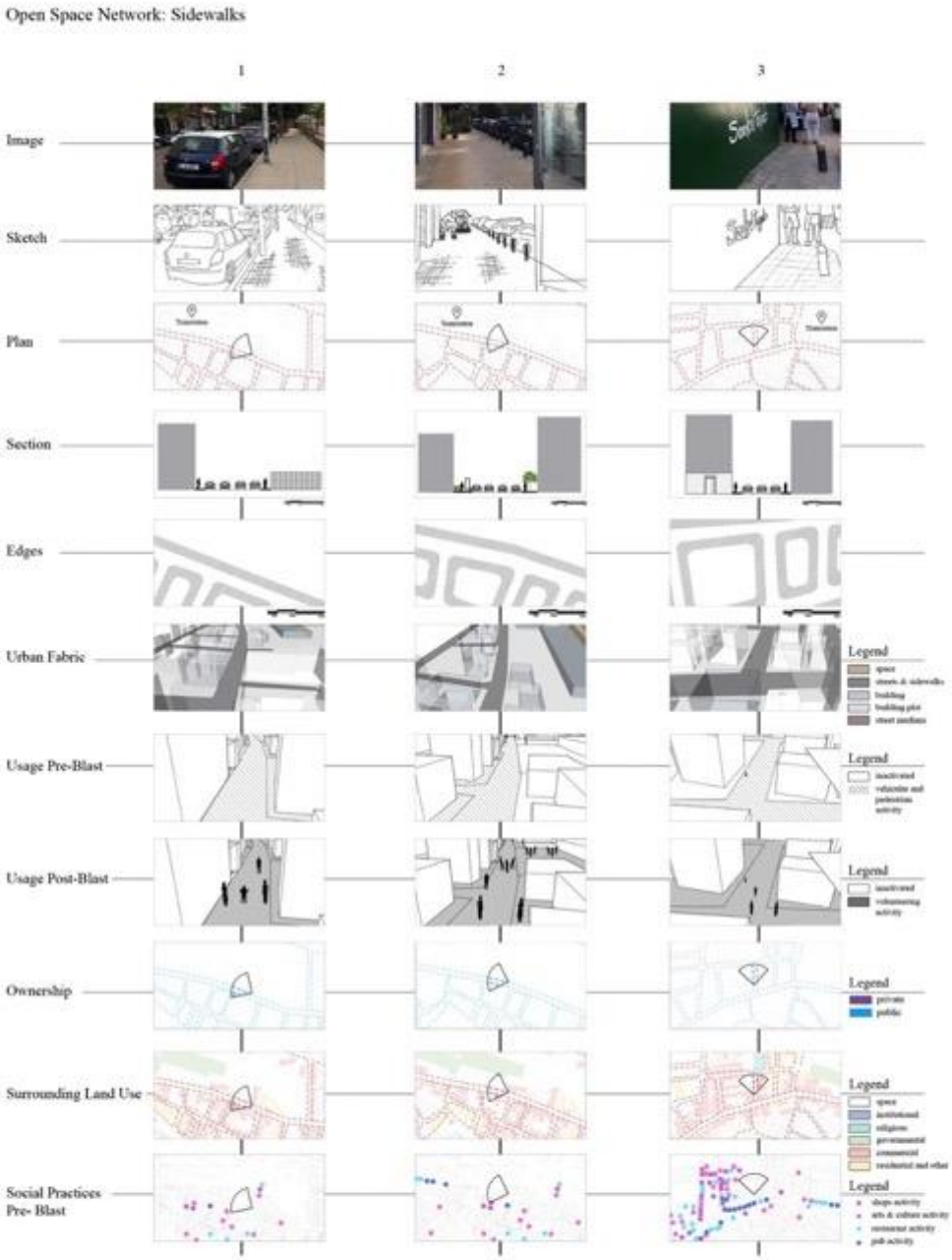

Figure 54 Open space network - sidewalks (1-3)

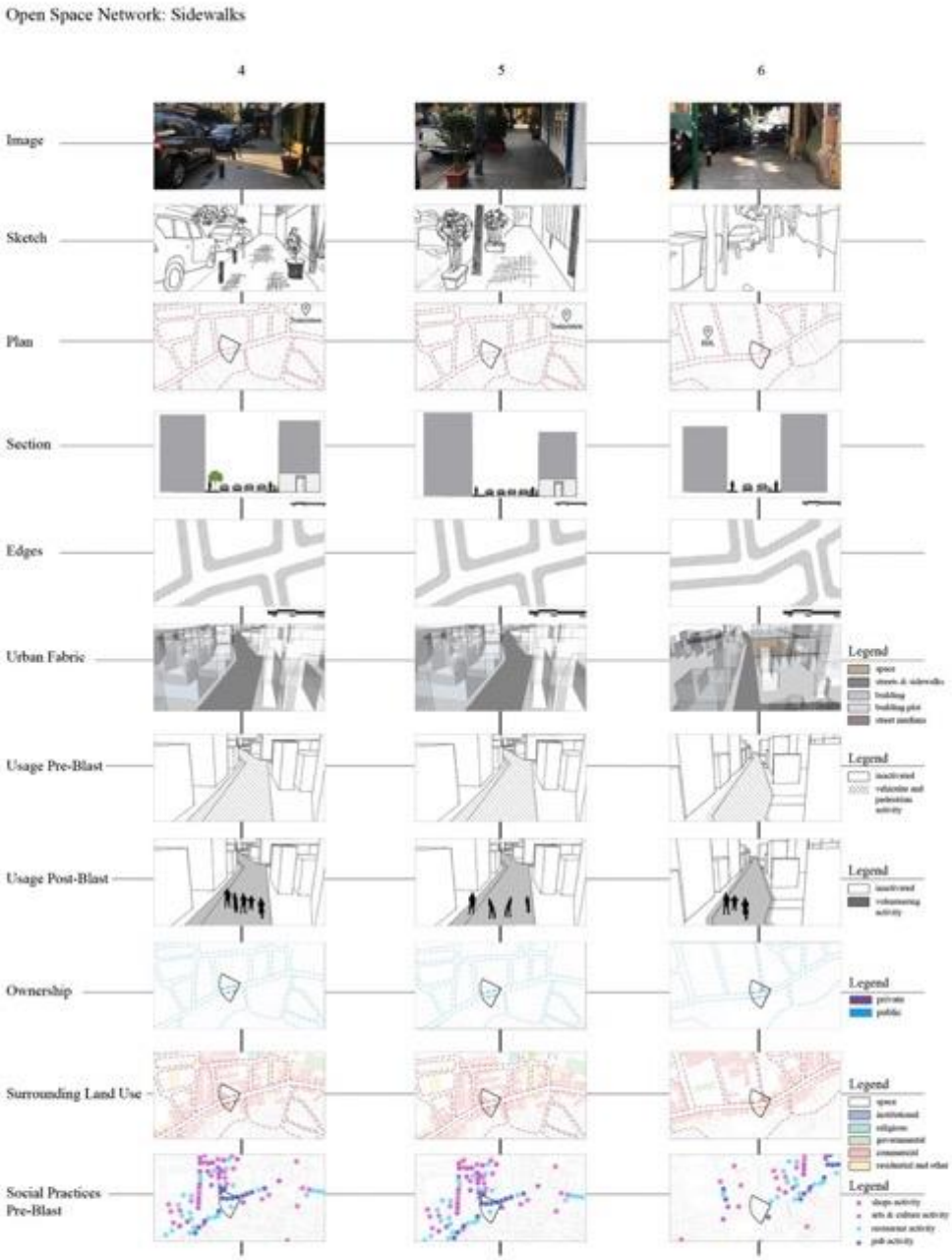

Figure 55 Open space network - sidewalks (4-6)

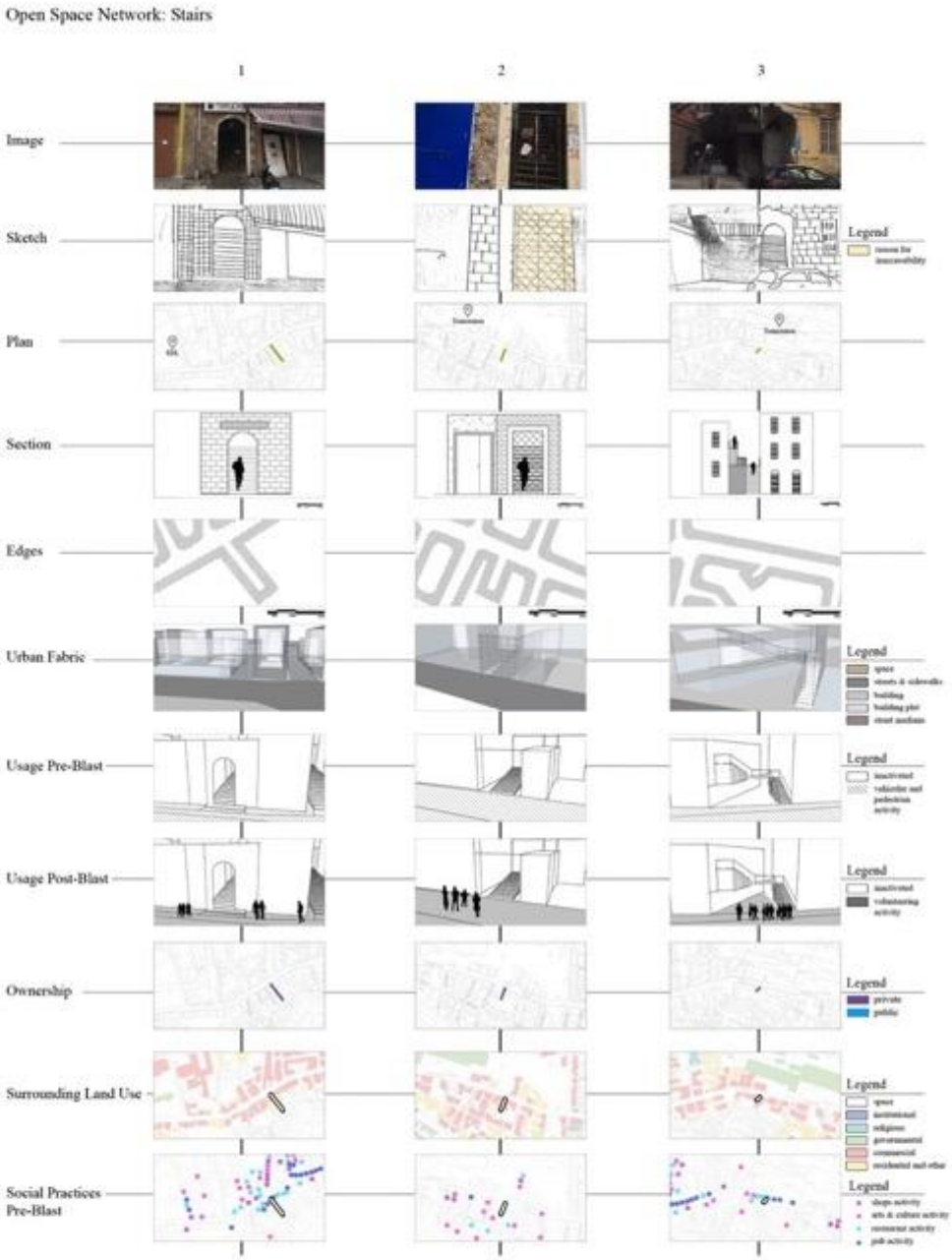

Figure 56 Open space network - stairs (1-3)

Figure 57 Open space network - stairs (4-6)

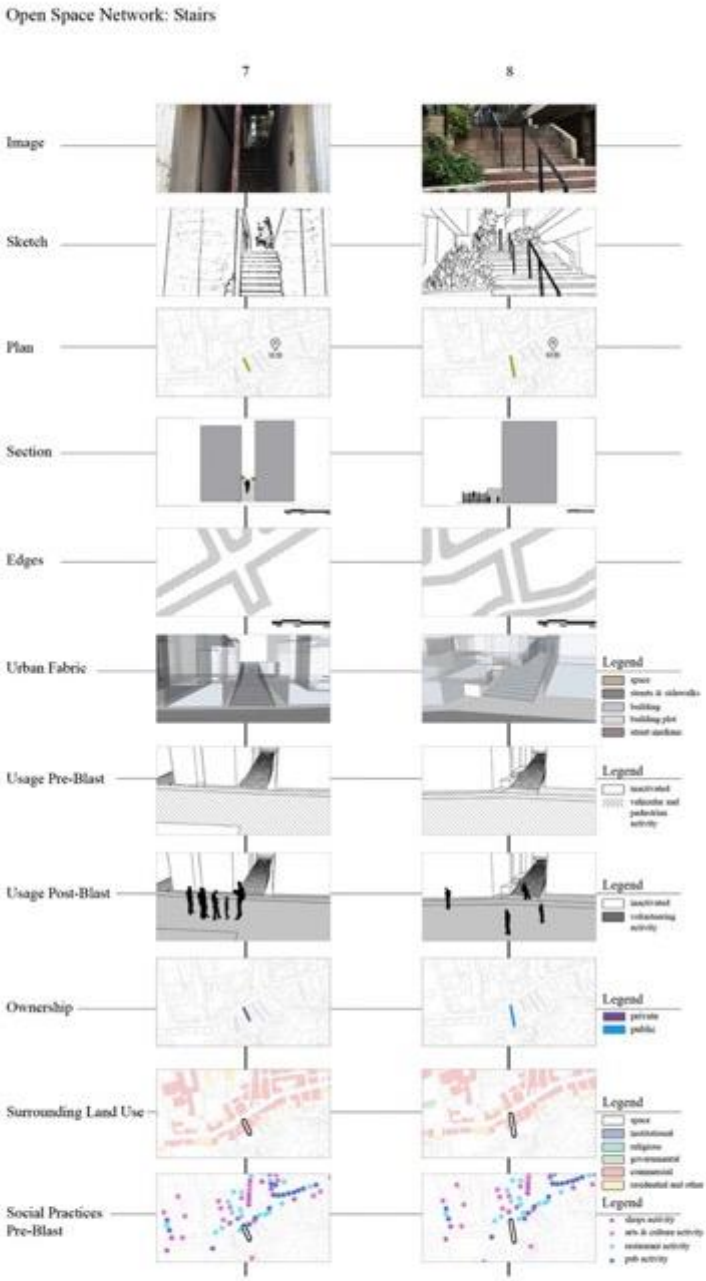

Figure 58 Open space network - stairs (7-8)

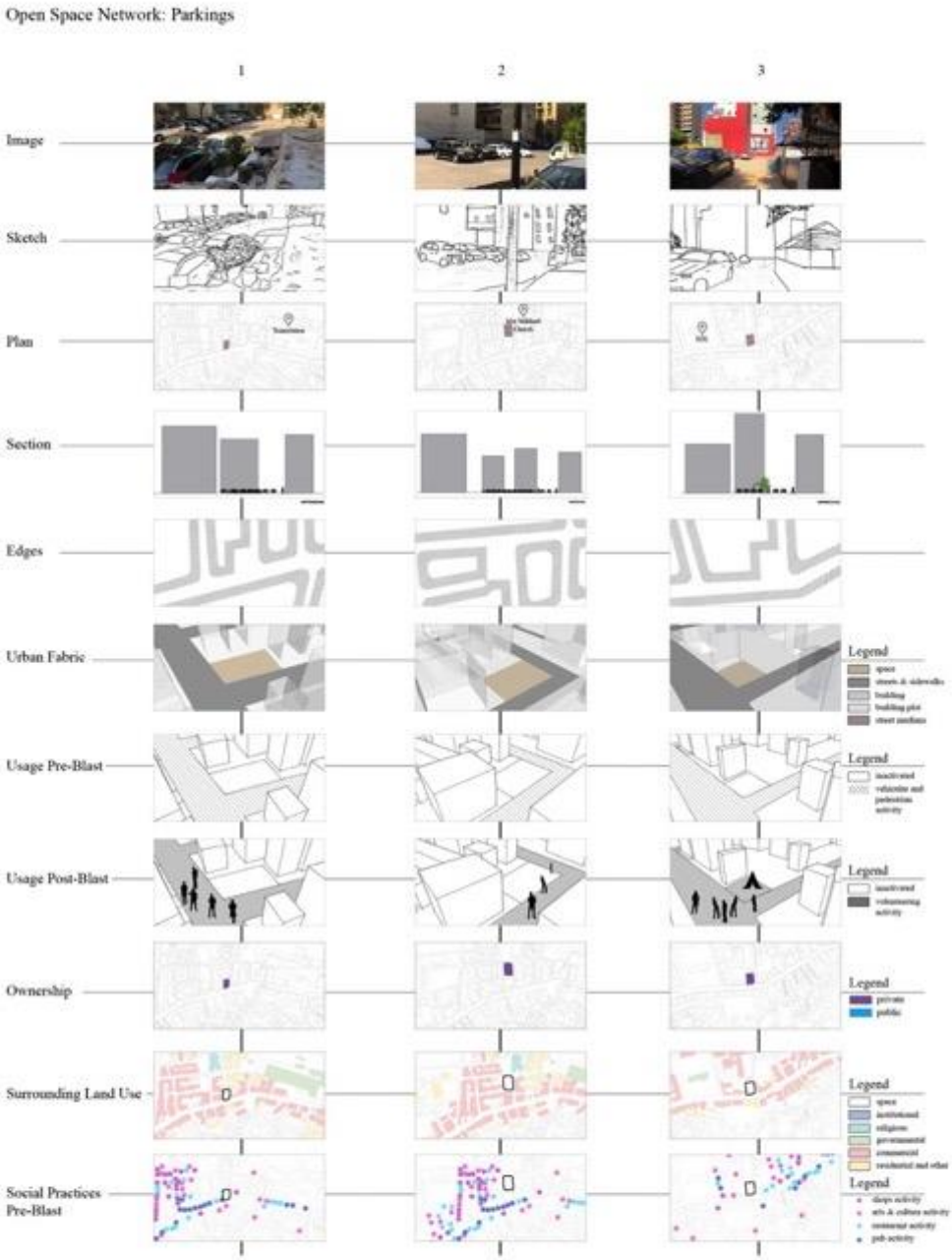

Figure 59 Open space network - parkings (1-3)

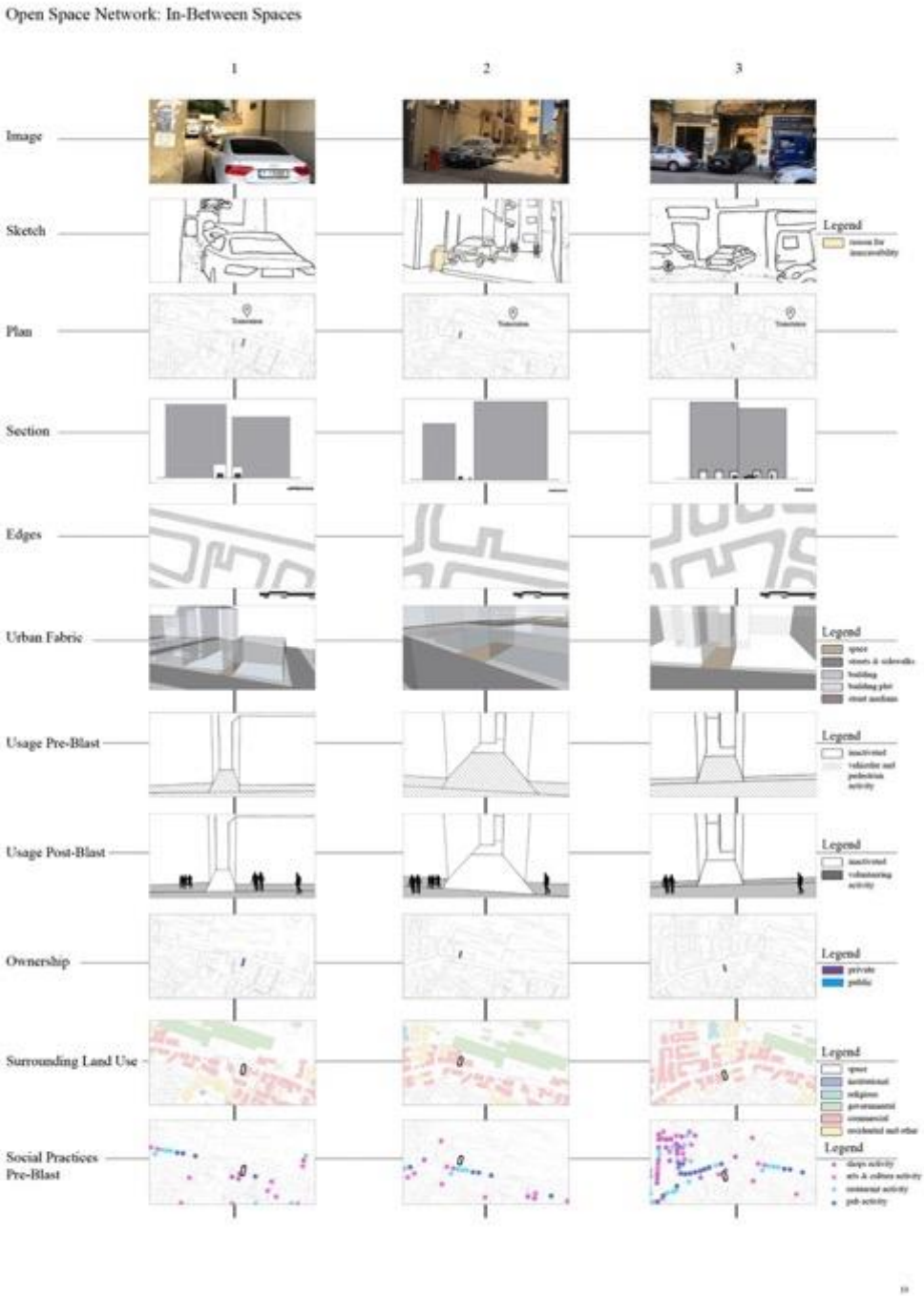

Figure 60 Open space network - in between spaces (1-3)

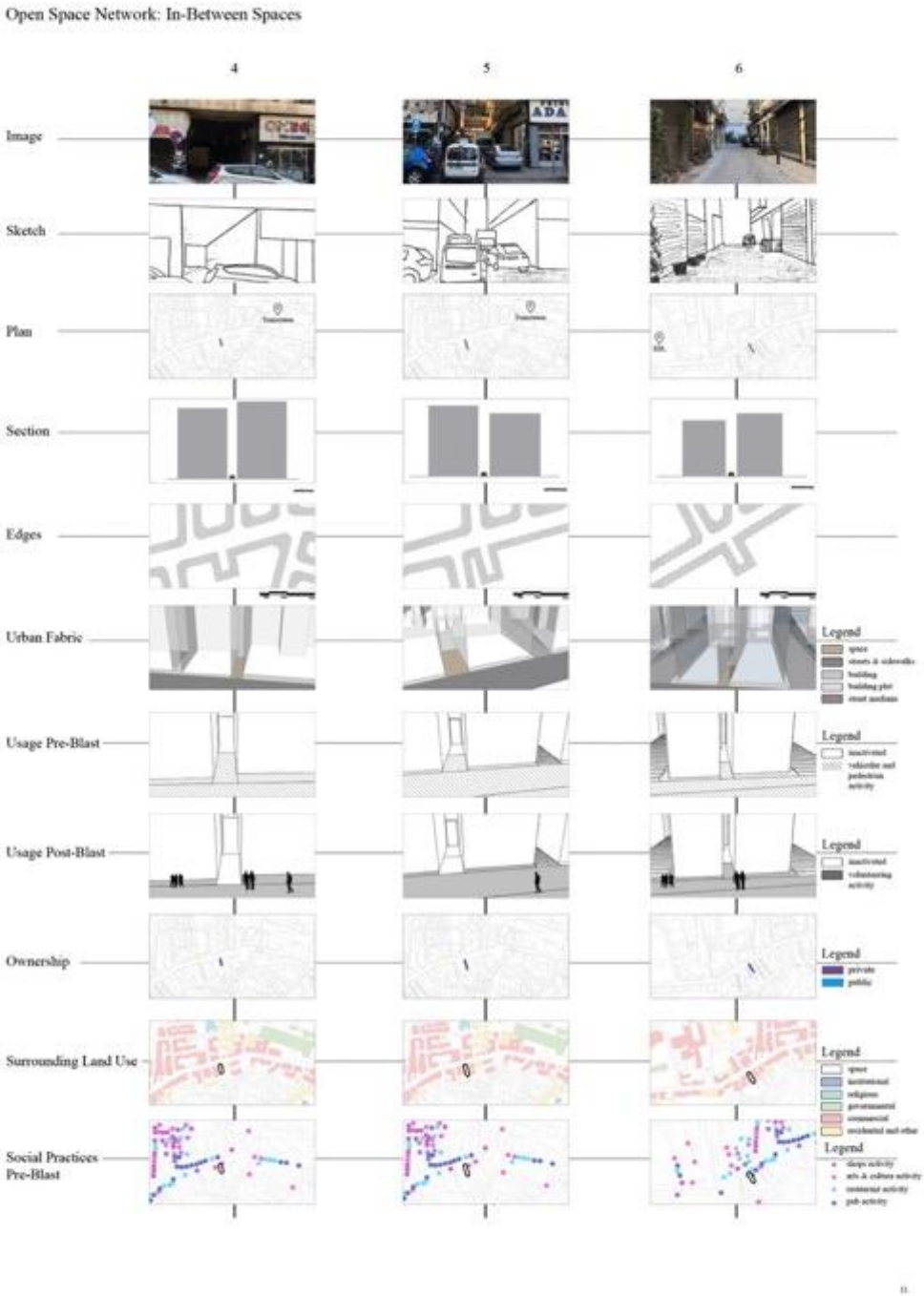

Figure 61 Open space network - in between spaces (4-6)

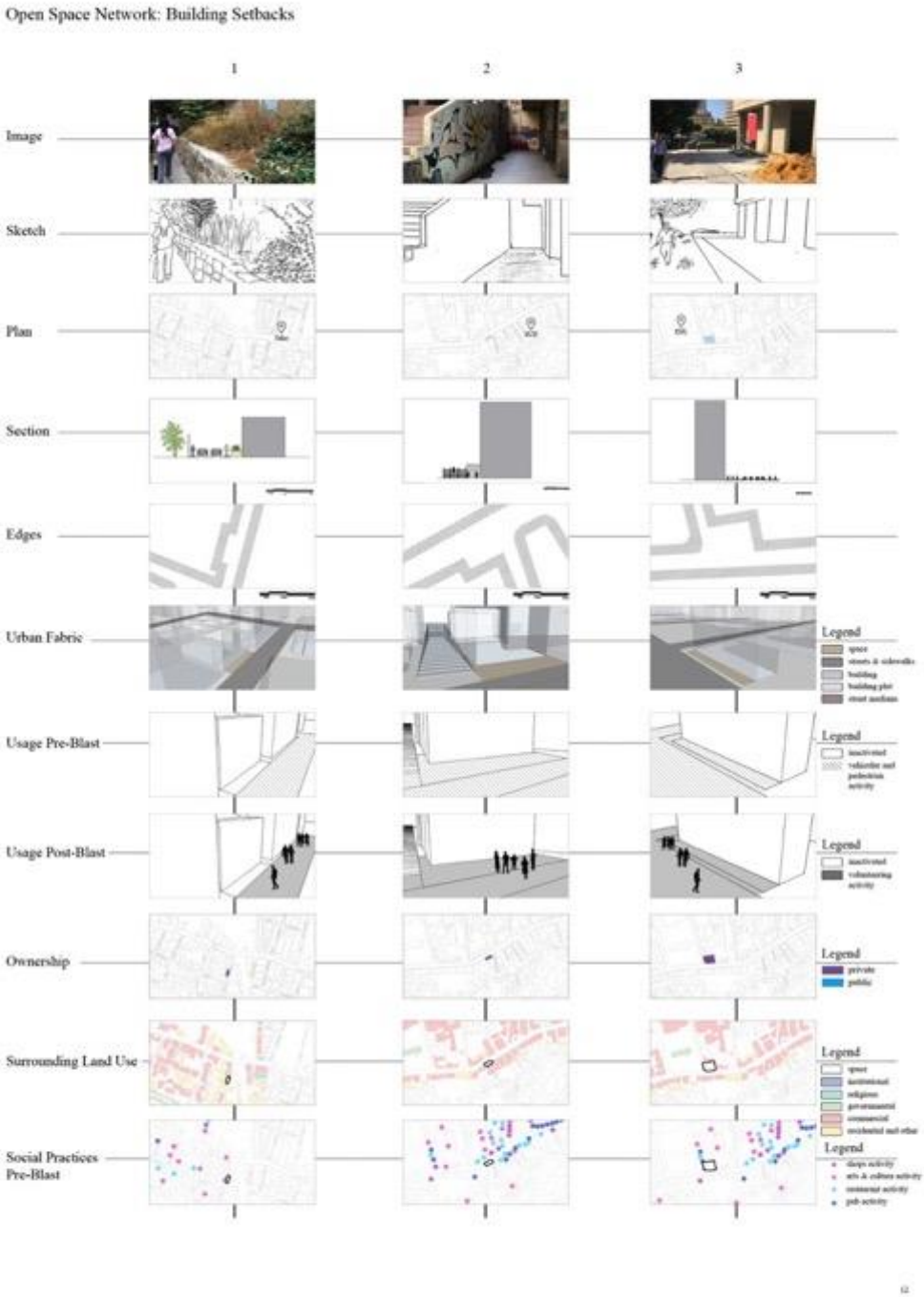

Figure 62 Open space network - building setbacks (1-3)

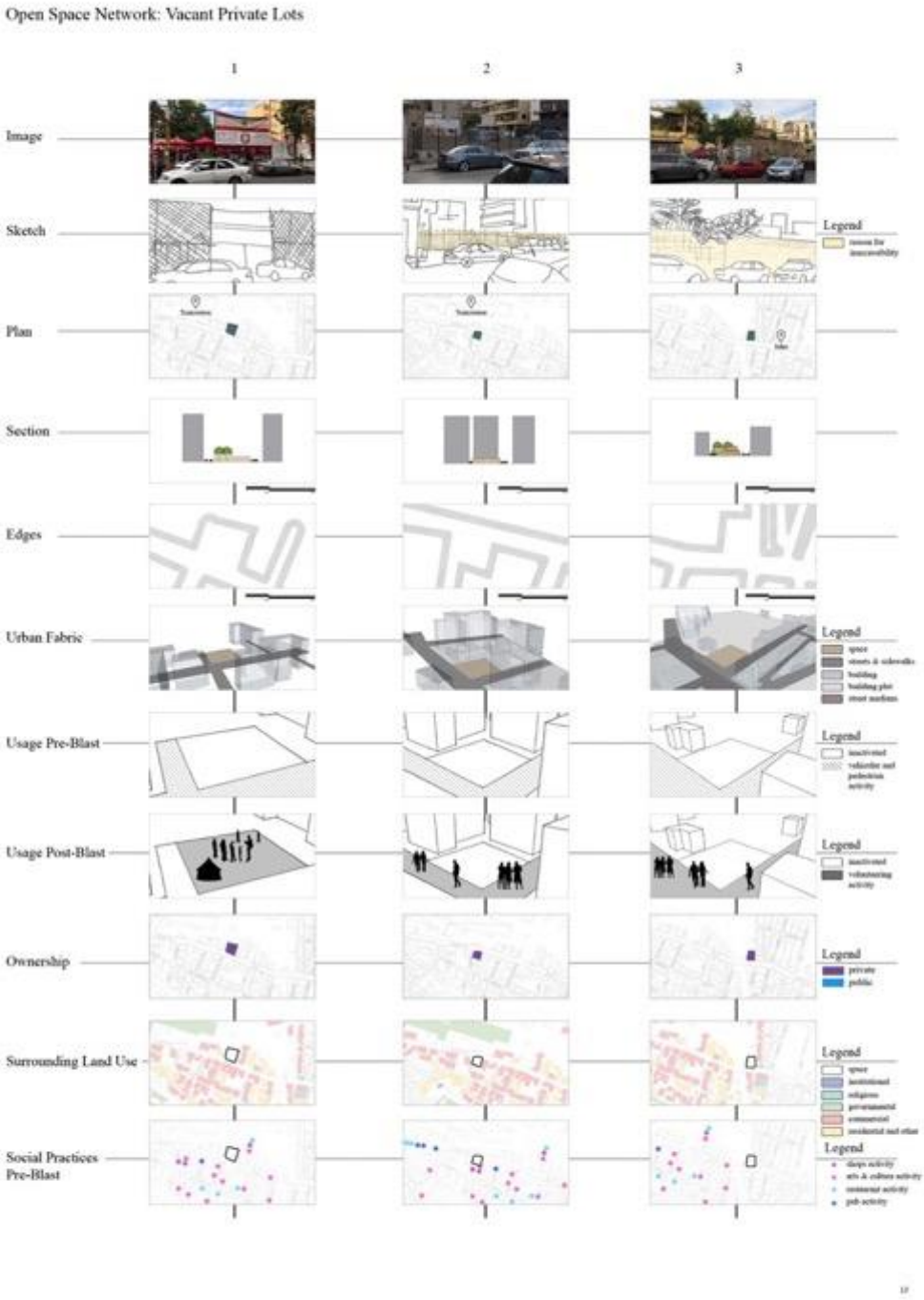

Figure 63 Open space network - vacant private lots (1-3)

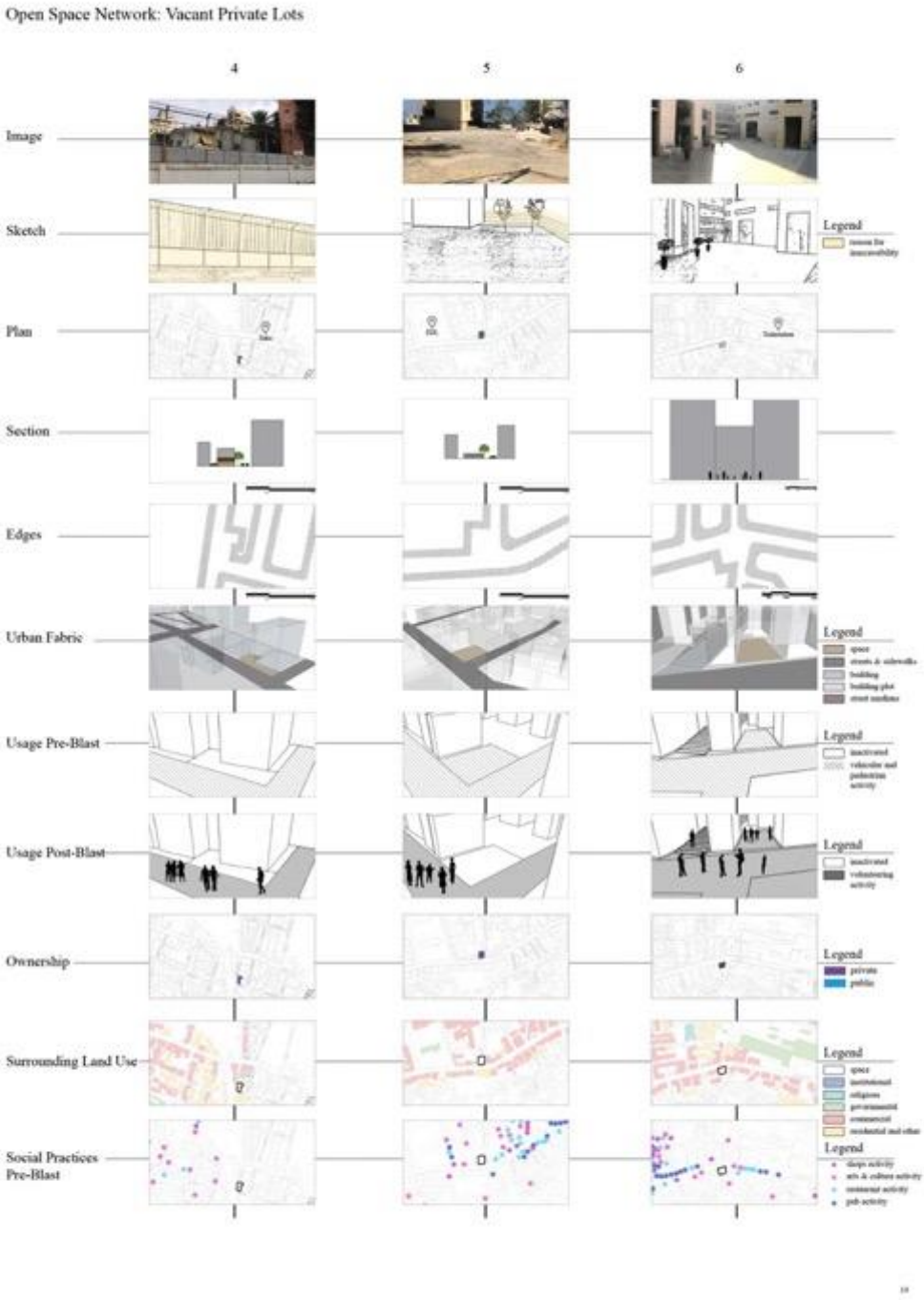

Figure 64 Open space network - vacant private lots (4-6)

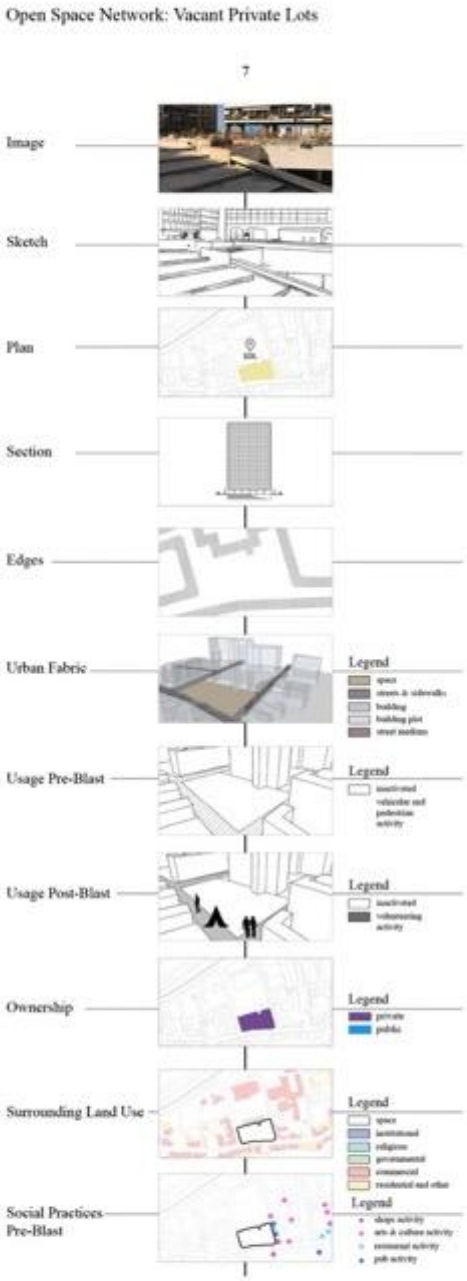

Figure 65 Open space network - vacant private lots (7)

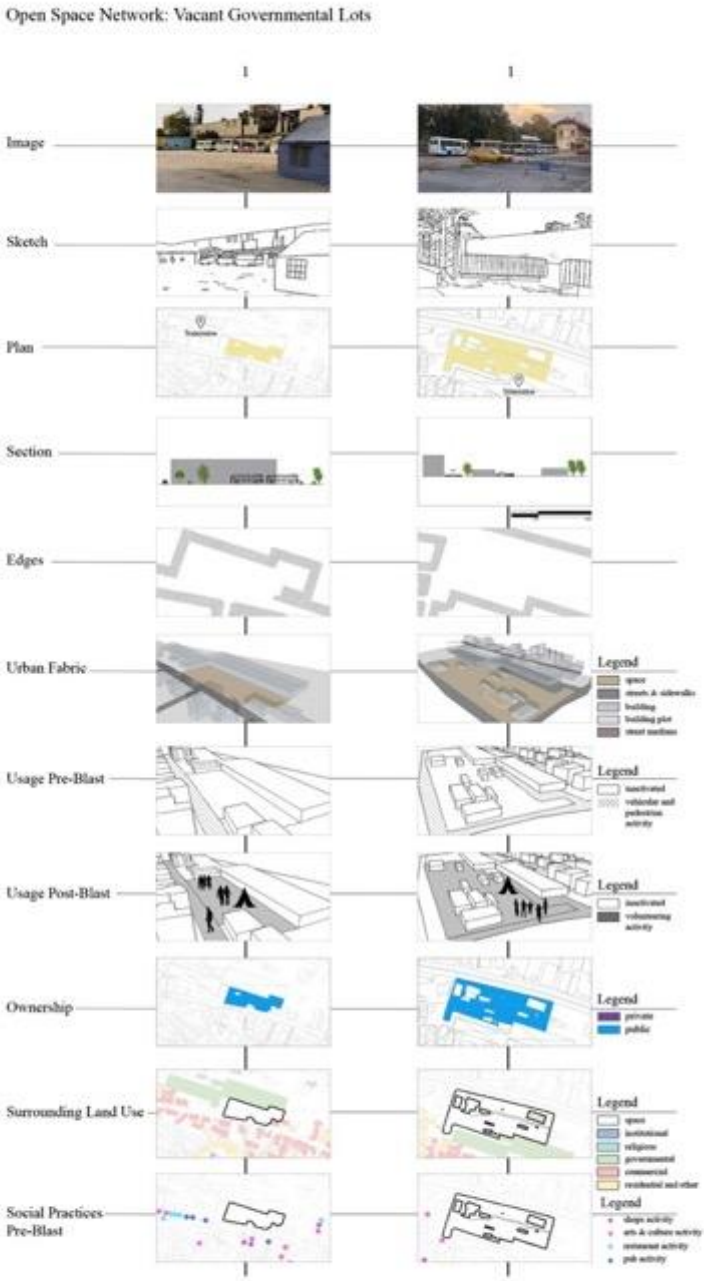

Figure 66 Open space network - vacant governmental lots (1-2)

CHAPTER V

INTERVENTION

A. Previous Projects: 'Plan Vert'

The 'Plan Vert et Paysager de la Ville de Beyrouth', commonly referred to as the 'Plan Vert' project, by Habib Debs Architects – Urbanists (URBI) and Francis Landscapes, completed in 2012, is a vision to mainly transform Beirut's Damascus road into a connective, and green spine across the city. This project is a partnership between the Municipality of Beirut and the Ile-de-France, which proposes a green axis and soft connection, or "Liaison Douse", across the city. However, the project has not been implemented yet. The project focuses on improving walkability, sidewalks, vehicular mobility, public transportation, public spaces, green spaces, their accessibility, and connection, through spaces of opportunity and potential linkages across the city, on the larger city-scale, and smaller neighborhood scale. This project also aims to connect areas in Beirut previously divided, Achrafieh and Ras el Nabeh, through the large green cultural spine along Damascus Road, simultaneously sustaining Beirut's collective memory.

The problems of Damascus Road include its limited role as a transit route lacking an active street life, which is further hindered by blocked entrances, and military presence. Nevertheless, the road features considerable opportunities for improvement, such as improving its identity, through the abundance of heritage buildings present along the road. Plan Vert is an ambitious vision of a 'soft link' between Beirut Downtown and Horsh Beirut, serving as a pilot project for possible future interventions.

The project proposes a green spine, featuring pedestrian, cycling, and bus lanes, thus improving walkability and mobility throughout the city. Moreover, along this road would be green pocket gardens offering spaces for recreational, active, and cultural activities, thus promoting social cohesion between two areas of the city, previously segregated during the Lebanese Civil War. Not only will the project tackle the main Damascus Road, but will also approach traffic flow issues along the secondary streets of Monot, Bachoura, Sodeco, Ras El Nabeh, Qasqas, Ghobeiri, and more, to provide an improved and more comprehensive traffic network across Beirut. This includes proposing the use of public transportation and bicycles, rather than private vehicles, to influence locals' mentalities and improve the social, environmental, and spatial qualities of the city and its neighborhoods. Barcelona's Via Julia and Moll de la Fusta projects from the early 1980s were relevant case studies for this project, as similar interventions of city revival and development. The Plan Vert objectives ensure a green framework that provides efficient mobility, and enhanced livability, through the integration open public spaces of social exchange between people of various backgrounds and ages. Urban green public open spaces are necessary along the Damascus Road axis, to reduce division and segregation between communities of different religious and social backgrounds. On the other hand, this proposal provides an environmental approach through a sustainable design of the city's vegetation, biodiversity, and urban spaces. However, although green and recreational spaces are strongly desired by the city's locals, they were concerned of the possible elimination of parking spaces, among other concerns in response to the proposal. Nevertheless, this project contributes solutions to issues pertaining to the political, social, cultural, economic, and heritage aspects of the city. Politically and socially, this proposal connects people from different

neighborhoods by creating spaces that host social interactions. Through enhanced accessibility and design of public green spaces, such social and cultural exchange occurs, simultaneously strengthening businesses in the area. In addition, in response to heritage buildings threatened by real estate development, this urban strategy also aims to conserve urban heritage across the city. Most importantly, this project connects existing green spaces, such as cemeteries, campuses, public or private gardens, ultimately creating a green network or a 'large park' across the city (Francis Landscapes Ltd., and Habib Debs Architects – Urbanists, 2012).

As shown in **Figure 67** below, Beirut is highly urbanized, despite the available green 'pockets', including cemeteries, the pine forest, institutional spaces, university campuses, public and private gardens, and street vegetation. Evidently, these spaces are rather segmented and scattered (Francis Landscapes Ltd., and Habib Debs Architects – Urbanists, 2012).

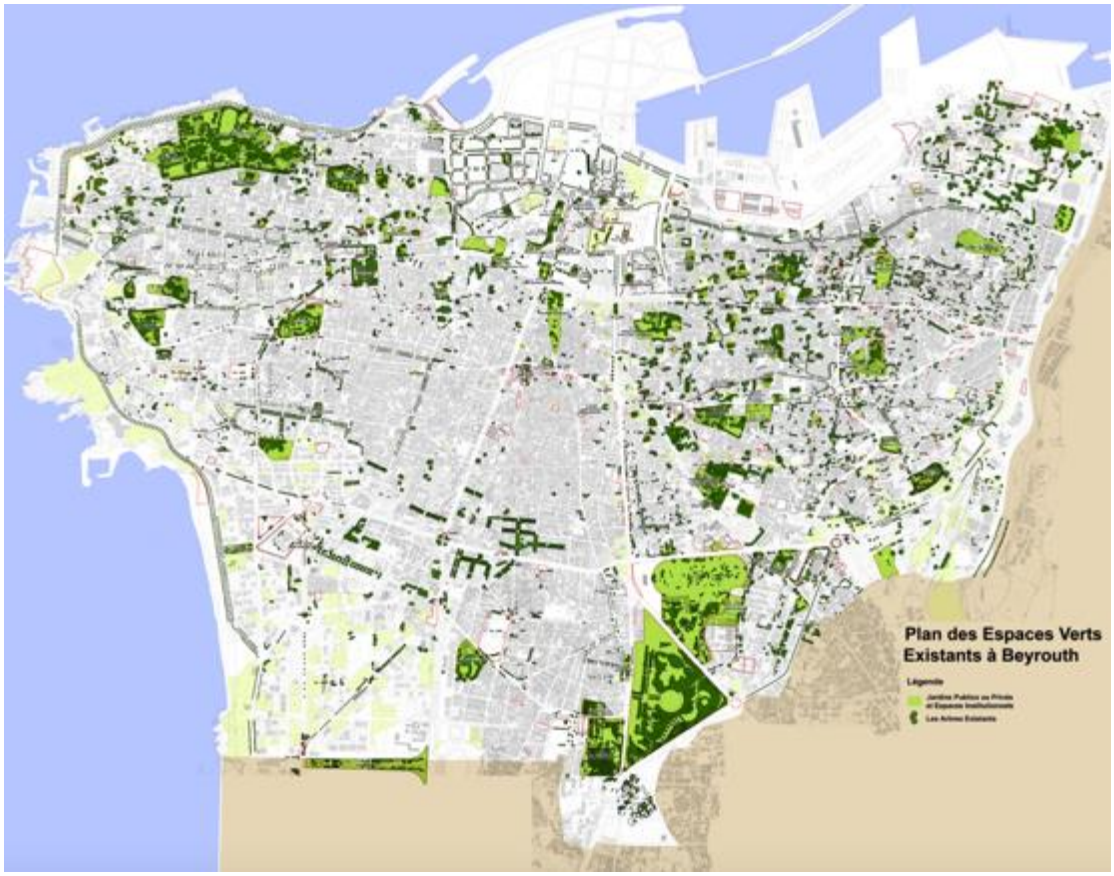

Figure 67 Plan of existing green spaces in Beirut (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

As shown, there is a significant imbalance in the distribution of green spaces in the city. However, each neighborhood in Beirut holds a certain identity as a result of its landscape character, and typology, as shown in **Figure 68** below. In this map, Beirut consists of large morphologically organized groups that make up the overall Beirut landscape, which are the Institutional Spaces, the North East Coast, the Peri-center Quarters, Karantina, the City Center, the Maritime Corniche, and Horsh Beirut. The Institutional Spaces group mainly consists of major institutions' gardens and campuses like AUB, ESA, and IC, and stairs and paths connecting the sea to the neighborhoods up the hill. The Northeast coast consists of vegetated slopes descending towards the port

and Beirut River, through alleys, stairs, and gardens. The Peri-Center Quarters, on the other hand, are old districts within the city that contain historic houses' private gardens, front lawns, institutional gardens, and street vegetation. Karantina consists of a frame of tall trees bordering a predominantly industrial area, with a large wasteland, and a few blocks of homes. The City Center is a green grid composed of an alignment of trees framing smaller public gardens and squares, private green building setbacks and gardens, archeological excavations, and institutional gardens (Serail, ESCWA, CDR), in addition to the surrounding dense built environment. However, increased real estate development and privatization in the area has lead to minimal space left for public open green spaces and opportunity to develop its landscape identity. The Maritime Corniche is a promenade, characterized with a landscape of rocks and sea. Horsh Beirut, consisting of the pine forest, the horse race track, and Kaskas Cemetery is a large green patch in the city, which had been disconnected by the city and its people by road infrastructure, and gated entrances. Ultimately, the large grouped typologies identified in this map characterize the city into different morphological landscapes that form the overall Beirut landscape. These morphological sets are a reflection of social and economic relations, strong identity, and history. Each area's landscape identity is formed by the relationship between the softscape elements and their surrounding built environment (Francis Landscapes Ltd., and Habib Debs Architects – Urbanists, 2012).

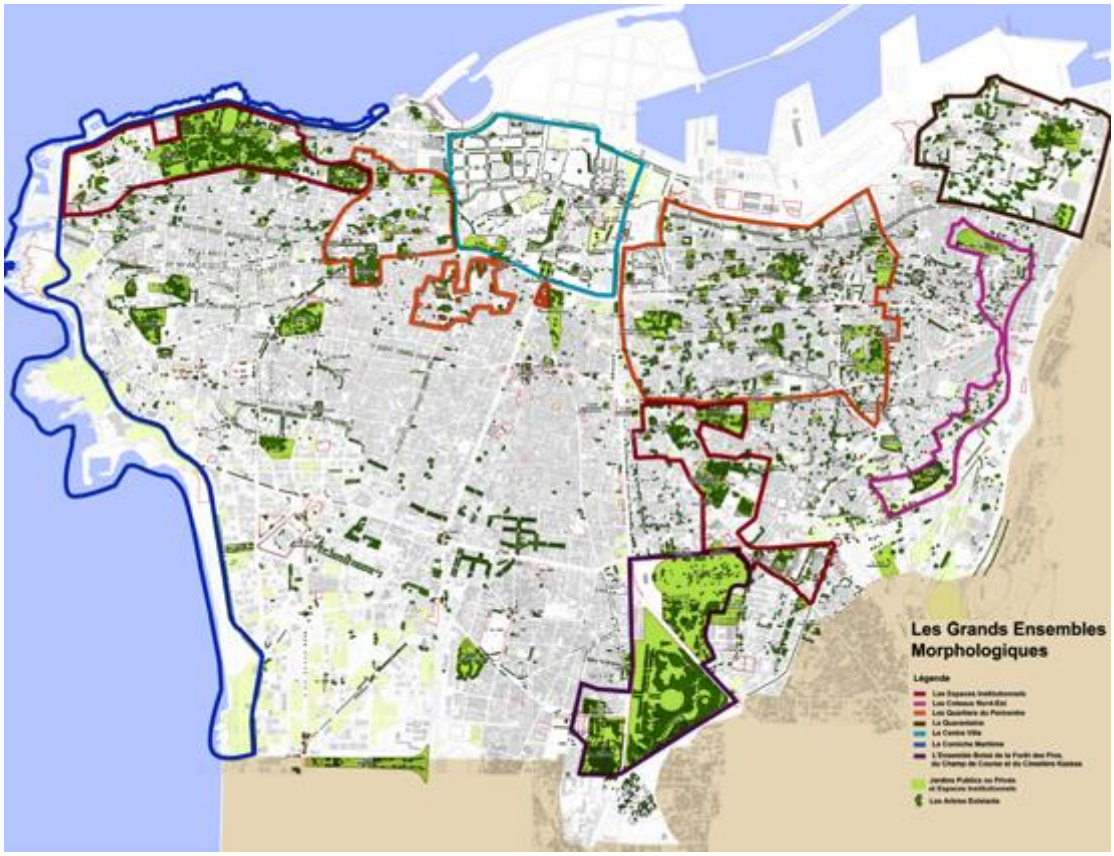

Figure 68 Large landscape morphology groups in Beirut (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

As shown in **Figure 69** below, the vehicular network of Beirut was also identified, through highways, avenues, urban boulevards, and main roads (Francis Landscapes Ltd., and Habib Debs Architects – Urbanists, 2012).

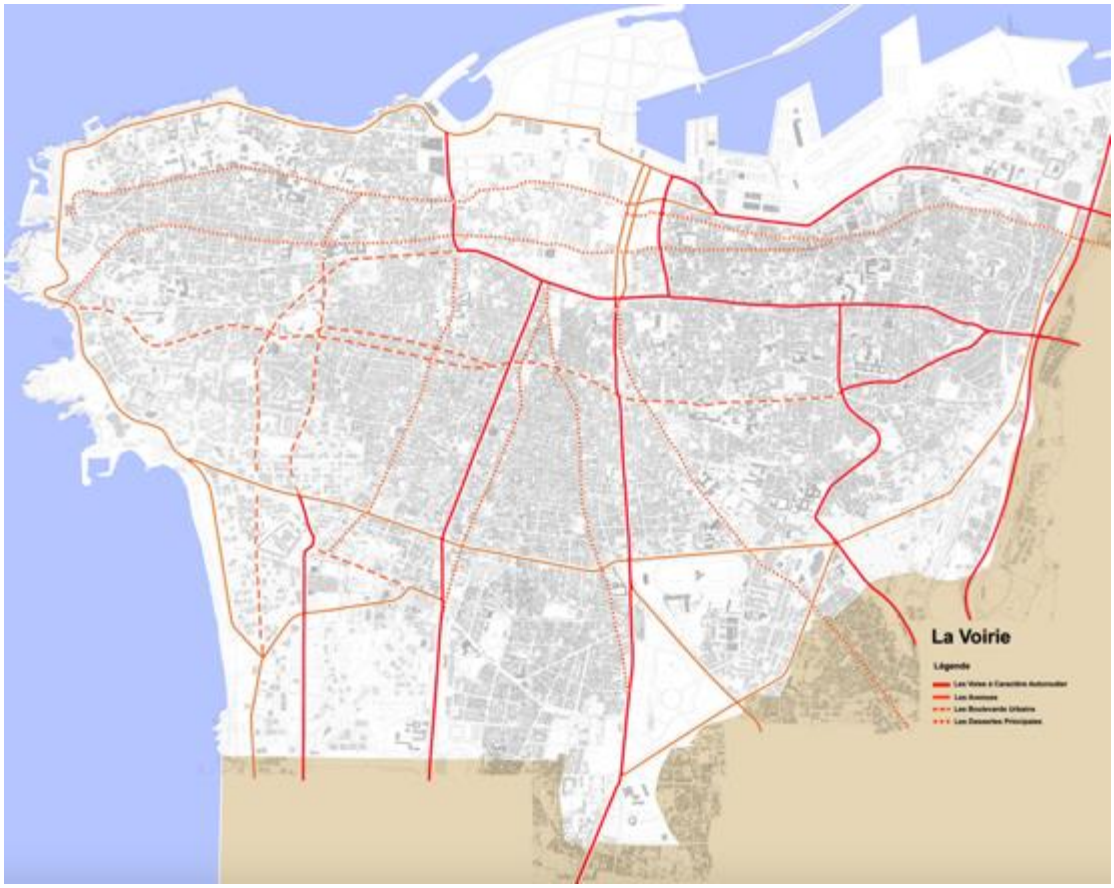

Figure 69 Road network in Beirut (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

Beirut's existing green spaces, landscape morphologies, and existing road network, shown in **Figure 70**, enabled the identification of opportunities for landscape and greening interventions within the city, as shown in **Figure 71** below. Firstly, it is suggested to implement urban parks on existing public land, including the maritime coast, the old Train Station, the UNRWA vacant lot on Verdun Street, in addition to enabling accessibility towards Horsh Beirut, and planning a park within the city center's waterfront. Secondly, this plan proposes the integration of small local public gardens, particularly in dense urban areas where open public spaces are lacking. Therefore, planting street vegetation, and implementing pocket parks in vacant leftover spaces, in-

between spaces, dead ends, pathways, and stairs is suggested, simultaneously enhancing the pedestrian experience and overall neighborhood livability. Moreover, this strategy map implies the connection of the maritime Corniche to the city center waterfront, and generally linking neighborhoods together through green corridors; Verdun, Sanayeh, Unesco, and Ramlet El Baida (1), Damascus Road and Horsh Beirut (2), and the Beirut River to Mar Mikhael along the railway line (3) are all suggestions of linkages between neighborhoods through green corridors. Moreover, this strategy also suggests the protection of urban heritage and their gardens, through establishing regulations that avoid their destruction. In conclusion, as shown in **Figure 71**, the 'Plan Vert' strategy presents a 'Liaison Douce' or 'Soft Link' proposal, in addition to proposing the greening of urban boulevards with pocket gardens, neighborhood links, urban parks in open public spaces, urban greening of avenues, the development of greening within secondary roads, and the protection and maintenance of existing private and institutional green spaces (Francis Landscapes Ltd., and Habib Debs Architects – Urbanists, 2012).

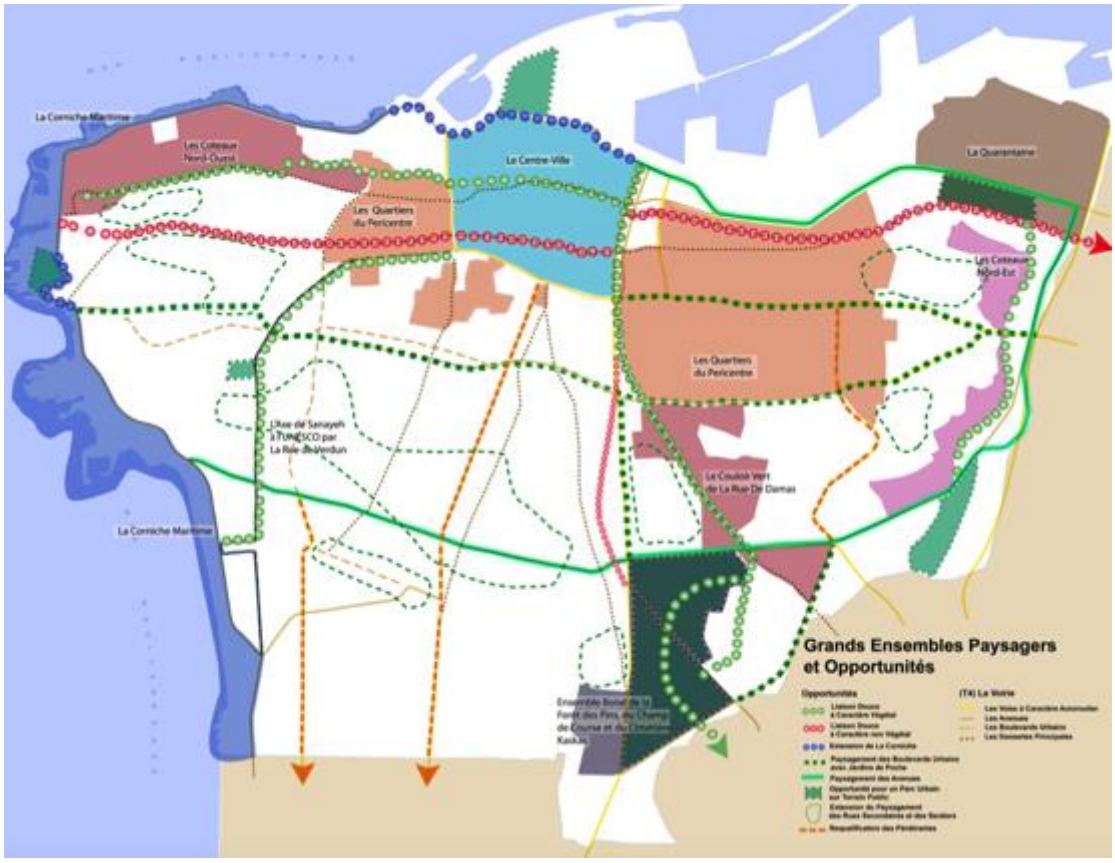

Figure 70 Large landscape morphologies and opportunities (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

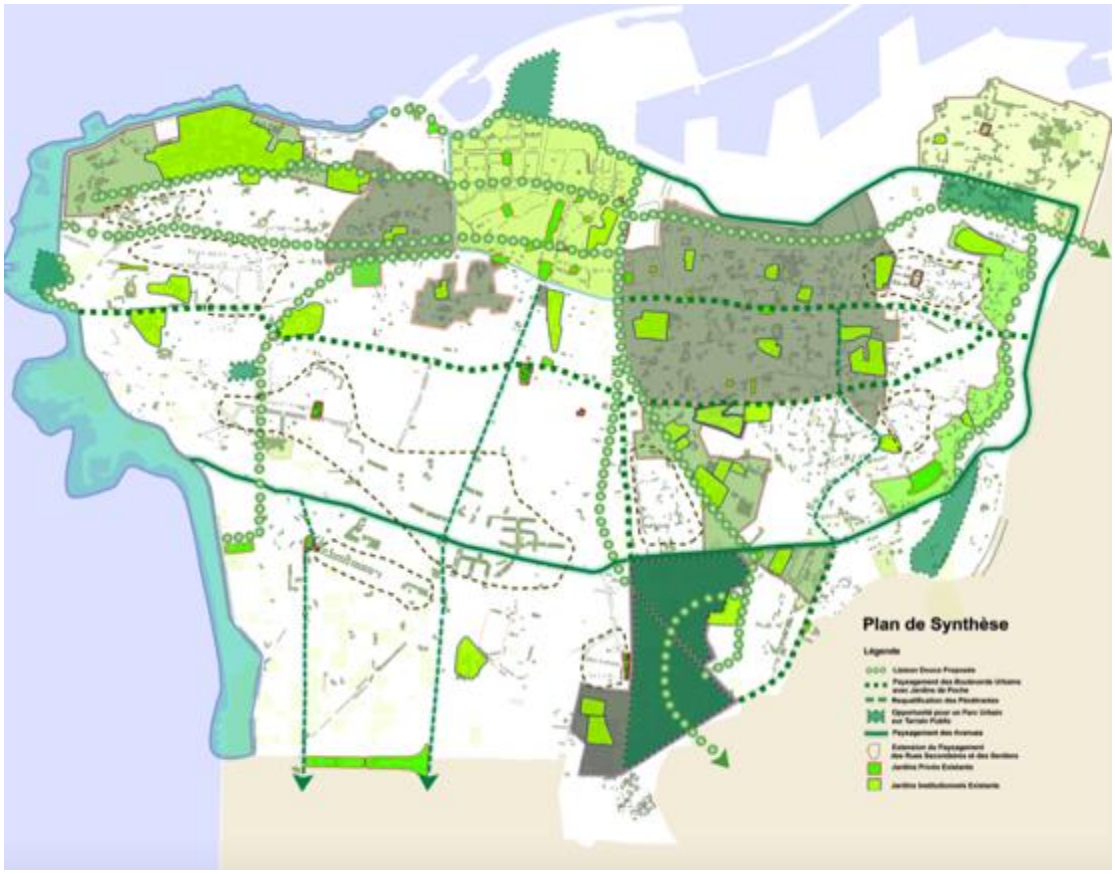

Figure 71 Synthesis plan of landscape and greening opportunities in Beirut (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

This strategy resulted with main planning and intervention opportunities, shown in **Figure 72**, a master plan comprised of three components of three groups of spatial strategies (‘1’, ‘2’, and ‘3’ as outlined on map) integrating the proposal of green links, parks, gardens, and other green areas.

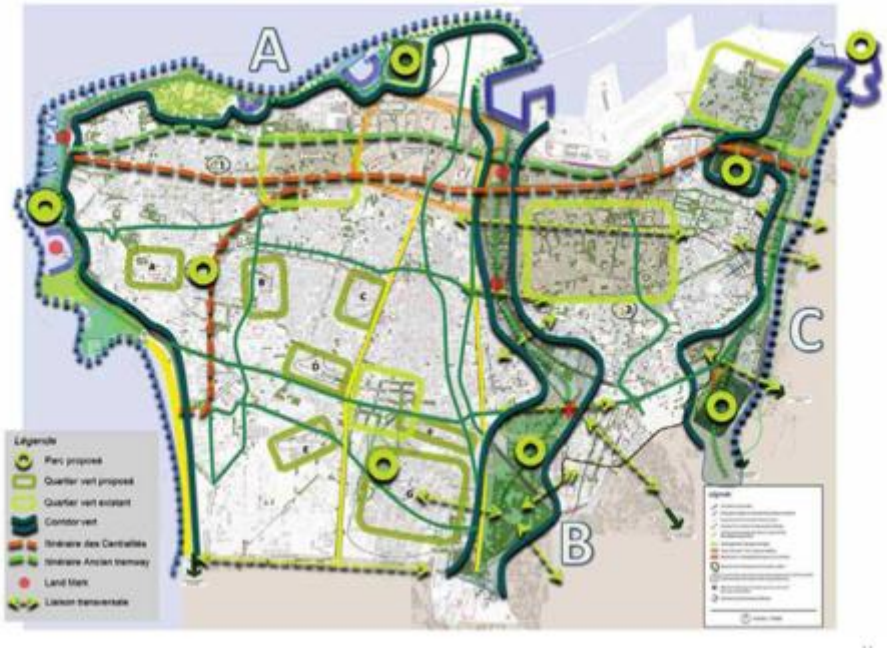

Figure 72 Elaboration of the Plan Vert of Beirut (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

A proposed green corridor link from Horsh Beirut towards the Port, illustrated in **Figure 73** below, passes through Mar Mikhael. Horsh Beirut is a significant 'green lung' in the city, consisting of the Pine Forest, horse race track, and cemeteries, in addition to being a major cultural space. Therefore, connecting it to the port and other cultural spaces through a 'soft link' is significant; other cultural spaces integrated within this proposed green corridor include Al Chams Theater, the National Museum, the French Institute, Beryte Theater, USJ Geological Museum, Monot Theater, and more. Therefore, this proposal creates a green link between green spaces, and cultural hubs from Horsh Beirut towards the Port of Beirut, passing through Mar Mikhael.

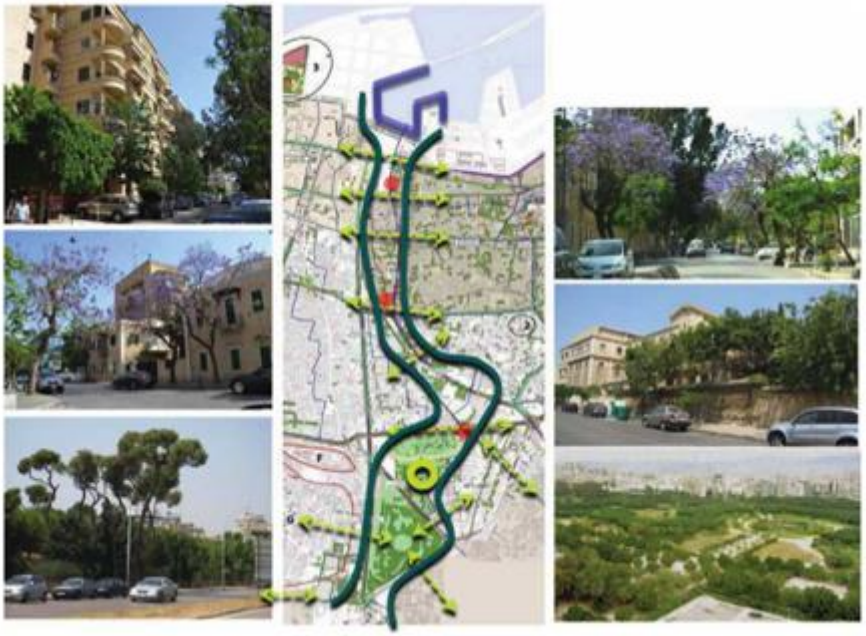

Figure 73 Cultural and green corridor along Damascus Road (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

As mentioned earlier, one of the suggestions within the city-scale green plan proposal is the implementation of an urban park on public open spaces, including Train Station, as shown in **Figure 74**. This proposal suggests improved accessibility through multiple entrances for pedestrians and cyclists. This plan identifies existing and proposed vegetation, vehicular and pedestrian paths, main stairs, proposed green spaces, a community garden, and activated spaces for communal activities, games, sports, walking, and more. This map also locates a suggested parking space, and city-scale BRT bus transportation system, supported by a public transportation station and infrastructure.

Figure 74 Proposed design of train station (Francis Landscapes Ltd/ Habib Debs Architects - Urbanists, 2012)

B. Relevant Site Analysis Recap

Given that the initial objective of this thesis is to sustain the social practices that occurred after the blast, and maintain the sense of community in the neighborhood, it is necessary to observe and understand patterns of social practices that occurred before and after the blast, in both the public and private realm of the neighborhood. As shown in **Figure 75**, social practices in the public realm before the blast included people sitting informally on sidewalks, occasional street markets, and performances and art events on stairs. Despite the scarcity of public spaces, the neighborhood community nevertheless managed to gather, and sustain cultural and social activities.

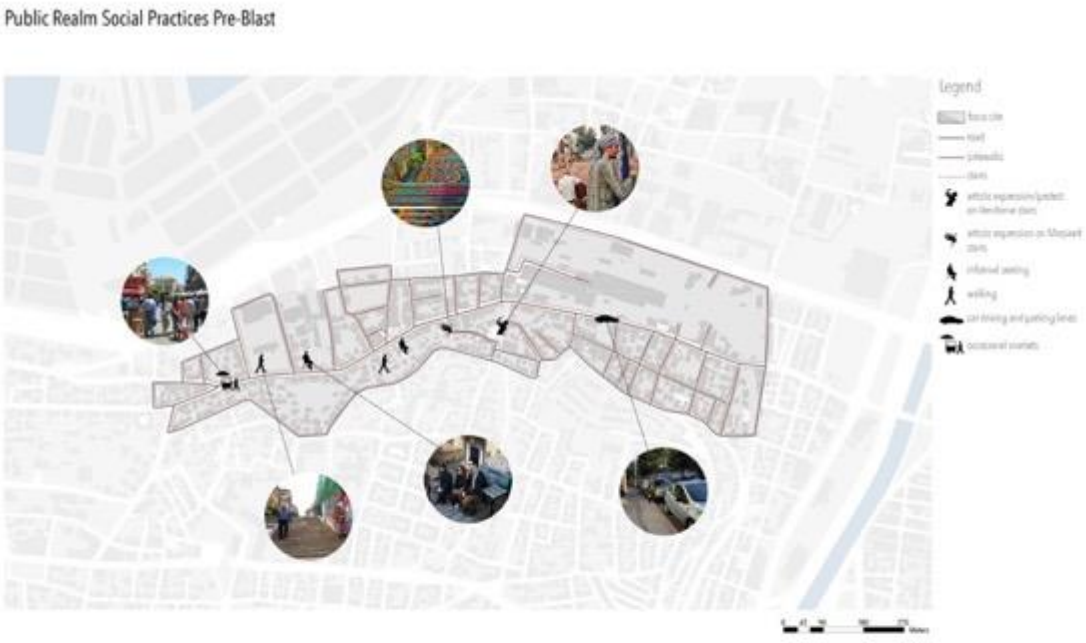

Figure 75 Public realm social practices pre-blast

Immediately after the blast, this sense of community was even more apparent, with people, from the neighborhood and beyond, immensely gathering and volunteering for the purpose of post-blast relief. As shown in **Figure 76**, many NGO's, such Basecamp, Ground-0, and more mainly stationed tents along Mar Mikhael's main Armenia Street, in addition to other locations. NGO's and volunteers from all over the country gathered to help the neighborhood residents, whether by offering reconstruction services, clothes, food, mental health aid, and more.

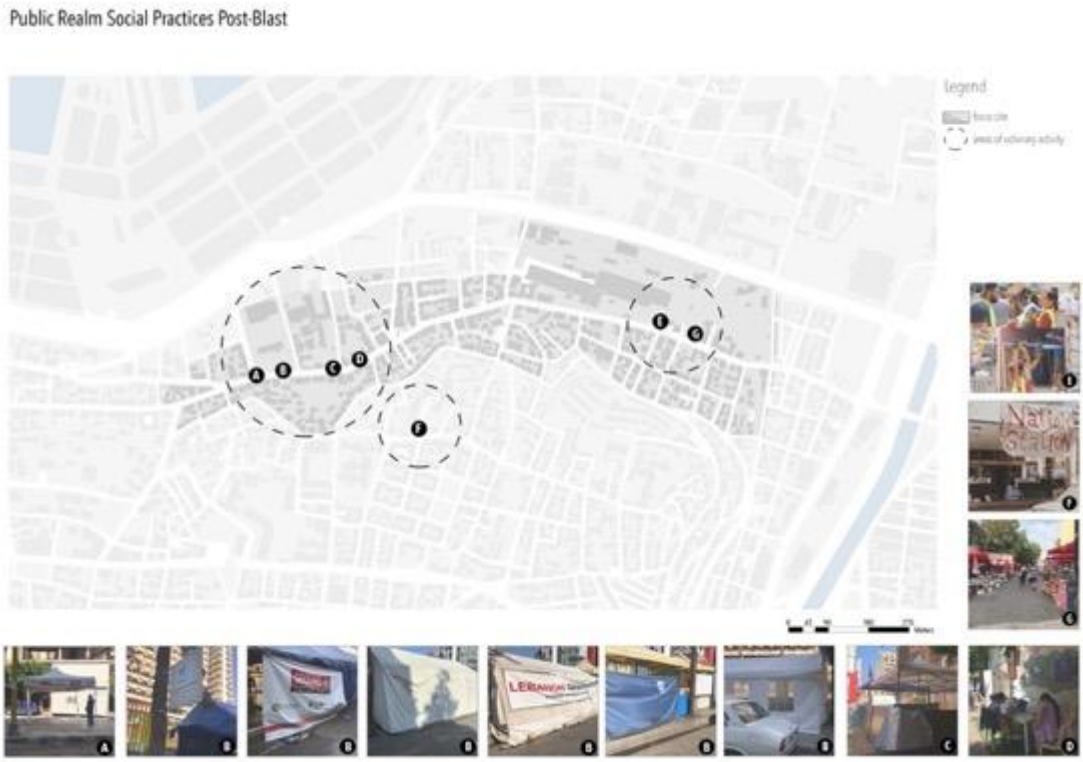

Figure 76 Public realm social practices post-blast

Community gatherings prior to the blast also occurred in the private realm, whether through restaurants, galleries, ateliers, pubs, and shops, as shown in **Figure 77**.

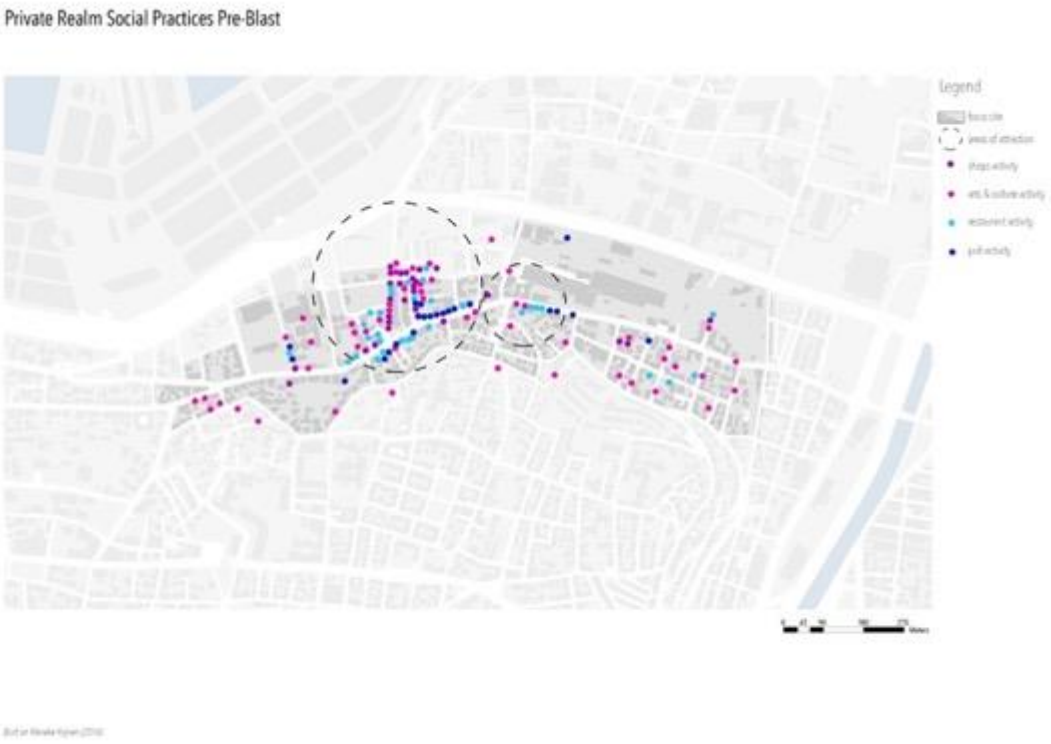

Figure 77 Private realm social practices pre-blast

Nevertheless, after the blast, community gatherings continued to occurred within the private realm, as some shops were still operating, people began reconstructing and cleaning destructed homes, and NGO coordination meetings and operations were also being held, as shown in **Figure 78** below. Specifically on Patriarch Arida Street, “more shops are seen operating, such as car garages, hardware stores, salons, clothing stores, and some cafes/restaurants” (Beirut Urban Lab et al, 2020). Armenia Street was “busier than other streets, especially that many shops (including pharmacies, fast food restaurants, markets) have re-opened” (Beirut Urban Lab et al, 2020). Son on Man, a faith-based organization, “rented an apartment that used to be vacant on Pharaon Street and opened a free health care clinic for residents of the neighborhood” (Beirut Urban Lab et al, 2020). Moreover, “Nusaned, local NGO, opened an office/information hub on

Armenia Street one month after the blast and is still operating daily" (Beirut Urban Lab et al, 2020).

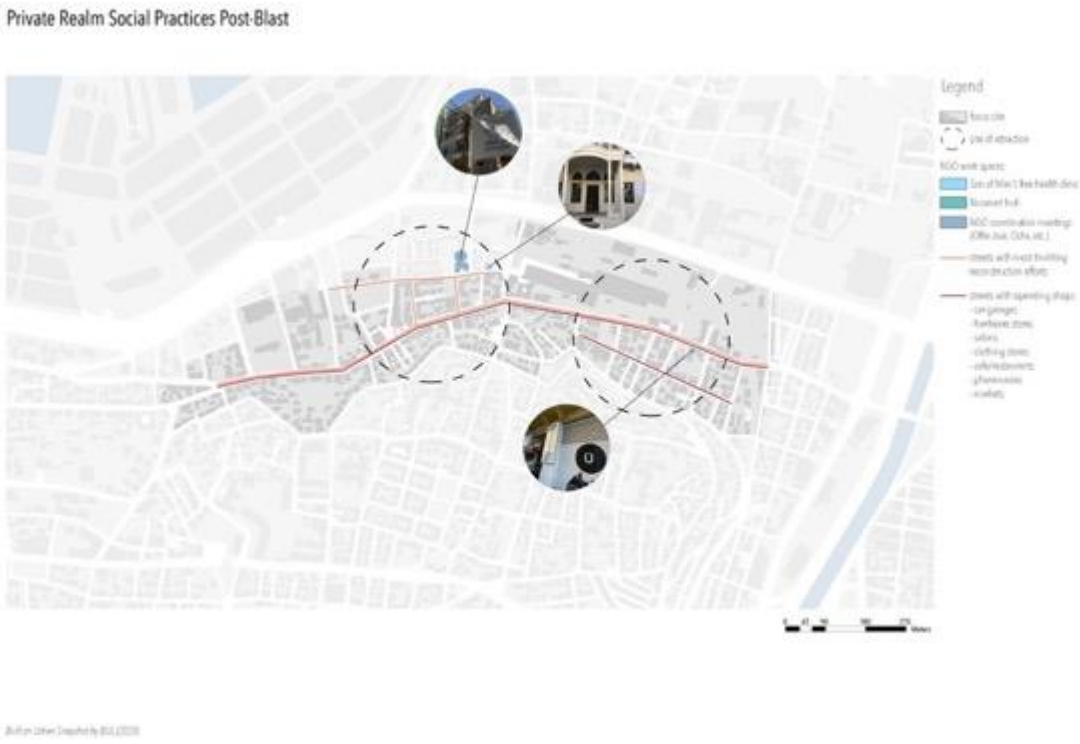

Figure 78 Private realm social practices post-blast

C. Design Concept

As explained earlier, the 'Plan Vert' proposal, by Habib Debs Architects – Urbanists (URBI) and Francis Landscapes, proposes the transformation of Beirut's Damascus road into a connective, and green spine across the city. This proposal, as shown in **Figure 79** below, acknowledges the existing urban vegetation, private gardens, and institutional gardens in the city, and suggests a proposal accordingly, where all these existing green spaces, and proposed areas of opportunity, are connected through a green network across the city. The project proposes multiple soft links

between Damascus Road, Hamra, Mar Mikhael, Beirut Central District, Ramlet El Baida, and Horsh Beirut, one of which passes through Mar Mikhael's Armenia Street. Moreover, the Plan Vert suggests vegetated avenues on two main roads, and the extension of vegetated secondary roads and pathways, in effort to connect green spaces with green linkages. In addition to existing green spaces, the project proposes additional urban park opportunities on the public realm, which includes the Train Station area in Mar Mikhael. As Plan Vert's main objective is connecting the city through green interventions, this proposal's city-scale strategy will be adopted and developed in this thesis. The proposal's relevant design propositions, in the context of this thesis' focus site is illustrated in **Figure 80**, where the urban park proposition on Train Station, and the soft link proposition across Armenia Street are highlighted.

Figure 79 City scale strategy: Plan Vert

Figure 80 Plan Vert in context

The Plan Vert in Context highlights the proposed soft link, and proposed urban park opportunity on Train Station's government-owned land, those of which are two elements included this thesis' proposed Neighborhood-Scale Strategy, as shown in **Figure 81** below. This neighborhood strategy aims to develop a spatial network, connecting spaces that have been appropriated following the blast, in addition to other spaces of opportunity such as government-owned land, to sustain social practices and allow for activities and gatherings to persist. Sustaining social practices is an effort towards post-blast urban recovery, where sense of community, and the memory of shared space would be sustained and protected. This would be achieved through landscape urbanism design tools and strategies, and is thus a landscape urbanism approach towards urban recovery of post-blast Mar Mikhael.

Figure 81 Neighborhood scale strategy

Consequently, the design strategy, illustrated in **Figure 82** below, proposes intervention on four different selected sites, connected by a main green pedestrian link, and a secondary pedestrian link. These four different sites have been selected in regards to their potential of becoming spaces of gathering, given their activation following the blast, and their ownership status; three of four selected sites are municipal property.

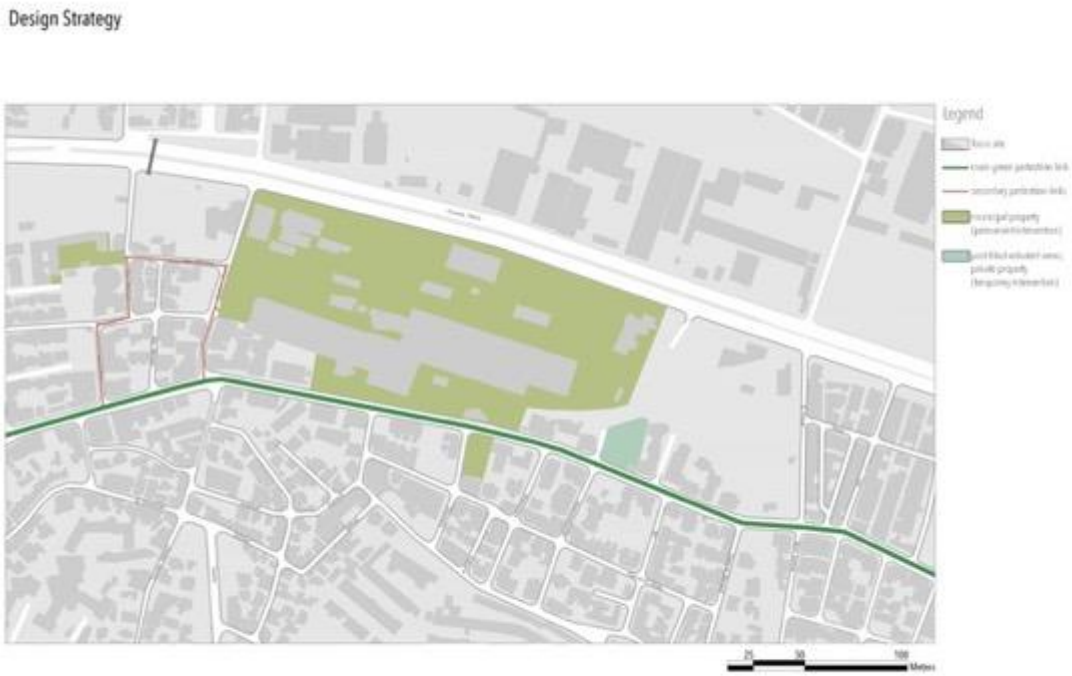

Figure 82 Design strategy

D. Zoom-In Analysis of Intervention Sites

Prior to intervening in the four selected areas, and street network, these spaces are analyzed in regards to their context. The landmarks, vehicular mobility, sidewalk structure, neighborhood characters, zoning, ground floor land use, upper floor land use, ownership, municipal property, and un-built land surrounding each area has been studied, as shown in **Figures 83-88**. This information, mainly the space's surrounding street typology, ownership, and vacancy, would later inform the design decisions integrated into the proposal.

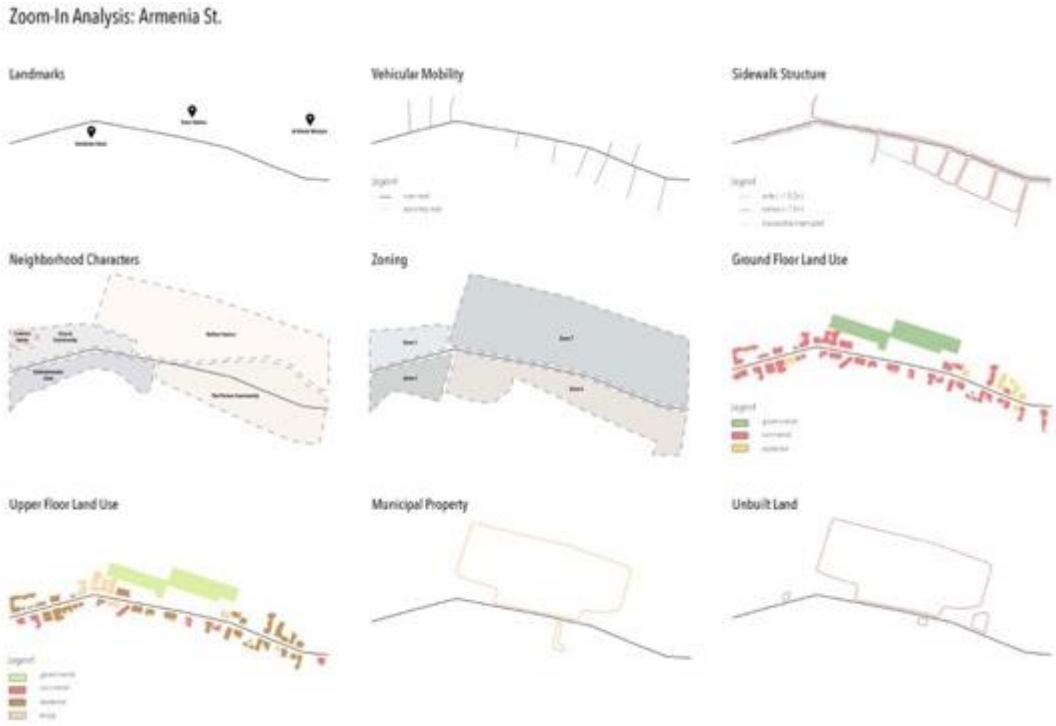

Figure 83 Zoom-in analysis - Armenia St.

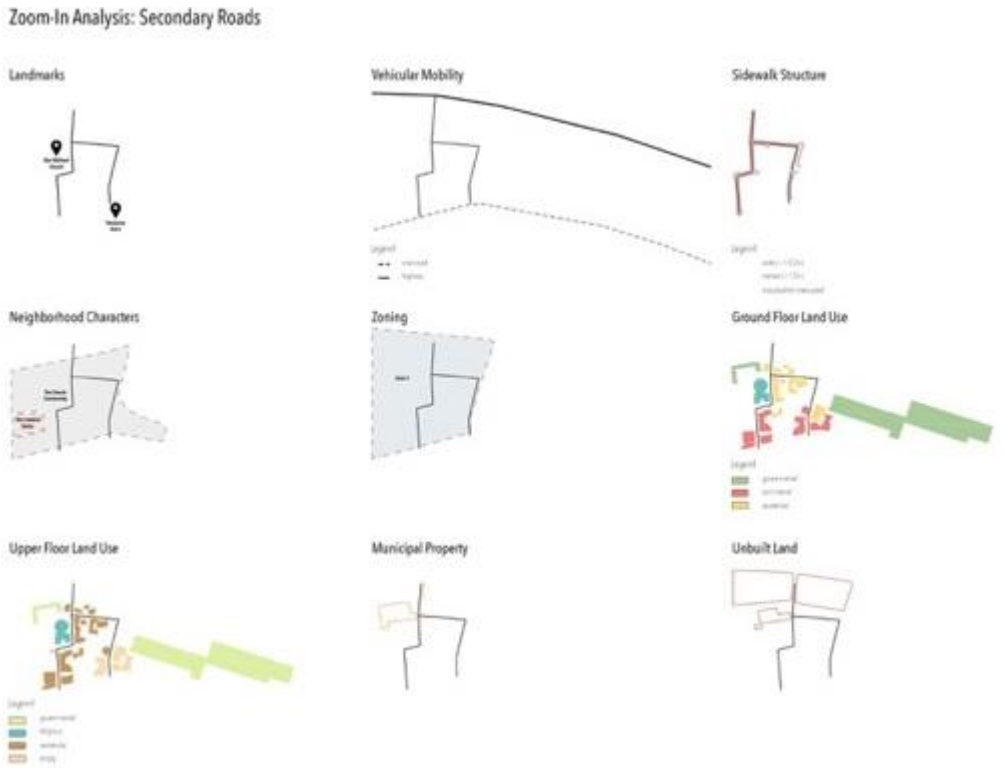

Figure 84 Zoom-in analysis - secondary roads

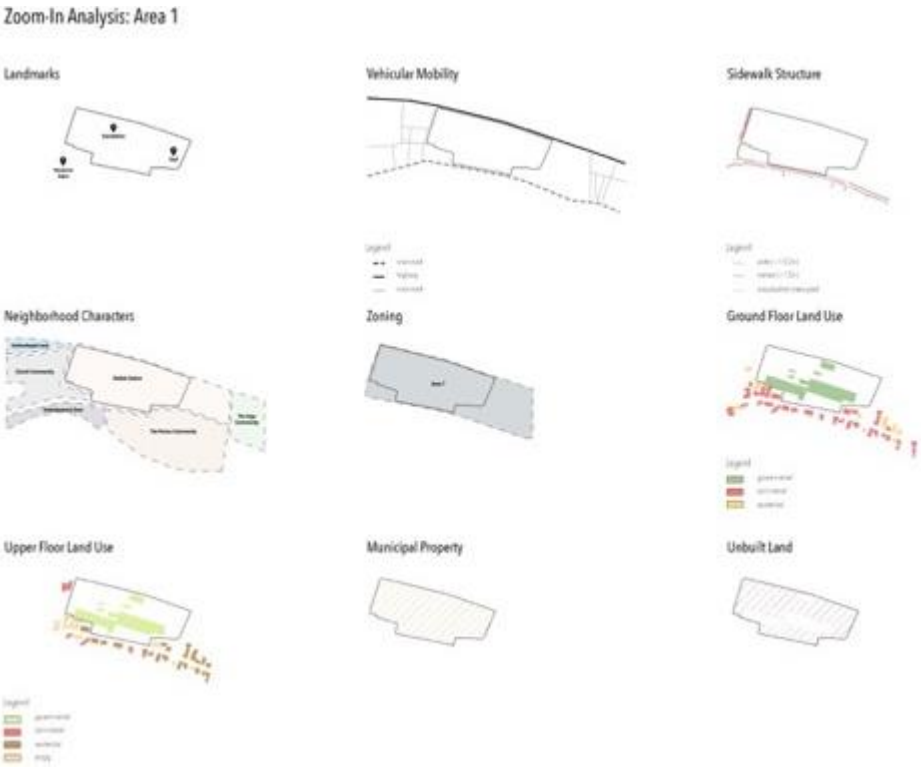

Figure 85 Zoom-in analysis - Area 1

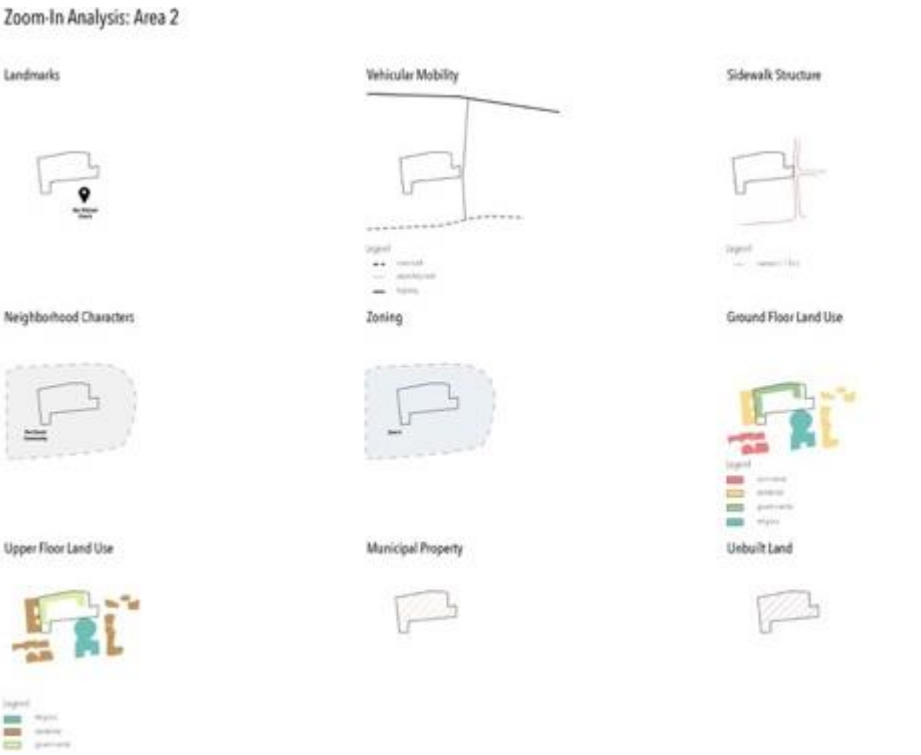

Figure 86 Zoom-in analysis - Area 2

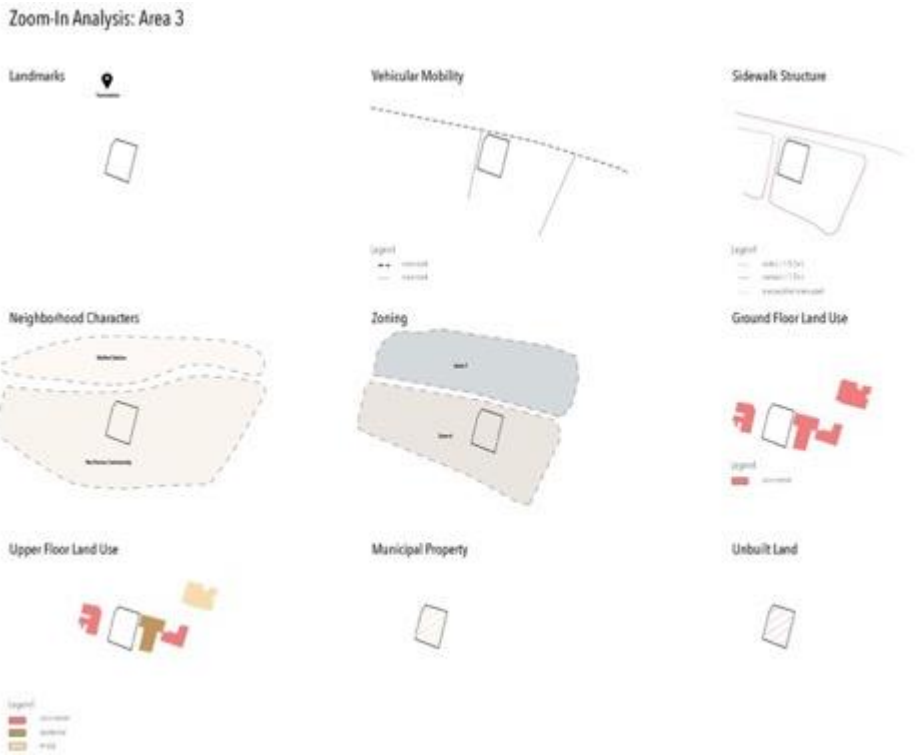

Figure 87 Zoom-in analysis - Area 3

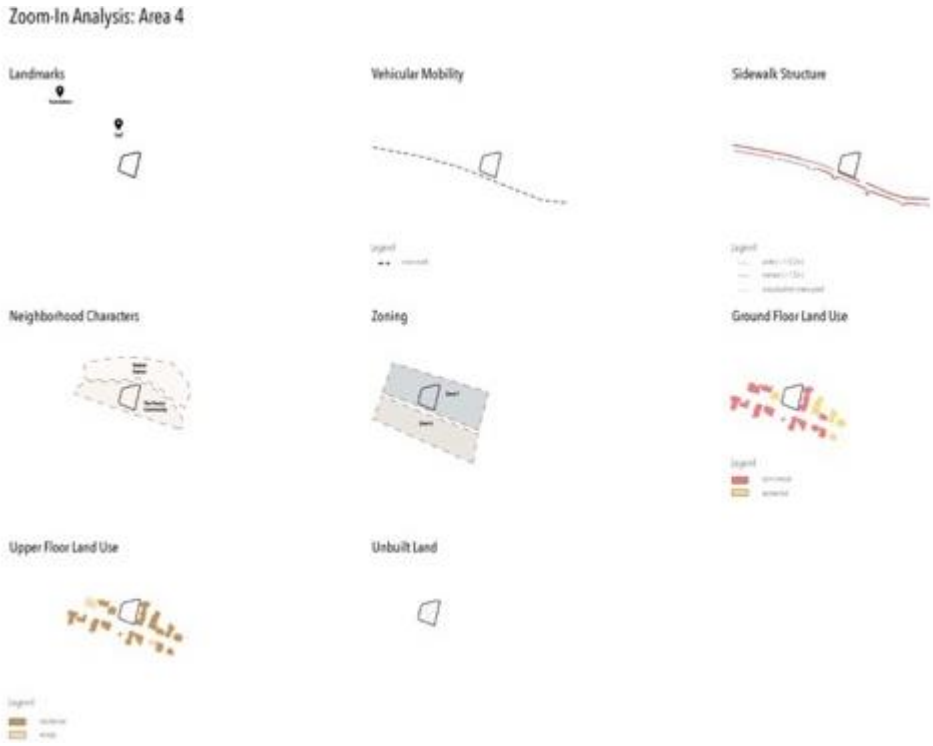

Figure 88 Zoom-in analysis - Area 4

E. Overall Intervention

Following detailed analysis on the selected areas of intervention, design programs are proposed, shown in **Figure 89** below. Given the vacancy of its hangar and space, in addition to previous events being held in the area, Area 1's Train Station is proposed to become a library and co-working space, surrounded by a multi-use event space. A library and co-working space would allow for cultural exchange to occur, in addition to coordination between and operation within NGO's that have worked towards the neighborhood's reconstruction efforts after the blast.

Area 2, the municipal land behind the Mar Mikhael Church, is proposed to become a church community garden. A community garden would not only allow for community residents to grow their own produce, but also gather and participate in group activities. As mentioned in the previous Literature Review chapter, community gardens are "a part of a series of other steps necessary for crime prevention and can contribute through the creation of a sense of community, empowerment and physical beautification" (Mees, 2018), in addition to being "widely recognized as sites of grassroots citizenship practice and place-based community development" (Ghose, Pettygrove, 2014). Most importantly, such an intervention could support individual and community resilience in a post-disaster environment" (Okvat, Zautra, 2011). This was observed in the case of New Orleans, following Hurricane Katrina, where recovery efforts included building new community gardens, restoring many that have been destroyed, which would ultimately allow community members to grow their own produce, in addition to strengthening community bonds (Okvat, Zautra, 2011). Such an intervention also suggests a solution for the community residents'' mental health following the blast, as community gardens could be design strategies and solutions that

propose “small-scale, yet socially catalytic interventions to remove ‘stress’ in the built environment” (Gerbal et al, 2016).

Area 3, the vacant municipal un-built lot along Armenia St. is suggested as an inclusive play space. Given the plot’s surrounding residential community, as previously shown in **Figure 87**, in addition to the observation of fieldworkers “children playing football in empty lots” (Beirut Urban Lab et al, 2020), and the neighborhood’s demographics consisting of “a diverse social mix of older, long-time residents…and young newcomers” (Gerbal, et.al, 2016), this area is thus suggested as a proposed safe play space, for both children, and elders.

Area 4, a privately owned parking lot also along Armenia St., is proposed as a market space. Although the space is currently a parking lot, as shown in **Figure 115** below, it is occasionally a market space, thus highlighting the opportunity and potential this area has into becoming an improved and designed market space, which would enhance the gathering experience, and allow for more market events to take place.

All four spaces combined offer opportunities for communities to gather, in different ways, through different activities and programs. They are connected by a main pedestrian link across Armenia Street, which extends towards secondary pedestrian links, further connecting the spaces with each other. Consequently, the proposed design programs offer a network of spaces that allow the persistence of social gatherings and interactions, through landscape urbanism tools and strategies, towards the urban recovery of Mar Mikhael.

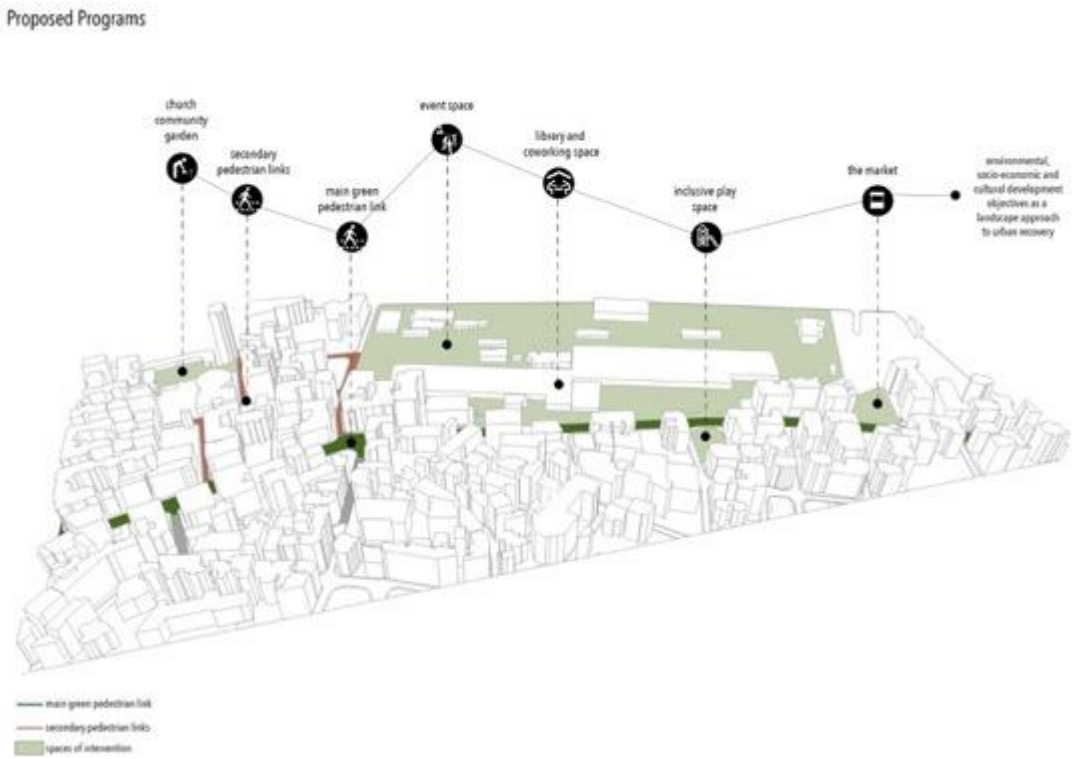

Figure 89 Proposed programs

F. Detailed Intervention

The following **Figures 90-107** present this thesis' proposed design intervention, with the overall existing plan (**Figure 90**), and overall proposed plan (**Figure 91**), followed by focused existing and proposed plans and sections of each of the four intervention sites (**Figures 92-107**).

As explained earlier, the design programs suggested are a co-working space/ library and event space, a church community garden, a safe play space for children and elders, and a market, all connected through a main green spine, and secondary green links.

As shown in the overall existing plan (**Figure 90**), and detailed existing sections (**Figures 94, 98, 102, and 106**), all sites are bounded by walls, fences, or gates, which obstruct the spaces' physical and visual accessibility. The sites are mainly asphalted, and left vacant, and inactive. Vehicular mobility is prioritized over the pedestrian experience, with an absence of street crossings, lighting, or defined passageways within the areas. Sidewalks are also tight, and restaurants' seating areas extend onto the sidewalk, as shown in **Figure 94**'s Section 1.

For these reasons, a design proposal, shown in **Figure 93**, addresses these issues, in line with this thesis' main objective to create spaces that sustain post-blast social practices, as a landscape urbanism approach towards the urban recovery of post-blast Mar Mikhael.

The sidewalk by the south-facing side of the Train Station lot is enlarged, by extending onto the Train Station lot, therefore forming a wider sidewalk, which would allow for activities that already occur on Mar Mikhael's tight sidewalks, as previously shown in **Figure 94**'s Section 1, and **Figure 75**, such as informal seating areas, street markets, and more. Such a widened sidewalk allowed for the integration of tree planters, and therefore a more consistent and enriched line of vegetation across the main green spine, defining the walkway through street trees and groundcover. The street tree proposed is Grevillea robusta, as it is commonly found throughout the site, and is suitable as a street tree, as it has a manageable maximum canopy size of 5-8m, and height of 15-23m. Its leaf persistence is evergreen, and it is heat and drought tolerant. This tree also adequately provides shading across the sidewalk, thus further allowing for informal seating to comfortably occur. Moreover, as shown in **Figure 91**'s bottom

legend, existing trees on site, such as Ficus nitida, and Ailanthus altissima trees are considered and maintained in the design proposal.

As to not disrupt the overall road network, and Armenia Street's required car and parking lanes, sidewalk enlargement was therefore possible through extension from the Train Station lot itself, which is municipal property, and directly adjacent to the sidewalk and main Armenia Street.

Moreover, rather than gates, fences, and walls, the intervention spaces are separated from the sidewalks through bollards, which allow for improved porosity, visual, and physical accessibility between both areas, and nevertheless maintains separation and defined distinction between the spaces and sidewalks. The entrances towards the event space, safe play space for children and elderly, church community garden, and market, are defined by shrubs and trees, rather than how they were previously defined by gates and fences. The proposed shrubs plant palette include Pittosporum tobira, Rosmarinus officinalis, Russelia equisetiformis, and Myrtus communis, all of which are evergreen, and vary in height, texture, and color, thus creating a diverse pedestrian experience throughout the main green spine, and spaces.

However, both the sidewalks, and the spaces' proposed passageways are to be tiled with consistent in pavement material, recycled plastic pavers, in effort to portray a continuous pedestrian flow between and within the proposed spatial network. This is also done by proposing level consistency between sidewalks and the spaces, both 0.15m above the road. Nevertheless, although consistent pavement material is used for both passageways, there is a distinction in color shades, to further imply and define the spatial distinction. The usage of recycled material throughout the design is continuous, given the opportunity of utilizing post-blast debris, and recycled waste.

Also, rather than walls and fences that separate the spaces with either the Charles Helou highway, in the case of the Train Station Lot, or a separate lot, in the case of the parking lot, a tree buffer of large canopy and evergreen trees, such as Cupressus sempervirens, and Ficus elastica, are proposed.

To further improve the pedestrian experience, overall connectivity of the spatial network, and accessibility, crossings and curb ramps are proposed at specific areas across the main street, connecting two different spaces and sides of the road. Furthermore, the integration of double street lights, for the roads, and sidewalk, are proposed, in addition to floor lights for the four spaces of intervention, ultimately illuminating the spatial network, and improving its accessibility, throughout all times of day.

Hardscape and softscape materials integrated in the design are described in the bottom legend in **Figure 91** and in the hardscape and plant palette diagrams in **Figures 117 and 118**.

In regards to the proposed plan of Area 1, the Train Station Event Space, shown in **Figure 93**, passageways solely are proposed, rather than defined park programs or seating areas, in order to allow for the multi-functionality of the space, but nevertheless integrating a passageways, defined by groundcover planters, further implementing connectivity throughout the neighborhood, and within the site. The openness and multi-functionality of the space would allow for mobile furniture on the site, dependent on the occasion or event. The planters and passageways are specifically designed and formed organically, thus displaying a sense of flexibility, and excitement throughout the area. The passageways, as mentioned earlier, are tiled with similar pavement as the sidewalks, in order to connect both spaces and create continuity for the pedestrian.

However, the space itself is paved in limestone paving, a local material, which would help clearly define and distinguish the event space from area passageways, with different color and sized tiles, in the context of this design. Overall, pavement selection throughout the design proposal is sustainable, through selections of local, recycled, and affordable material. Chosen groundcover plants include Ophiopogon japonicus, Myroporum parvifolium, Chlorophytum comosum, and Aptenia cordifolia. The groundcover palette is specifically selected as heat and drought tolerant, nevertheless portraying diversity in textures, colors, and heights, further diversifying the pedestrian experience within the site.

The proposed plan for Area 2, the Church Community Garden, similarly integrates passageways defined by planters to guide the visitor into and throughout the site. Rather than how a wall initially separated the church and the site, and how the entrance to the site from the sidewalk was gated, a pathway from the church's back entrance and the sidewalk towards the site, defined by shrubs, is proposed. Connecting the church and this church community garden links two community spaces together, further strengthening the community bond in the area. The agricultural planters are provided as modular gardens, made of recycled material from the blast, as presented in **Figure 118**'s hardscape palette.

Area 3, the Inclusive Play Space, is currently an inaccessible gated lot, bordered by tight sidewalks, as shown in the existing plan and sections in **Figures 100**, and **102**. As shown in the proposed plan and sections in **Figure 101** and **103**, removing the fence, and bordering the area with bollards, shrubs, and trees instead enhance accessibility to the area. The sidewalk around the space is widened by extension onto the lot itself, as it is municipal-owned. As the proposed program of this space is a safe play space for

children and elderly, or an inclusive play space, the floor is tiled with rubber playground tiles, and features painted playground floor games. In order to provide flexibility and multi-functionality of space usage in the neighborhood, all proposed furniture elements in this proposal are movable and subject to change. The proposed passageway mirrors the plot's form, forming a circular walkway passage around the plot, around all potential play elements, and forms the open space in the center, allowing for group activities to occur.

Area 4, the Market, is currently a parking lot, as shown in **Figure 115**, but occasionally hosts markets. For this reason, the proposed program of this area is a market, thus the proposed passageways within the space, guiding a continuous, organic, and organized pedestrian flow formed around temporary market stalls, and mirroring the plot's original form.

Nevertheless, urban furniture and particular design elements portrayed in this proposal's perspective images represent a conceptual vision. Although it is proposed to intervene on a main green spine, secondary green links, and four community gathering spaces, including a community garden, a play space, an event space, and a market, the approaches towards these programs are rather flexible. Provided that this proposal consistently suggests an urban network of open green community-gathering spaces, the methods, and particular design elements used to achieve this goal are variable, and could result in many different potential design products. This would ultimately allow the further development of this design concept, which responds to temporal change, transformation, adaptation, and succession overtime, particularly in a constantly changing urban environment like Mar Mikhael.

Figure 90 Existing plan

Figure 91 Proposed plan

Figure 92 Existing plan (Area 1: Train Station Event Space)

Figure 93 Proposed plan (Area 1: Train Station Event Space)

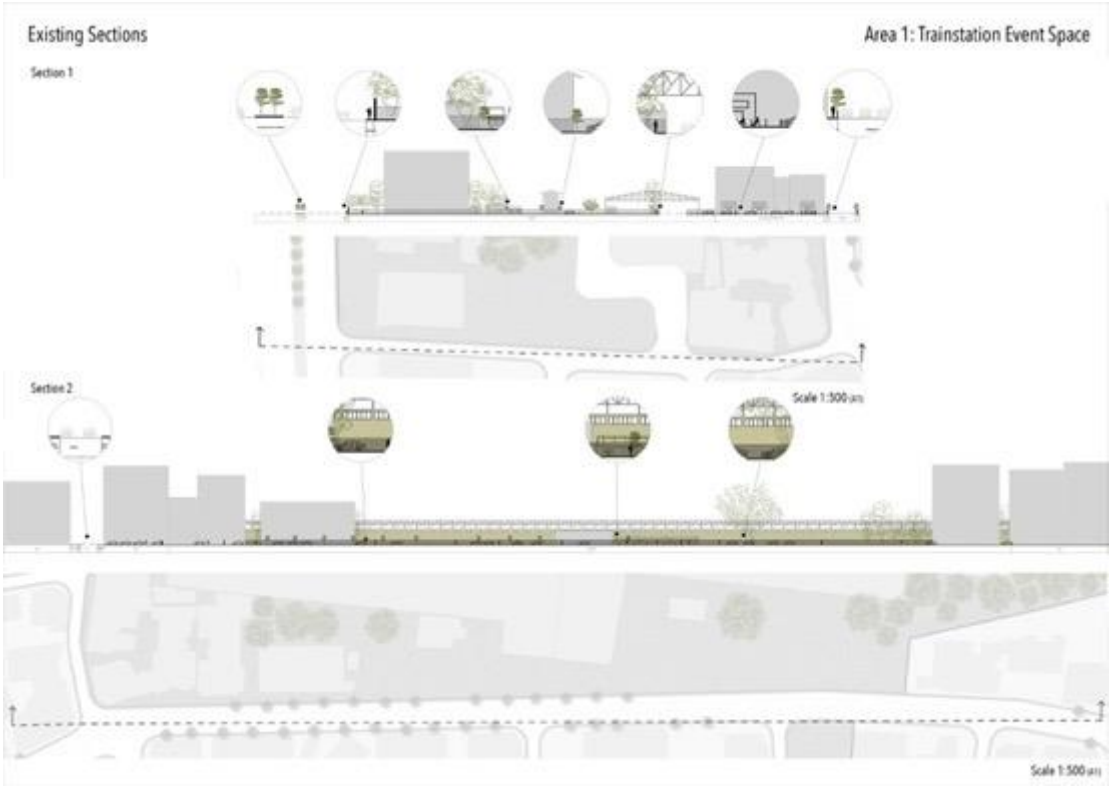

Figure 94 Existing sections (Area 1: Train Station Event Space)

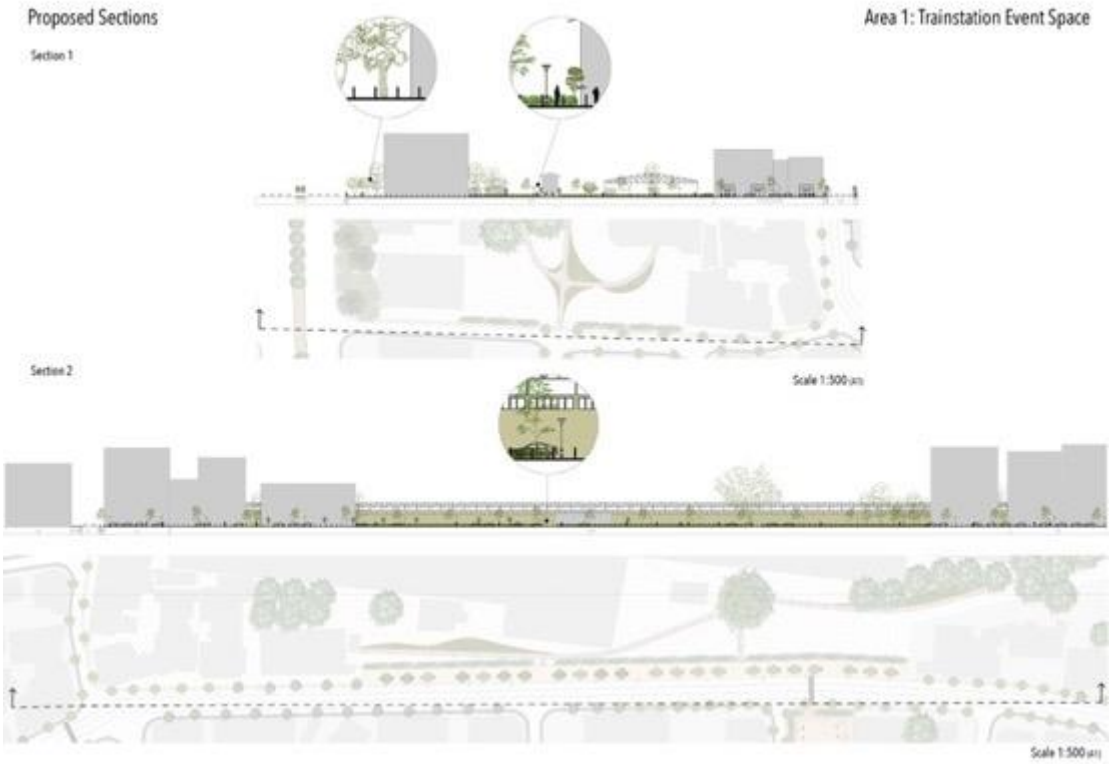

Figure 95 Proposed sections (Area 1: Train Station Event Space)

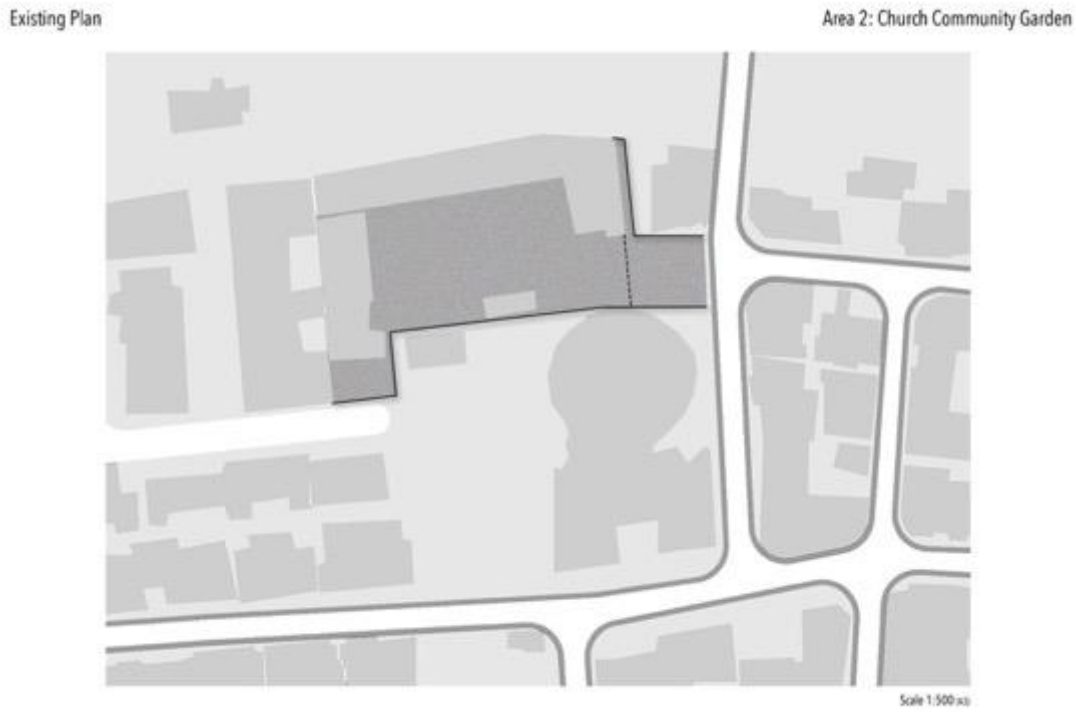

Figure 96 Existing plan (Area 2: Church Community Garden)

Figure 97 Proposed plan (Area 2: Church Community Garden)

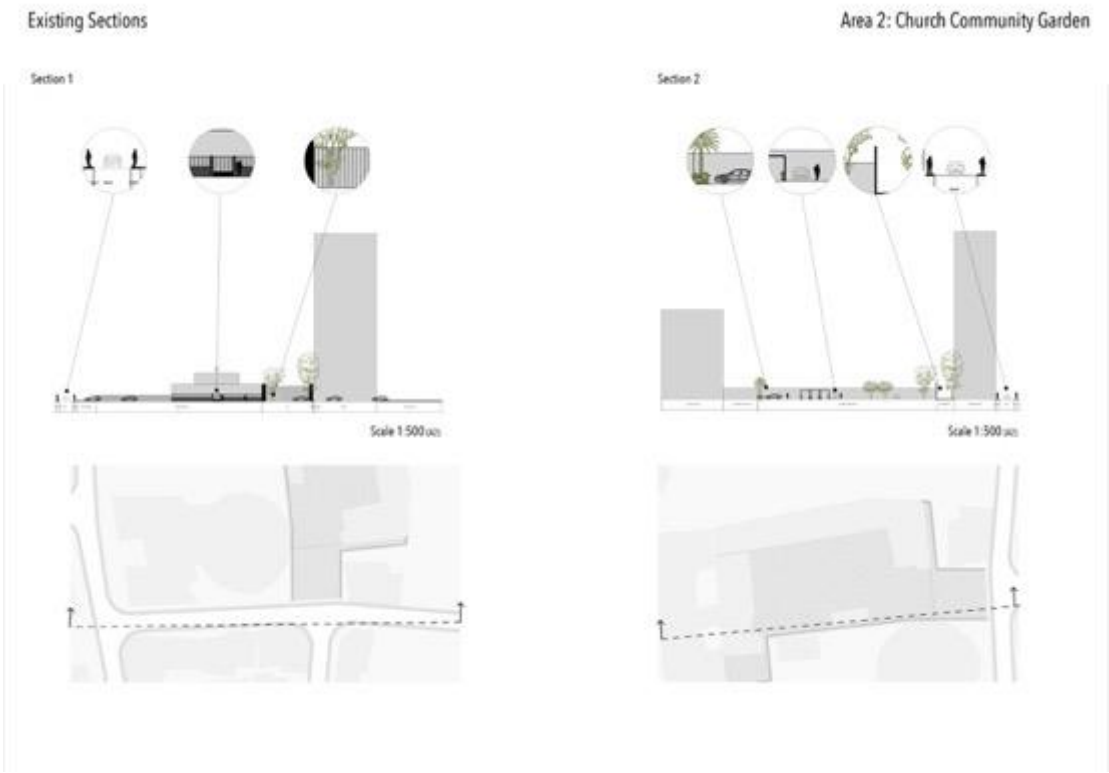

Figure 98 Existing sections (Area 2: Church Community Garden)

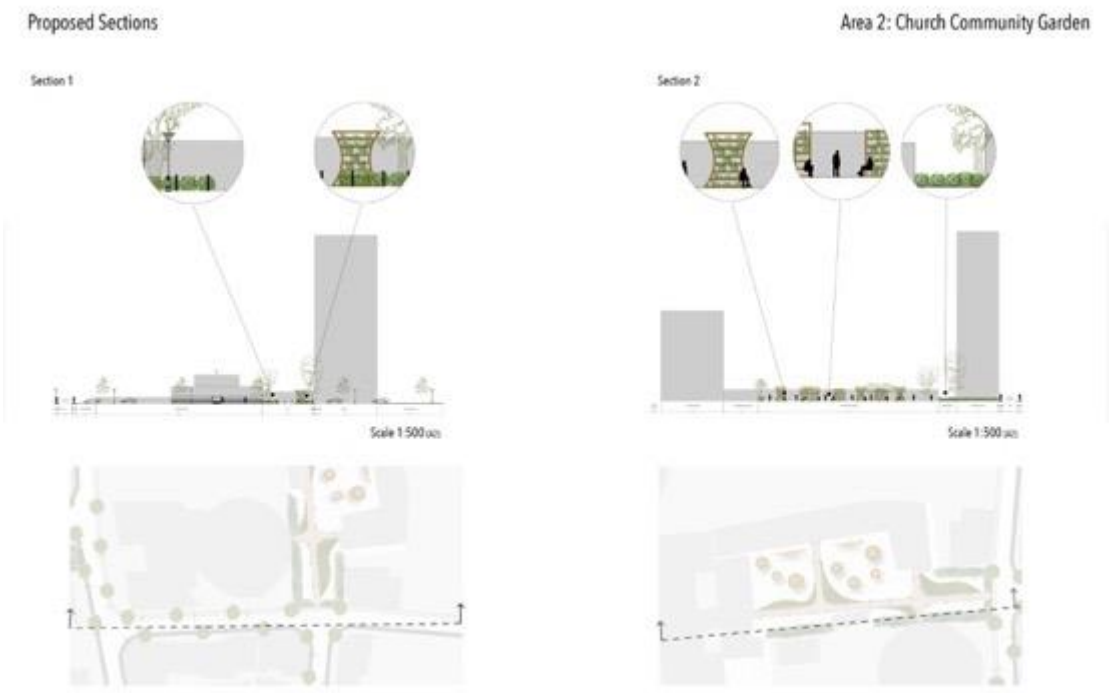

Figure 99 Proposed sections (Area 2: Church Community Garden)

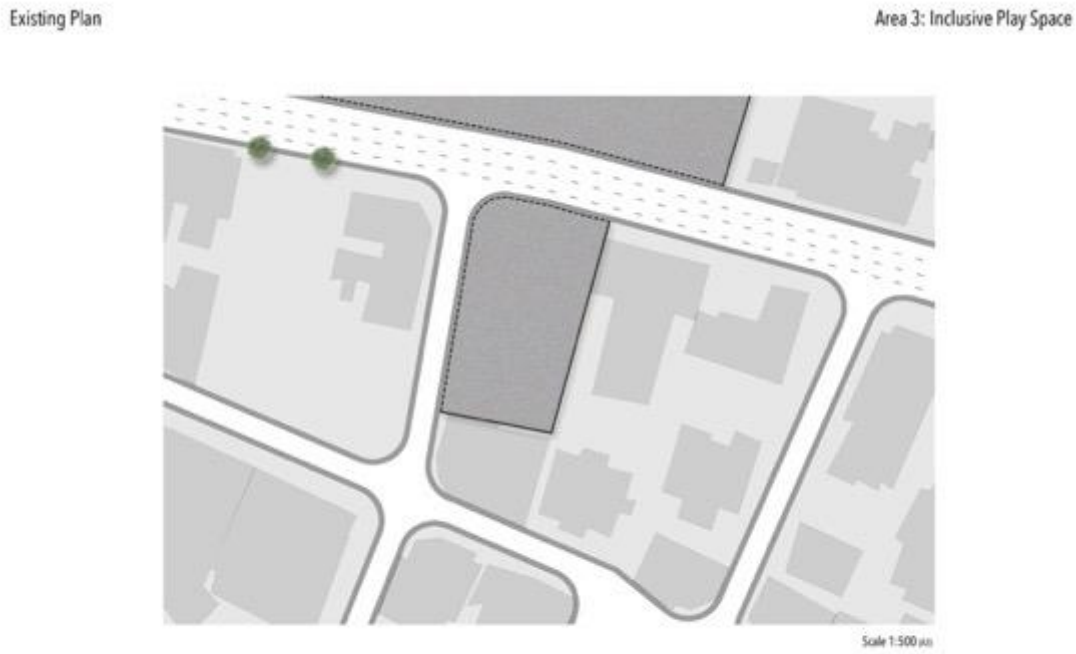

Figure 100 Existing plan (Area 3: Inclusive Play Space)

Figure 101 Proposed plan (Area 3: Inclusive Play Space)

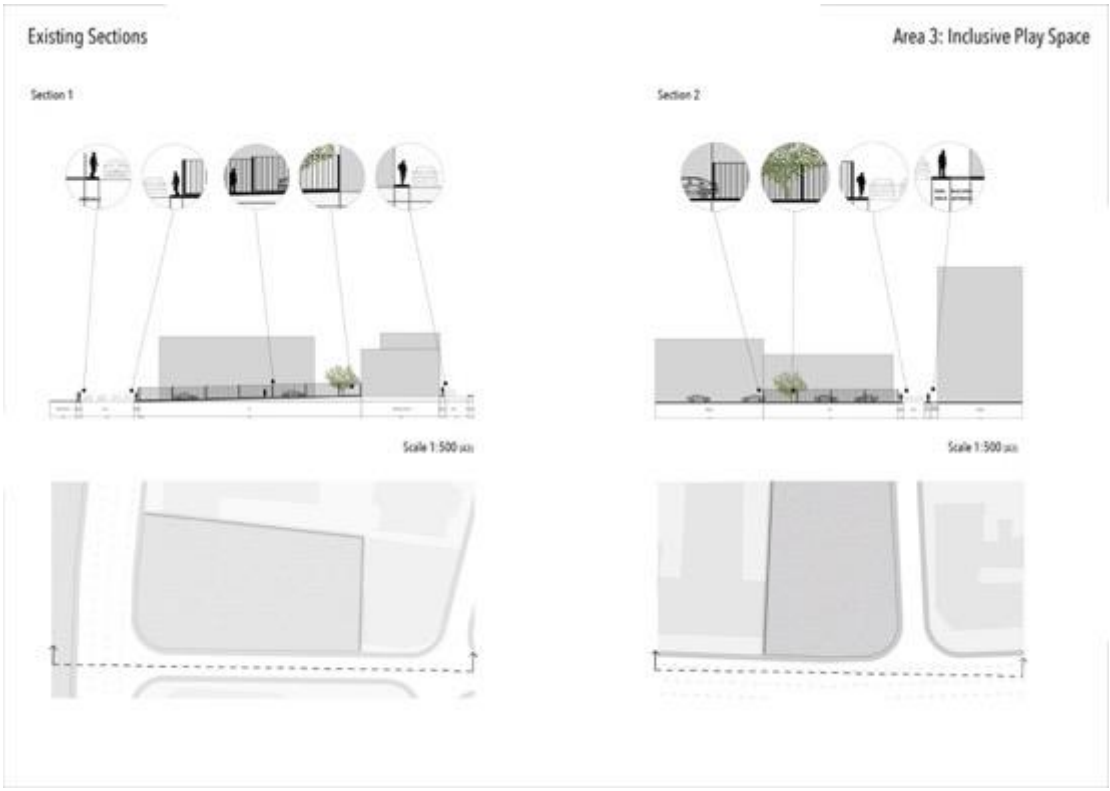

Figure 102 Existing sections (Area 3: Inclusive Play Space)

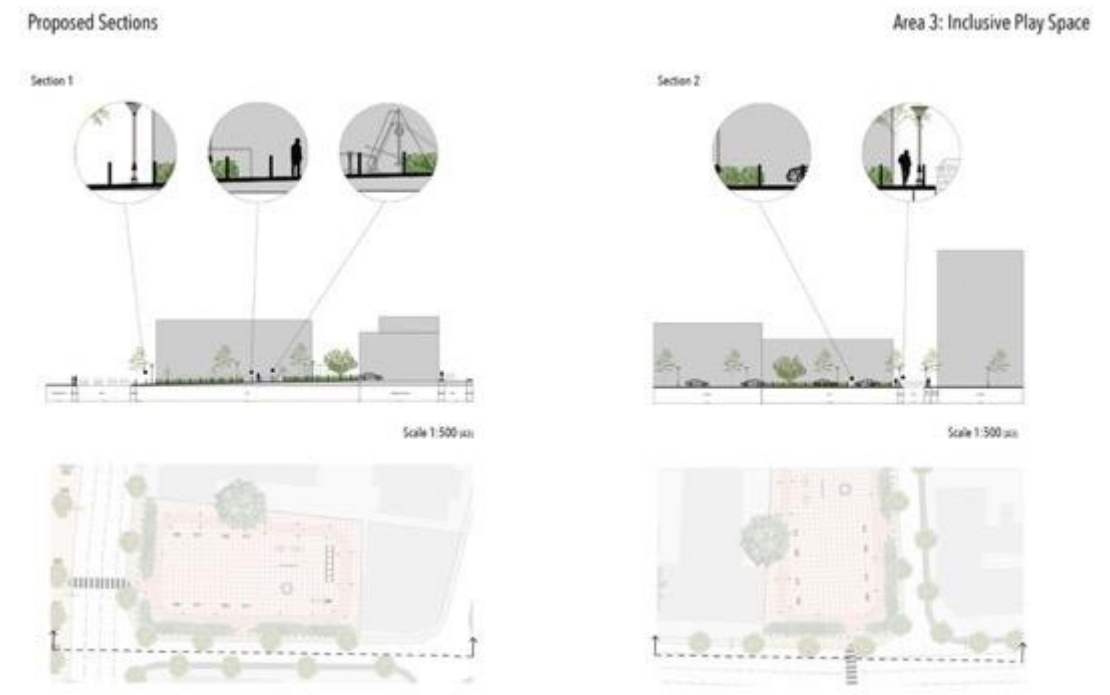

Figure 103 Proposed sections (Area 3: Inclusive Play Space)

Figure 104 Existing plan (Area 4: Market Space)

Figure 105 Proposed plan (Area 4: Market Space)

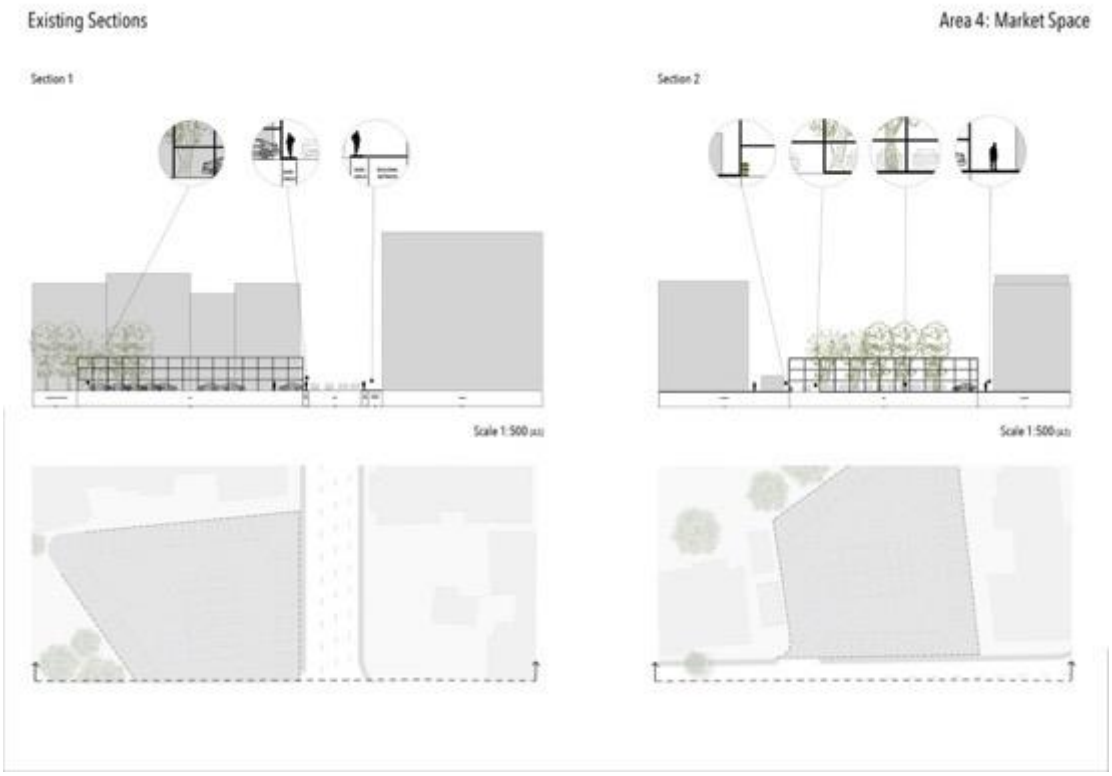

Figure 106 Existing sections (Area 4: Market Space)

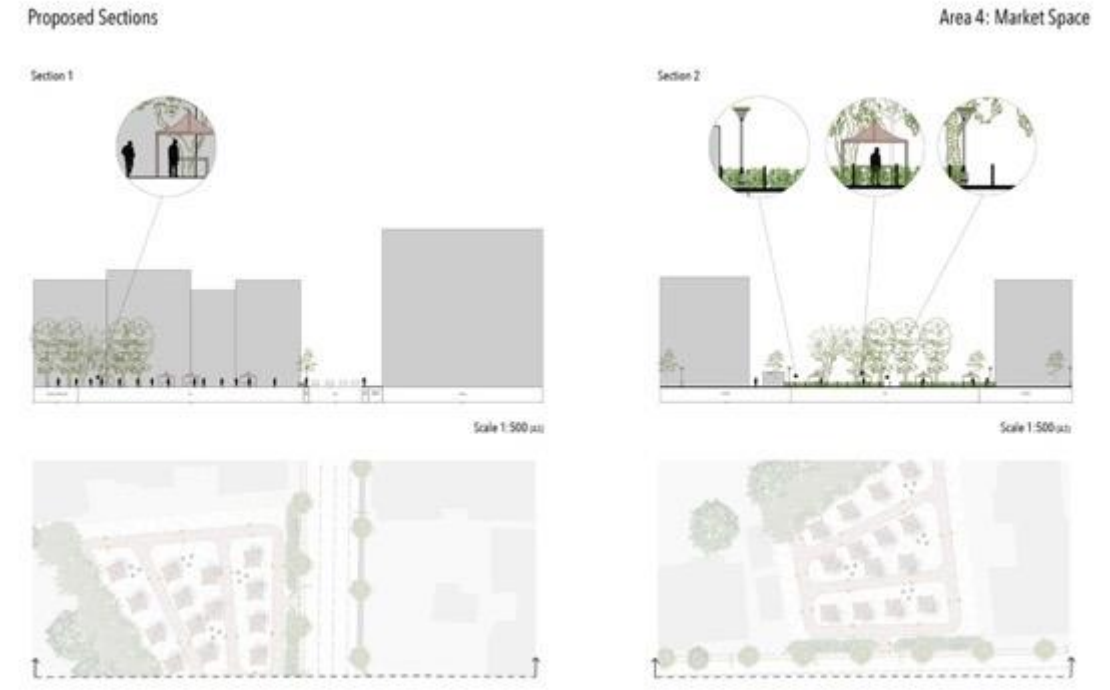

Figure 107 Proposed sections (Area 4: Market Space)

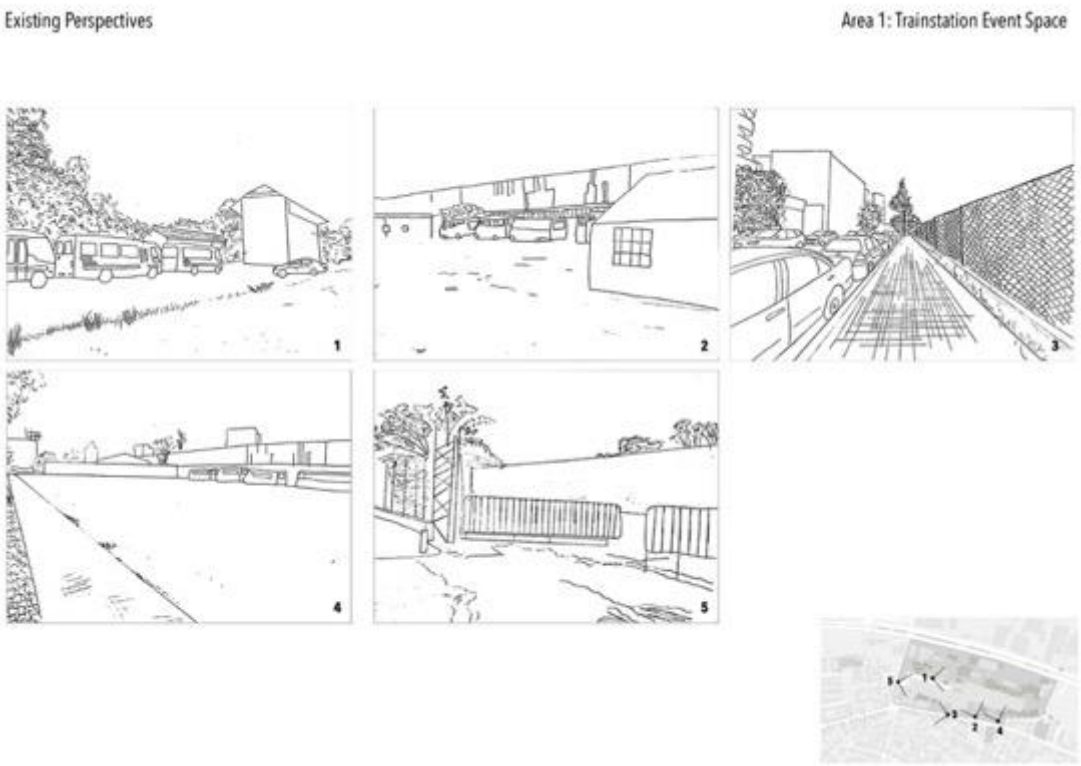

Figure 108 Existing perspectives (Area 1: Train station Event Space)

Figure 109 Proposed perspectives (Area 1: Train station Event Space)

Figure 110 Proposed perspectives (Area 1: Train station event space)

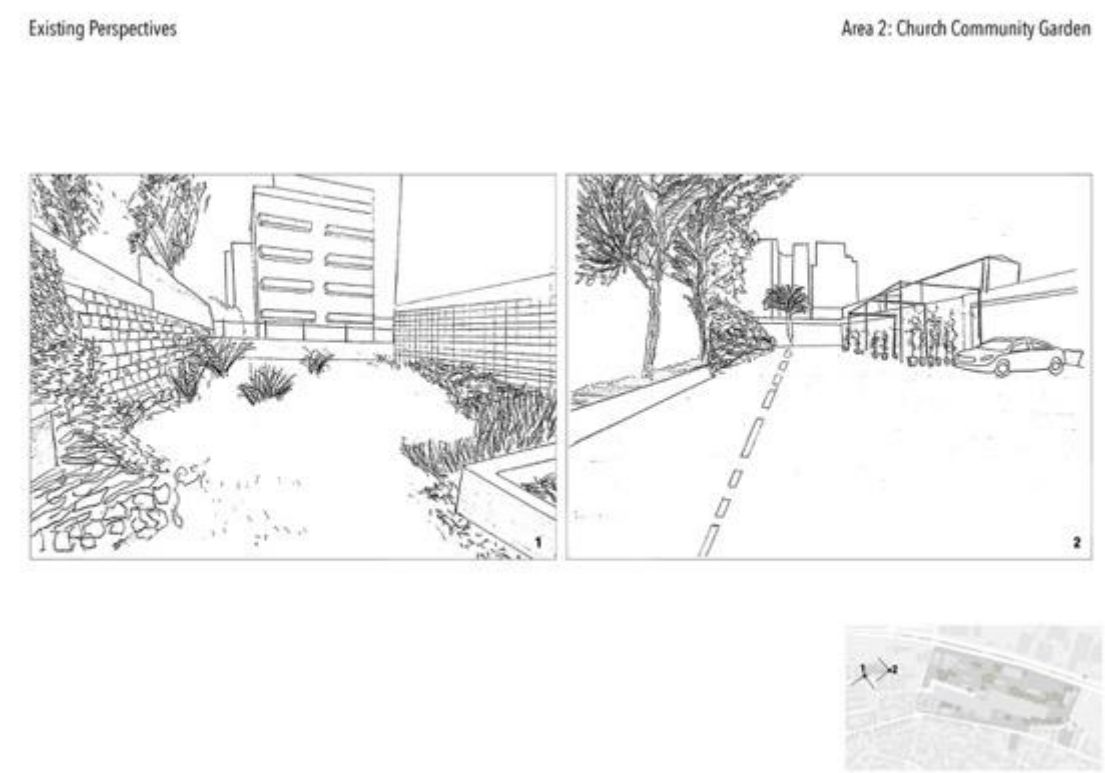

Figure 111 Existing perspectives (Area 2: Church Community Garden)

Figure 112 Proposed perspectives (Area 2: Church Community Garden)

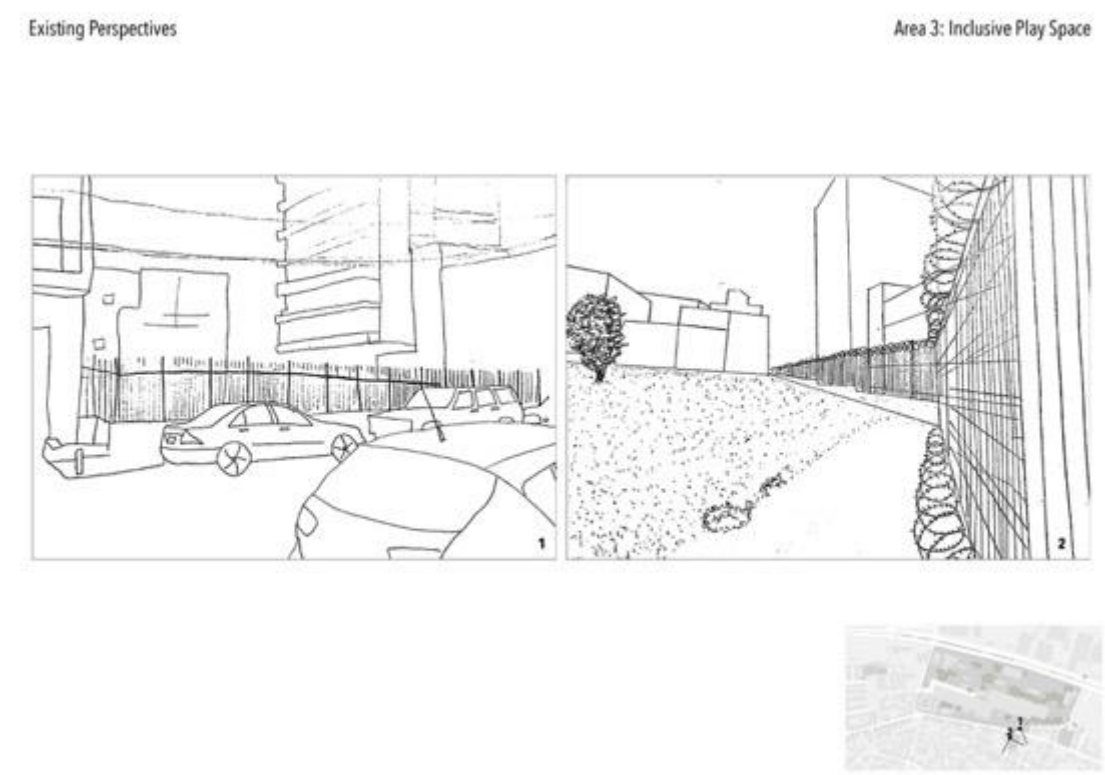

Figure 113 Existing perspectives (Area 3: Inclusive Play Space)

Figure 114 Proposed perspectives (Area 3: Inclusive play space)

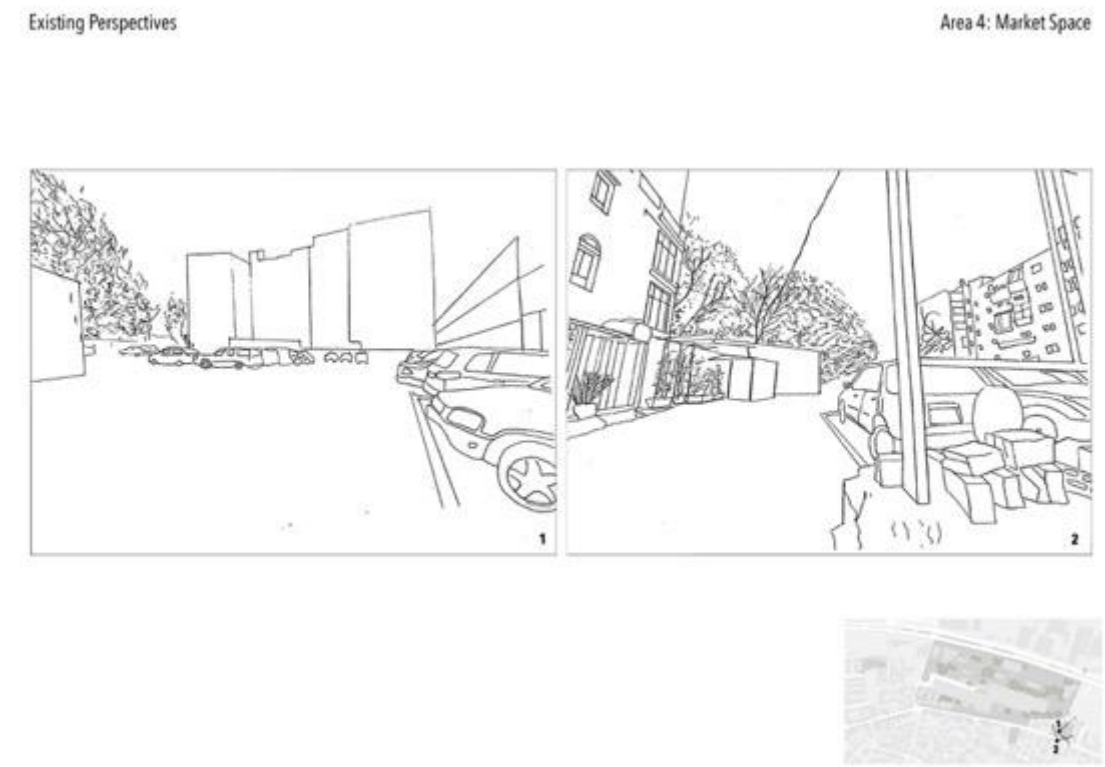

Figure 115 Existing perspectives (Area 4: Market Space)

Figure 116 Proposed perspectives (Area 4: Market Space)

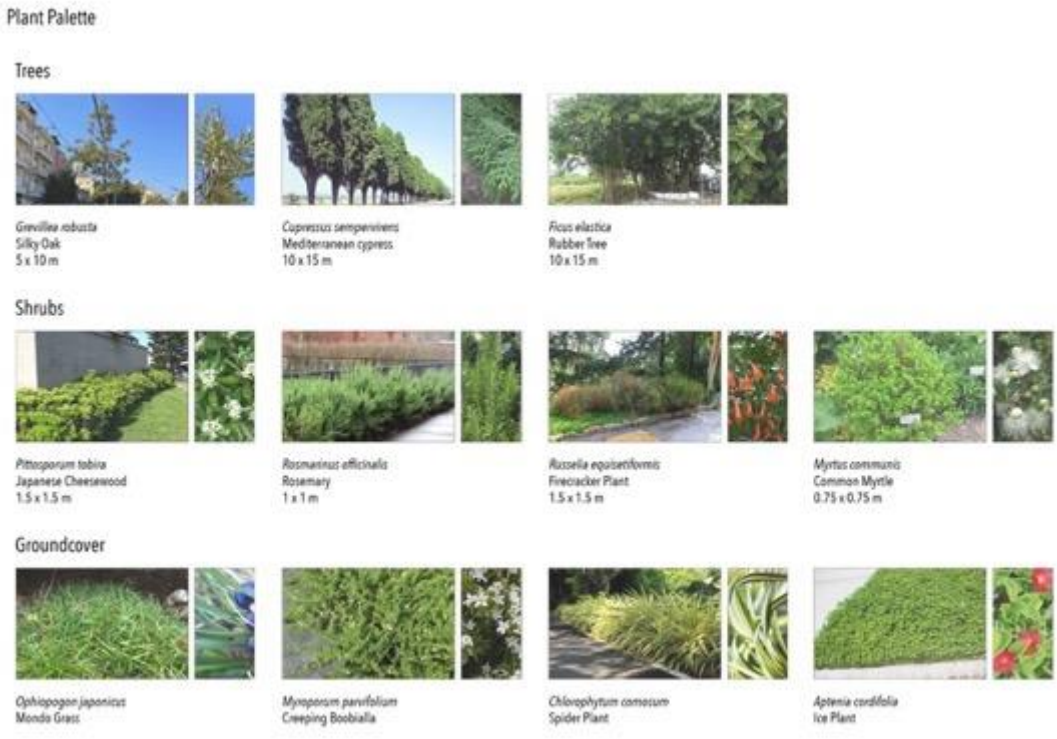

Figure 117 Plant palette

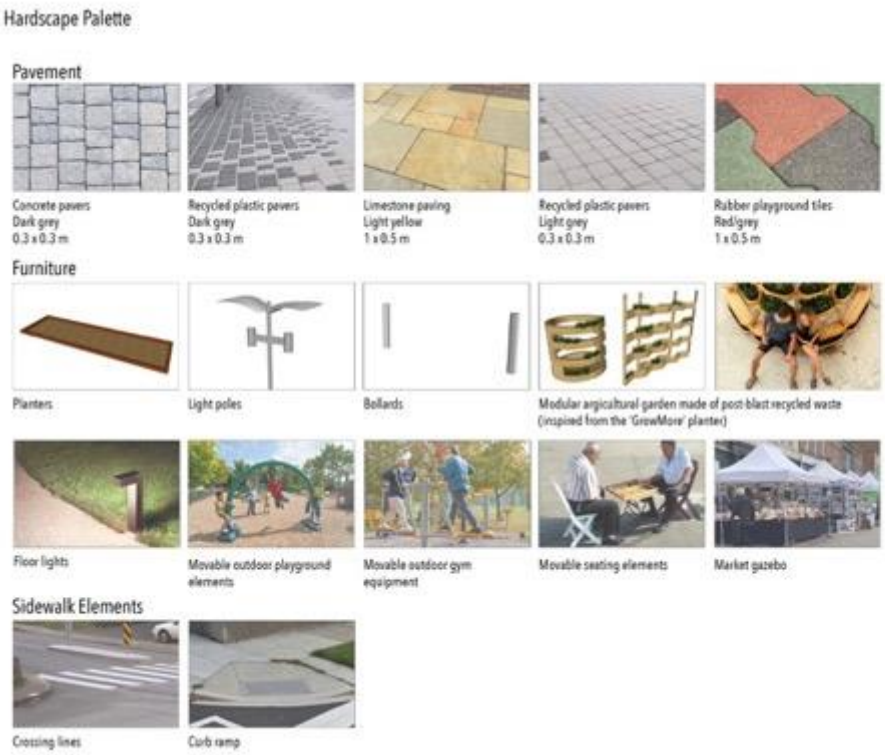

Figure 118 Hardscape palette

G. Relevant Stakeholders

The key stakeholders in Mar Mikhael include “promoters, defender, or latent agents” (Ghaddar, 2020), as shown in **Figure 119**. They include private landlords and property owners, real-estate developers, political and religious institutions, old rent residents, arts and crafts business owners, the local government and municipality, and more, all of which would be affected by the propositions of this proposal, despite their difference in power, awareness, will and interest, and ability to make a change. Considering that the main context of this thesis is the observation of NGO’s and volunteers gathering following the blast, and the consequent thesis objective of creating spaces for community residents to gather, the main stakeholders concerned in this thesis

are the community residents, local community representatives, local and international NGO's, and volunteers, also listed in **Figure 119** below.

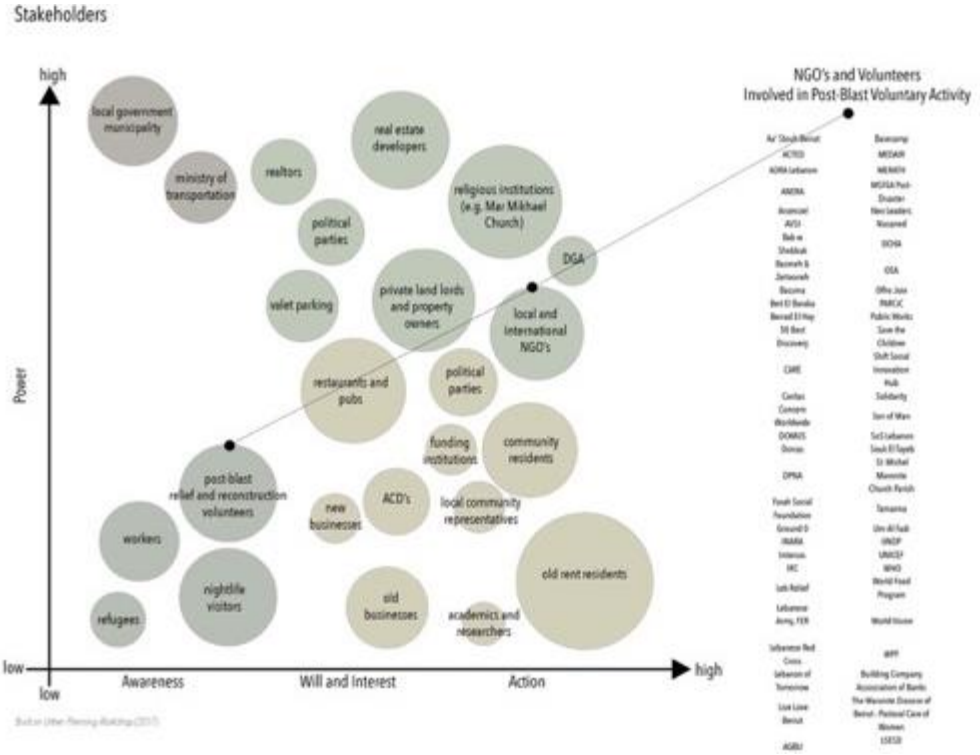

Figure 119 Stakeholders

H. Possible Implementation Approach

As mentioned in the previous section, stakeholders affected and involved in this proposal could include residents, restaurant and pub owners, business owners, NGO's, developers, the municipality, funding agencies, and more. Given that this thesis' main intention is to sustain community practices, particularly those that occurred after the August 4 blast, it is important to connect and merge these entities together, just like they had been following the blast, but in a more structured manner, to properly achieve a people-centered intervention strategy.

To ensure the implementation strategy of this proposal is people-centered, an advocacy planning approach is suggested. Considering the diversity of stakeholders involved in such a neighborhood intervention, this strategy would be most suitable, as advocacy planners are "able to engage in the political process as advocates of the interests" of both the government and other interest groups (Davidoff, 1965). Such consideration of the collective is possible by conducting "fair notice and hearings, production of supporting evidence, cross examination, [and] reasoned decision" (Davidoff, 1965). Advocacy planning therefore approaches a more independent, non-affiliated method towards decision-making.

The implementation strategy of this proposal should "operate within a framework that is bottom-up, and socially just in order to achieve a people-centered, heritage-led, and place-specific recovery" (Al Harithy, Yassine, 2020). The implementation process should be participatory and inclusive, and begins by primarily prioritizing the people of Mar Mikhael, and their needs.

In the short term, post-blast recovery efforts, where NGO's i-NGO's, agencies, and volunteers demonstrated cooperation and coordination within one another for immediate relief was sufficient. However, in the long term, a more plausible, structured, and sustainable implementation scenario is required. In addition to neighborhood residents, urban planners, urban designers, and landscape architects potentially involved in such a people-centered urban recovery and landscape urbanism proposal, the involvement of several other actors is required in the operational process, in order to ensure an effective and transparent implementation strategy. For example, the Directorate General of Urban Planning, the Order of Engineers and Architects, and the Municipality of Beirut are among the actors responsible for the development and

revision of master plans. Particularly regarding the land ownership status of the spaces of intervention, landowners like the Municipality of Beirut, private landowners are significant actors to be considered and approached. Moreover, as Train Station is a main intervention plot, involving the Red Cross, Ministry of Transportation (OCFTC) are main stakeholders to account for. Overall, this proposal would also necessitate the collaboration with academics, research hubs, and institutions to disseminate knowledge and study the applicability and consequences of the proposed master plan. Most importantly, the civil society, activists, and the general public, should be involved in order to provide a collaborative vision for the post-blast neighborhood of Mar Mikhael.

CHAPTER VI

CONCLUSION

Landscape urbanism is an emerging model for urbanism, which organizes horizontal surfaces' materiality and performance to "activate space and produce urban effects without the weighty apparatus of traditional space making" (Waldheim, 2006). Ultimately, landscape urbanism is an urban design strategy that utilizes landscape as a foundation of urban program and form. Case studies explored in this thesis, such as Parc de la Vilette, Downsview Park, Fresh Kills, Lafayette Park, Weigong Channel, the High Line Project, Lower Don Lands, and Parc Jeanne-Mance all convey a similar vision of creating spaces and urban environments through landscape elements and tools. The High Line Project, for example, transformed an abandoned rail line into a green corridor park, through landscape elements like paving and planting, and is now a "model for how abandoned urban territories can be transformed into community assets" (Steiner, 2011). Consequently, landscape urbanism is a design strategy capable of reviving public places.

Reviving public places is a significant strategy toward the urban recovery of post-disaster urban environments. Particularly with landscape as urban recovery, the recovery discourse is widened temporally and spatially "to embrace environmental, socio-economic and cultural development objectives" (Makhzoumi, 2010). Therefore, landscape is also a tool for post-disaster recovery, integrating "people and place in post-war recovery" (Makhzoumi, 2010). Community gardens that "support individual and community resilience in a post-disaster environments" (Okvat, Zautra, 2011) also demonstrate landscape as urban recovery. Landscape as urban recovery is also

portrayed through case studies like of Al-Qleileh, where “public spaces for the community to congregate” (Makhzoumi, 2010), were designed. Consequently, this case study approached post-disaster recovery through a landscape approach by creating places for communities to gather, extending “beyond the immediacy of the post-war condition and beyond the physical reconstruction to serve in initiating development to benefit rural communities” (Makhzoumi, 2010).

Therefore, landscape urbanism is an emerging model for urban design, and can also be used to approach post-disaster contexts as urban recovery, possibly by creating places for communities to gather and sustain socio-spatial activities. In the context of this thesis, the emergence of spaces that hosted community focal points of gathering and service immediately after the blast highlighted the need to sustain such social practices, and provide public places for community gatherings. How can landscape urbanism as an approach offer tools and strategies to intervene in post-blast Mar Mikhael? How can the community-centered practices that emerged after the blast be sustained?

Consequently, this thesis’ proposed design objectives were to create public places that could sustain post-blast observed social practices, through landscape urbanism strategies, as an approach towards urban recovery. Although each proposed space hosts particular activities and programs, all four spaces, and the street network that connects them, apply a consistent design language, through continuous elements like shrubs and bollards that define entrances, buffer trees that border plots, passageways with consistent sidewalk tiling and groundcover, space tiling, lighting, street crossings, curb ramps, and more. Overall, these design elements and strategies ultimately improve accessibility, flow, safety, and livability of these spaces, and their network, thus allowing for social activities to continuously take place. Moreover, all

proposed site furniture is temporary, enabling the flexibility of space usage, inviting a multitude of social activities to occur. The flexibility and multi-functionality of the spaces is significant, particularly given how space usage changes overtime, as observed earlier in **Figures 75** and **76**, where activities in the public realm shifted before and after the blast. The proposed programs of each space has been assigned to particularly offer spaces for social gatherings, but in different ways: an event space, a church community garden, an inclusive play space, and a market- all of which were chosen according to studies and observations of the space, as shown in **Figures 83-88**, **107**, **110**, **112**, and **114**. The proposed design layers overall conform to the theory, practice, objectives of landscape urbanism and urban recovery, as shown in **Figure 120**. This figure also represents the relevance of selected design intervention concepts and strategies to the case studies mentioned earlier in this thesis. For example, similarly to Parc Jeanne-Mance, this Mar Mikhael project proposal similarly focuses on social and community-building values. In the case of Parc Jeanne-Mance, locals in Montreal, Canada underwent a guerrilla gardening project, both the social and recovery aspects of the urban environment were tackled, building "social capital, [and claiming] the right to the city or to ignite community capacity building in the context of neighborhood improvement" (Mikadze, 2021), similar to this thesis' goal of creating community gathering spaces. This project also socially benefitted the community, through the engagement of locals, with their surrounding activated spaces. Furthermore, this thesis' community garden intervention proposal is similar to the studied case of post-Hurricane Katrina in New Orleans, where Common Ground Relief helped build community gardens and restore many that had been flooded, in addition to organizing a local garden club, in effort towards helping community members grow produce independently, and

strengthen community bonds. Consequently, this thesis intervention's concepts and ideas relate to the case studies explored in previous sections, which collectively aim to provide a landscape urbanism approach to urban recovery of post-disaster contexts.

Moving forward, this thesis could be further developed by future works that involve studying the proposal's climate responsiveness, particularly considering the landscape urbanism approach and environmental values of this project. Accounting for the selected softscape palette's performance in response to environmental factors like sun, and wind orientation could have enhanced the spatial quality of the proposed pedestrian network. Moreover, future works would explore how proposed programs and design elements could evolve in parallel to temporal change of the neighborhood context overtime, while maintaining this thesis' core intention of providing a landscape urbanism approach to urban recovery, by sustaining socio-spatial practices through an urban network of open green community-gathering spaces.

To conclude, in response to this thesis' initial research questions, this design proposal presents an urban network of spaces designed, through landscape urbanism tools and strategies, towards the urban recovery of the neighborhood, through its capacity of community building, and sustained social practices, illustrated in **Figure 121** below. In conclusion, this thesis explored how urban recovery efforts through landscape urbanism strategies could be possible, consequently demonstrating the potential of landscape urbanism as a strategy towards urban recovery, rather than a tool for mere 'beautification', as criticized by previous literature.

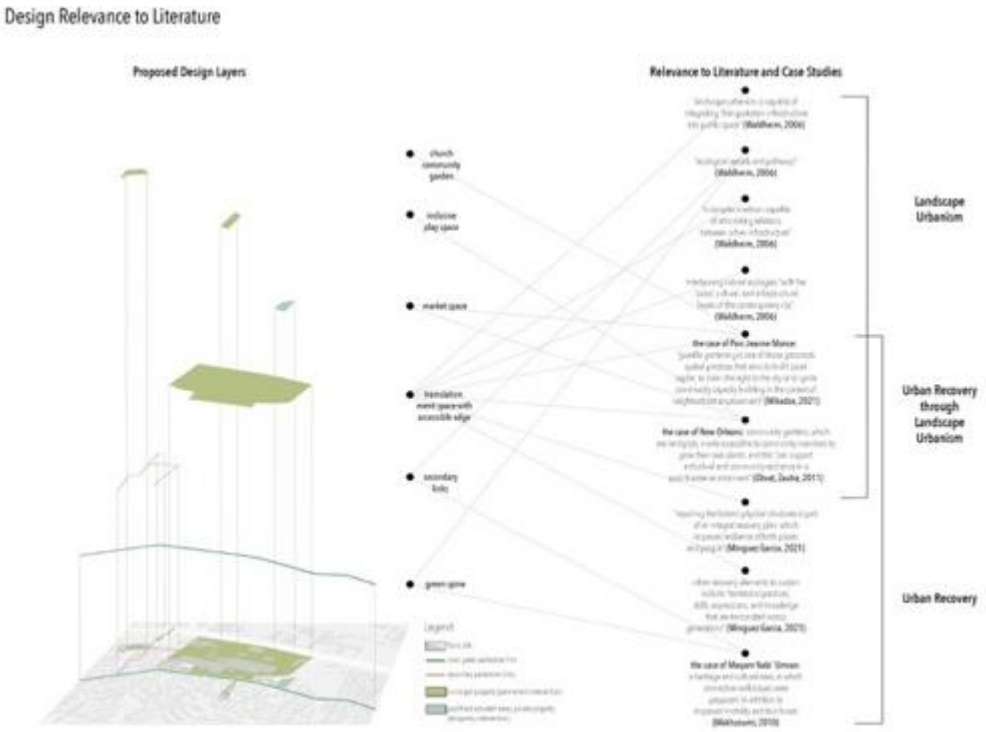

Figure 120 Design relevance to literature

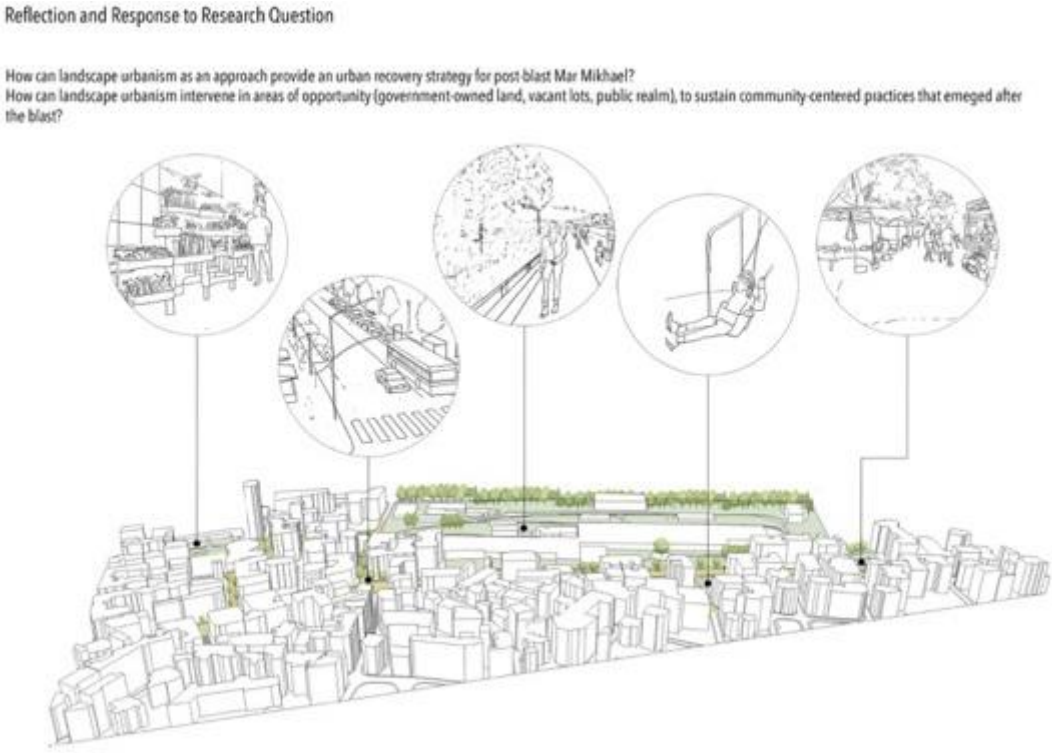

Figure 121 Reflection and response to research question

BIBLIOGRAPHY

Abdelmohsen, Sherif, Ayman Assem, and Mohamed Ezzeldin Abdelaziz Hassan. "Smart Management of the Reconstruction Process of Post-Conflict Cities." *International Journal of Architectural Research* 14 (October 5, 2019): 325–43. https://doi.org/10.1108/ARCH-04-2019-0099.

Al-Harithy, Howayda, ed. *Lessons in Post-War Reconstruction: Case Studies from Lebanon in the Aftermath of the 2006 War*. London: Routledge, 2010. https://doi.org/10.4324/9780203851524.

Al Harithy, Howayda, and Batoul Yassine. "Post-Disaster Karantina: Towards a People-Centered Heritage-led Recovery." The Public Source, October 6, 2020.

Anderson, Nels. *The Urban Community a World Perspective*. 1st ed., Routledge, 1959.

Aouad, David, and Noushig Kaloustian. "Sustainable Beirut City Planning Post August 2020 Port of Beirut Blast: Case Study of Karantina in Medawar District." *Sustainability* 13, no. 11 (2021): 6442. http://dx.doi.org.ezproxy.aub.edu.lb/10.3390/su13116442.

Ardakani, Maryam Keramati, and Seyyed Saeed Oloonabadi. "Collective Memory as an Efficient Agent in Sustainable Urban Conservation." *Procedia Engineering*, vol. 21, 2011, pp. 985–988., doi:10.1016/j.proeng.2011.11.2103.

Arefian, Fatemeh Farnaz. "A Synthesis of Multidisciplinary Theoretical Discussions." In *Organizing Post-Disaster Reconstruction Processes: Housing Reconstruction after the Bam Earthquake*, edited by Fatemeh Farnaz Arefian, 25–80. The Urban Book Series. Cham: Springer International Publishing, 2018. https://doi.org/10.1007/978-3-319-70911-6_2.

AUB Planning Workshop: Jari, Salhab, Farhat, Villani, 2017

AUB Planning Workshop: Kanaan, Goulordava, Mneinmeh, Tabbakh, 2017

Barakat, Sultan Z., Adrijana Car, and Peter J. Halls. “Spatial Methodologies to Support Postwar Reconstruction.” In *GIS and Evidence-Based Policy Making*. CRC Press, 2007.

Beirut Urban Lab (2021), *Urban Snapshot: Mar Mikhael*, Beirut: ACTED and Beirut Urban Lab.

Belal, Ali, and Elena Shcherbina. “Post-War Planning for Urban Cultural Heritage Recovery.” *E3S Web of Conferences* 263 (2021): 05054. https://doi.org/10.1051/e3sconf/202126305054.

Boyer, M. Christine. *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments*. MIT Press, 1996.

Cighi, Catalin I. “Submitted to the Graduate School of the University of Massachusetts Amherst in Partial Fulfillment of the Requirements for the Degree Of,” n.d., 205.

Cimellaro, Gian Paolo. “Building More Resilient Communities.” In *Urban Resilience for Emergency Response and Recovery: Fundamental Concepts and Applications*, edited by Gian Paolo Cimellaro, 409–61. Geotechnical, Geological and Earthquake Engineering. Cham: Springer International Publishing, 2016. https://doi.org/10.1007/978-3-319-30656-8_13.

Clark, Julie, and Nicholas Wise. *Urban Renewal, Community and Participation: Theory, Policy and Practice*. Springer International Publishing, 2018.

Davidoff, P. 1965. “Advocacy and Pluralism in Planning”, *Journal of the American Institute of Planners,* Vol.31, pp.103-114.

El Hajj, Sleiman. “Writing (from) the Rubble: Reflections on the August 4, 2020 Explosion in Beirut, Lebanon.” *Life Writing*, vol. 18, no. 1, 2020, pp. 7–23., doi:10.1080/14484528.2020.1830736.

El Hajj, Sleiman. “Writing (from) the Rubble: Reflections on the August 4, 2020 Explosion in Beirut, Lebanon,” October 26, 2020.

El Samad, Daria Ziad, Mona Fawaz, and American University of Beirut. Faculty of Engineering and Architecture. Department of Architecture and Design. “Property, Housing and Processes of Gentrification: A Case Study of the Neighborhood of Mar Mikhael (Beirut).”

Fawaz, Mona, Ahmad Gharbieh, Mona Harb el-Kak, and Dounia Salamé, eds. *Refugees as City-Makers*, 2018.

Fawaz, Mona, et al. “The Beirut Blast: A Week On.” Beirut Urban Lab, 10 Aug. 2020, www.beiruturbanlab.com/en/Details/659

Fawaz, Mona, Marieke Krijnen, and Daria El Samad. “A Property Framework for Understanding Gentrification: Ownership Patterns and the Transformations of Mar Mikhael, Beirut.” *City* 22, no. 3 (May 4, 2018): 358–74. https://doi.org/10.1080/13604813.2018.1484642.

Gavin, Angus. “The Corporate Discourse: Learning from Beirut’s Central Area Renewal.” In *Urban Design in the Arab World*. Routledge, 2015.

Gerbal, Lisa, et al. GAIA Heritage, Sciences Po, and the Issam Fares Institute for Public Policy and International Affairs, 2016, pp. 9–22, *Linking Economic Change With Social Justice In Mar Mikhael*.

Gerbal, Lisa, Nicolas Hrycaj, Camille Lavoipierre, and Marissa Potasiak. “Linking Economic Change With Social Justice In Mar Mikhael,” n.d., 76.

Ghaddar, Ali Mohammad, Serge Yazigi, Mona Fawaz, and American University of Beirut. Maroun Semaan Faculty of Engineering and Architecture. Department of Architecture and Design. “Introducing Performance-Based Planning in Context of Rapid Urban Transformations: The Case of Mar Mikhael, Beirut (Lebanon).”

Ghaddar, Ali Mohammad. “Introducing Performance-Based Planning in Context of Rapid Urban Transformations, the Case of Mar Mikhael, Beirut (Lebanon).” *American University of Beirut*, 2020, pp. 18–27, 37-41.

Ghose, Rina, and Margaret Pettygrove. “Urban Community Gardens as Spaces of Citizenship.” *Antipode*, vol. 46, no. 4, 2014, pp. 1092–1112., doi:10.1111/anti.12077.

Ghosn, Faten, and Amal Khoury. “Lebanon after the Civil War: Peace or the Illusion of Peace?” *The Middle East Journal* 65, no. 3 (Summer 2011): 381–97. http://dx.doi.org.ezproxy.aub.edu.lb/10.3751/65.3.12.

Goulordava, Karina Irakly, Mona Harb, Serge Yazigi, and American University of Beirut. Maroun Semaan Faculty of Engineering and Architecture. Department of Architecture and Design. “Very Small Enterprises in a Gentrified Neighborhood: A Case Study of Qobayat, Mar Mikhael, Beirut.”

Habib Debs Architectes - Urbanistes (URBI), and Le Groupement Solidaire Francis Landscapes Ltd. *Plan Vert Et Paysager De La Ville De Beyrouth*, 2012.

Hankir, Zahra, and Kareem Chehayeb. “Another Explosion for Lebanon: The Blast in Beirut Made International Headlines. Even before That the Nation Was in Turmoil and It Has Only Worsened the Mental Health Crisis.” *Index on*

Censorship 49, no. 4 (December 1, 2020): 8–13. https://doi.org/10.1177/0306422020981249.

Hourani, Najib B. "Post-Conflict Reconstruction and Citizenship Agendas: Lessons from Beirut." *Citizenship Studies* 19, no. 2 (February 17, 2015): 184–99. https://doi.org/10.1080/13621025.2015.1005949.

Hussein, Fatmaelzahraa, et al. "Cultural Memories and Sense of Place in Historic Urban Landscapes: The Case of Masrah Al Salam, the Demolished Theatre Context in Alexandria, Egypt." *Land*, vol. 9, no. 8, 2020, p. 264., doi:10.3390/land9080264.

Kazimee, Bashir A., and Abdul Wassay Najimi. "An Analysis of Urban Regeneration and Architectural Heritage Saving in Kabul since 2001." *International Journal of Heritage Architecture* 1, no. 4 (July 31, 2017): 671–82. http://dx.doi.org.ezproxy.aub.edu.lb/10.2495/HA-V1-N4-671-682.

Kerbage, Hala, and Martine Elbejjani. "Mental Health in the Aftermath of the Beirut Blast: Community Healing and the Quest for Justice." *Psychiatric Services*, vol. 72, no. 2, 2021, pp. 234–235., doi:10.1176/appi.ps.202000666.

Krijnen, Marieke. "The Urban Transformation of Beirut: An Investigation into the Movement of Capital." Dissertation, Ghent University, 2016.

Krijnen, Marieke. Issam Fares Institute for Public Policy and International Affairs, 2016, pp. 7–17, *Creative Economy, Social Justice and Urban Strategies: The Case of Mar Mikhael*.

Kuo, Kang, and Rong Wan. "Research on Urban Canal Renewal from the Perspective of Landscape Urbanism——Take the Weigong Channel as an Example." *IOP Conference Series. Earth and Environmental Science* 621, no. 1 (January 2021). http://dx.doi.org.ezproxy.aub.edu.lb/10.1088/1755-1315/621/1/012182.

Locke, Ryan, Peter Elmlund, and Michael W. Mehaffy. “Evaluating Landscape Urbanism: Evidence from Lafayette Park, Detroit.” *Journal of Urbanism: International Research on Placemaking and Urban Sustainability* 12, no. 1 (January 2, 2019): 34–59. https://doi.org/10.1080/17549175.2018.1531906.

Makdisi, Saree. “Laying Claim to Beirut: Urban Narrative and Spatial Identity in the Age of Solidere.” *Critical Inquiry* 23, no. 3 (1997): 661–705.

Makhzoumi, Jala. “Marginal Landscapes, Marginalized Rural Communities: Sustainable Post-War Recovery in Southern Lebanon.” In *Lessons in Post-War Reconstruction*. Routledge, 2010.

Malkoun J. (2021) Occupying Transit Spaces: The Case of Lebanon’s Abandoned Railways. In: Azzali S., Mazzetto S., Petruccioli A. (eds) Urban Challenges in the Globalizing Middle-East. The Urban Book Series. Springer, Cham. https://doi.org.10.1007/978-3-030-69795-2_12.

Mees, Carolin. *Participatory Design and Self-Building in Shared Urban Open Spaces: Community Gardens and Casitas in New York City*. Springer, 2018.

Mikadze, Vladimir. “Landscape Urbanism and Informal Space-Making: Insights from a Guerrilla Gardening Case in Montreal, Canada.” https://www-tandfonline-com.ezproxy.aub.edu.lb/doi/full/10.1080/13574809.2020.1752645.

Minguez Garcia, Barbara. “Integrating Culture in Post-Crisis Urban Recovery: Reflections on the Power of Cultural Heritage to Deal with Crisis.” *International Journal of Disaster Risk Reduction* 60 (June 15, 2021): 102277. https://doi.org/10.1016/j.ijdrr.2021.102277.

Nagle, John. “Ghosts, Memory, and the Right to the Divided City: Resisting Amnesia in Beirut City Centre.” *Antipode* 49, no. 1 (2017): 149–68. https://doi.org/10.1111/anti.12263.

Okvat, Heather A., and Alex J. Zautra. “Community Gardening: A Parsimonious Path to Individual, Community, and Environmental Resilience.” *American Journal of Community Psychology* 47, no. 3–4 (June 2011): 374–87. http://dx.doi.org.ezproxy.aub.edu.lb/10.1007/s10464-010-9404-z.

Omar, Osama. “Towards Eco-Neighborhoods, Solutions for Sustainable Development, Construction and Energy Saving Technologies.” *Journal of Architecture and Urbanism* 42, no. 2 (October 2018): 95–102. http://dx.doi.org.ezproxy.aub.edu.lb/10.3846/jau.2018.6141.

Puzon, Katarzyna. “Saving Beirut: Heritage and the City.” *International Journal of Heritage Studies* 25, no. 9 (September 2, 2019): 914–25. https://doi.org/10.1080/13527258.2017.1413672.

Sayed, Mazen El. “Beirut Ammonium Nitrate Explosion: A Man-Made Disaster in Times of the COVID-19 Pandemic,” November 18, 2020.

Schmid, Heiko. “Privatized Urbanity or a Politicized Society? Reconstruction in Beirut after the Civil War.” *European Planning Studies* 14, no. 3 (April 1, 2006): 365–81. https://doi.org/10.1080/09654310500420859.

Steiner, Frederick. “Landscape Ecological Urbanism: Origins and Trajectories.” *Landscape and Urban Planning*, Landscape and Urban Planning at 100, 100, no. 4 (April 30, 2011): 333–37. https://doi.org/10.1016/j.landurbplan.2011.01.020.

Vicenzotti, Vera. “The Landscape of Landscape Urbanism.” https://muse-jhu-edu.ezproxy.aub.edu.lb/article/683435.

Waldheim, Charles. “Landscape Urbanism: A Genealogy”. Praxis: Journal of Writing Building, no. 4, 2002, pp.10-17. JSTOR. www.jstor.org/stable/24328948.

Waldheim, Charles. *Landscape Urbanism Reader*. New York, UNITED STATES: Princeton Architectural Press, 2006. http://ebookcentral.proquest.com/lib/aub-ebooks/detail.action?docID=3387326.

Waldheim, Charles. *The Landscape Urbanism Reader*. Princeton Architectural Press, 2006.

World Bank Group, 2020, pp. 1–56, *Beirut Residents' Perspectives on August 4 Blast: Findings from a Needs and Perception Survey*.

World Bank. *Beirut Residents’ Perspectives on August 4 Blast*. Risk and Vulnerability Assessment. World Bank, 2020. https://doi.org/10.1596/34527.