

ENHANCING THE SURVIVAL LANDSCAPE

Spaces of resilience
as social catalyst

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Studio

Neretva Recollection: materiality of war,
flowing memories and living archive

Enhancing the survival landscape is a graduation project within the Landscape Architecture master track at TUDelft.

The project examines the post-war city of Mostar, Bosnia and Herzegovina, its contested territory and its rich history.

It explores urban and landscape transformations, looking at the transitional spaces between the military, violent destruction and the spatial reactions of the inhabitants, resulted in spaces of resilience.

Keywords: resilience, survival landscape, spatial conditions, participation

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*The Stari Most and the Old Town,
aerial photo by Anna Saracco*

Contents

	Preface	10	04	Site conclusions	64
	How to read this catalogue	11		Findings	66
01	Introduction	12		Classification	68
	Fascinations		05	Design process	76
	Architecture and conflict	15		Overview	78
	Spaces of resilience	17		Case studies	80
	Problem statement	18		Survival landscape tool	84
	Research objective			Speculation	92
	Enhancing resilience	21		Participation	100
	Methodology		06	Findings, evaluation, combination	106
	Research approach	24			
	Landscape's duality	26	07	Design	112
	Design approach	30		Components	114
	Relevance	32		Application	117
02	Theoretical framework	34		Masterplanning	118
	Theories of resilience	36		Detailing	124
	Theories of reconstruction	38	08	Conclusions	152
03	Site analysis	40			
	The story of Mostar	42		Reflections	156
	War spatiality	50			
	City scale, 1993-1994	52		Glossary	168
	The resilient city	54			
	Spatial outcome of Mostar's resilience	60		Bibliography	169



An elderly woman looks out of her apartment window after the cease-fire. She and her husband refused to leave their apartment although they were just meters from the frontline and were the only ones left living in the building during the fighting. Photo by Wade Goddard

We are nowadays constantly being confronted with images of conflicts. It is a reality that seems far away from us, until we are not called to confront it closely. Throughout this research, I questioned the role of landscape architects in post-war cities and how we can intervene in a scarred territory.

Enhancing the survival landscape investigates the Siege of Mostar (1993-1994) from a morphological point of view. Since the beginning, I questioned the way the conflict has played out through the space, the reactions of citizens to reorganise and reshape the city in order to respond to the basic need of survival.

All of this resulted in the creation of spaces of resilience, the starting point of this research. Structuring and visualising these notions, and developing a coherent project that deals with the survival landscape defined by

citizens between 1993-1994 are the aim of my graduation research.

Intervening in a post-war context that still presents scars of the war is not an easy task, but I considered it as an urban and landscape design challenge.

This catalogue is a summary of a research that shows how landscape architecture can and should deal with post-war scenarios. As Annemarie Bucker points out, "what becomes an increasingly important task, even a duty, for landscape architects is the meaningful re-use and re-design of warscapes after warfare. Dealing with the material remnants of warfare and creating programs and practices to re-inhabit these landscapes, calls for an attentive reading of warscapes on the one hand and for the search for creative solutions on the other" (Bucher, A. 2016, p.41).

This catalogue is the story of past and future Mostar by the eye of the author. The following suggestions are meant to help you navigate through the contents of this catalogue and retrieve more easily what you might be looking for.

If you feel like investigating...

The 01| *Introduction* chapter outlines the research in its entirety, explaining the choices that led to the definition of the design project. Have a look here to grasp the aim of the research.

If you are interested in exploring the grounds of this work, the 02| *Theoretical framework* chapter is what you are looking for. It extensively illustrates the theories behind the research, giving a solid background about the architectural ideas the work is built on.

If you feel like exploring...

If you'd rather become familiar with the site and get to know Mostar, then move to the 03| *Site analysis* chapter. Here a

series of maps and photos will presents a thorough analysis on different scales of the war-spatiality in Mostar during the Siege in 1993-1994, moving from the story of Mostar to the spatial outcome of the resilient city. If you continue, chapter 04| *Site conclusions* identifies and categories the current residual areas in Mostar and prepare you to understand the design.

If you feel like dreaming...

Get right down to the design and try to envision how Mostar could look like. Chapter 05| *Design process* outlines the tools to build up the design interventions. 06| *Findings, evaluation, combination* summaries the principles chosen and open up the way to 07| *Design*, where the final proposal is presented with various media.

If you feel like coming full circle...

The end. Chapter 08| *Conclusions* brings you back to the objective of the research and connect it with the project.



*Crossing between Glavna Ulica and
Braćom Brkića, 1993 from cidom.org*

01

Introduction

The first chapter outlines the objective of the research and how it is approached from a personal point of view. It presents my interests and fascinations that led to the development of the design intervention.



Glavna Ulica, 1993 from cidom.org

“

Resilience becomes clear through the ability of citizens to practice their everyday life by adapting to new violent conditions .

”

Davis, D.E. 2012, p.32

Fascinations

Architecture and conflict

Generation after generation, landscape has been modified and re-shaped by humans to get access to resources, security, and comfort. By accident as well as by design, human activity has become catalyst of change in the global landscape.



Mostar's residences queue for water delivered daily by a tanker truck. The Bosniaks of east Mostar lived without running water and electricity during the 9 months of Siege. Photo by Wade Goddard

Over the last century, space has almost always been seen as a product, in which cities were something to erect from scratches, something to destroy, rebuild, and sell. What happens when traumatic events unexpectedly not only change the environment, but erase entire cities?

"Conflict and violence touch cities, space, landscape and architecture" (Piquard, B., & Swenarton, M. 2011, p.2). This is the case of Mostar, where the war lasted two years, enough to change completely the urban conditions. Here lies my interest for a fascinating topic: the relationship between (landscape) architecture and conflicts. Do we have a role in it as designer? How can we potentially contribute to peace?



Temporary bridge on Neretva river,
1993 from cidom.org

As Piquard and Swenarton state, war affects the way people produce, understand and inhabit the landscape. In times of war, when cities literally exploded on the landscape, people face the need to gather, recycle, reuse and share to survive.

In Mostar, the conditions of isolation imposed by the war in 1992-1994 forced the citizens to react, reorganising and reshaping the city to respond to the basic need of survival.

Spaces of resilience

This resulted in the creation of spaces of resilience: existing spaces along the city have been adapted to provide safe conditions for daily life activities, safe lines of movements, productive landscapes. Resilience can be seen in various forms of temporary architectural solutions (Pilav, A. 2012): big curtains were erected between two houses to protect the streets, signs appeared to indicate the presence of snipers, improvised devices were assembled by citizens to move safely on the streets, temporary bridges were built to cross the Neretva. Life was conducted underground, much safer than the above-ground level, only used to provide food, water, wood and fuel. These spaces of resilience in Mostar are the starting point for my graduation research.



Bulevar, aerial photo by Anna Saracco



Reconstruction is the achievement of a state of mind reached through a process of community empowerment.



Barakat, S. 2005, p.12

Problem statement

The siege of Mostar took place during the Bosnian War first in 1992 and then again later from 1993 to 1994, modifying the urban conditions and the relationship between citizens and their own environment. Therefore, the image of the city changed rapidly due to the need of adaptation.



The Old Town, aerial photo by Anna Saracco

In 1996, the process of reconstruction of Mostar began, and, throughout more than twenty years, many of the war damages became scars. In the progressive physical and emblematic reconstitution of the urban broken patterns, especially along the former front lines, it is still possible to find some voids, scars of the war. Some are to be found along some back streets, in the leftover spaces of some neighbourhoods, in destroyed buildings and abandoned areas.

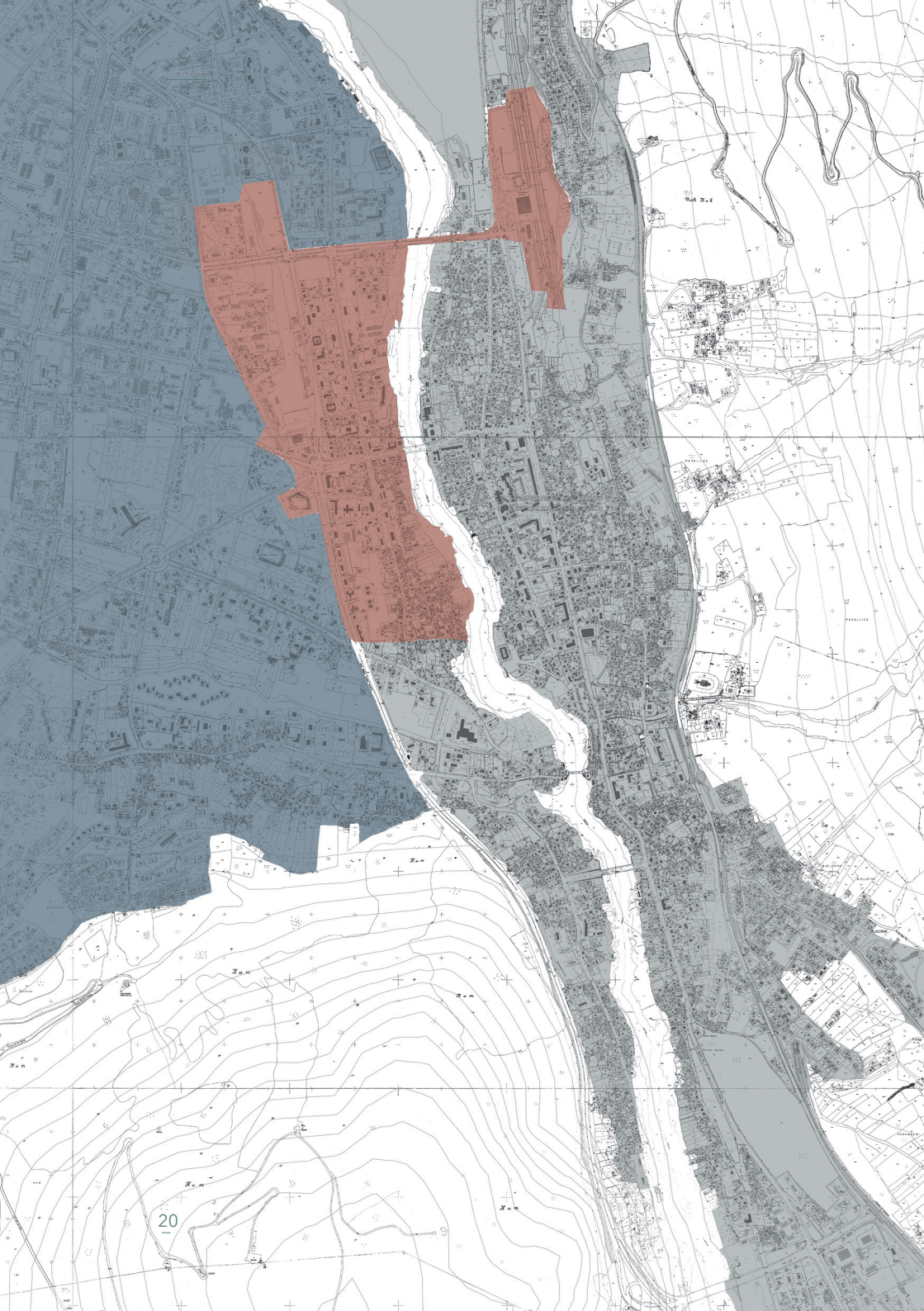
Close to these spots, everything was reconstructed exactly as it was before, 'erasing' the effect of the war. The reconstruction happened fast, too fast for the citizens of Mostar to adapt to the new image of the city. The lack of a transitional process and the absence of involvement of the inhabitants contributed to separate them from their city.

The reconstruction failed to assimilate the spatial solutions emerged during

the Siege: the new landscape and its spatial conditions disappeared in a frenetic reconstruction, and with it all the effort put by citizens to react to the conditions of isolation imposed by the war.

Moreover, the destruction and the rushed reconstruction created barriers in the urban pattern, enhancing the mental division of the two sides of Mostar. The former frontline act as social reminder of this division. It is almost as if Mostar is two different cities: there are two separate bus companies, two soccer teams, two hospitals, two universities, two post offices, two taxi companies. Two of almost everything, 'divided' by the front line, in a Croats and Bosnian sides.

The design aims at returning to the city the social character it was deprived of, reclaiming and enhancing those spaces of resilience so important during war days yet completely ignored in the reconstruction stage.



Šantićeva Ulica, November 1993 from cidom.org

Research objective

Enhancing the resilience

The research structure, visualise and enhance through the design interventions the 'positive achievement' of the war: the productive survival landscape that mirrors the culture of resilience of the citizens.

Studying the potential re-use of those spaces that war – directly or indirectly – generated, my goal is to build up a scenario of reactivation, exploring the potential of the hidden survival landscape, of the actors involved and of the current conditions and then promoting encounter, dialogue, interaction among different actors.

The project aim at switching citizens' attitude towards abandoned, residual areas in the city that remind them war-time. Through the design, the hidden survival landscape is enriched of new cultural meaning and used as social catalyst to redefine new memories for the community, reconnecting citizens with their environment.

On the previous page:

Map of the former division

- Neutral zone
- Bosniak - muslim side
- Croatian - catholic side



*Fejiceva - Vakuf court, December 1994
from cidom.org*

Aside from the traumatic and violent events of the Siege, I personally tried to approach the subject from a different point of view, looking into the positive attitude of inhabitants to face the conditions of isolation imposed. Citizens recognised, even in the terrible conditions of the war, the great landscape's potential, while nowadays it has been completely forgotten. This made me understand the need to call for a reflection upon the existing landscape. The design is used as tool to first investigate spaces of resilience and then defying informal interventions in the area between the frontline and the hills of East Mostar to capture and made visible their spatial conditions as resilient landscapes.



*Bulevar i Krpičeva, November 1995
from cidom.org*

Exploring the potential war-imposed spatial conditions of the hidden survival landscape that still have a productive force.

HOW CAN SUCH SPATIAL CONDITIONS BE EXPLOITED IN ORDER TO SWITCH CITIZENS' ATTITUDE AND DEFINE NEW SOCIAL CONNECTORS?

What are the most suitable spatial and material devices to enhance qualities of resilient survival landscape?

How to define a new level of memory in order to implement the previous?

What are the implications of design interventions in terms of urban and social aspects? It is possible to replicate them in similar contexts?

Methodology

In order to completely understand the dynamics of adaptation applied by the inhabitants during the Siege, this study went hand in hand with a historical, political and anthropological analysis of the war. First of all, I faced the need to understand if the conditions of resilience defined a visible pattern in the urban tissue. Without this, it would have been impossible to have a solid ground for further researches.



The city, although unsafe, itself became a natural resource. The previous peacetime functions of the buildings took on new functions as urban shelters - for family, public, and spontaneous general uses.



Pilav, A. 2012, p.26

Research approach

Aiming for a better understanding of the dynamics of adaptation, I investigate the urban pattern left by the war from a morphological point of view, studying the transformation of the city and the reaction of its inhabitants resulted in spaces of resilience.

The first part of the research consists of a collection of elements of Mostar determined by the Siege on different scales, then focusing on the area between the frontline and the hills of East Mostar, including the Neretva river. These informations were translated into analytical maps and drawings (*site analysis*) and then categorised (*design process*) to be used in the design interventions.

No material was available as the study of resilient spaces has never been conducted on the city of Mostar. Hence, I collected the informations presented in the following pages from interviews with citizens of Mostar, photographers (Wade Goddard) and journalists (Jeremy Bowen) that lived or spent few months in Mostar during the war. I then extrapolated data from old photos and texts, documentaries, archives and combined them with the interviews to finally build up site analysis-maps based on my personal interpretation of the information collected.

This collection needs a constant comparison with theoretical understanding of concepts of adaptation and resilience, translated in the relationships between human and space during the war.

The theme of resilience is approached from the perspective of a landscape architect. I faced the need to abstract the concept of resilience to provide it with a spatial significance. As

Ashworth (2002) pointed out, cities have fulfilled different defence functions for which their distinctively urban conditions have particularly suited them. Therefore, I addressed the Siege of Mostar in a wider direction: abstracting the layer of the war, I defined a neutral spatial framework by providing a tool of generic landscape conditions of spaces related with their military uses.

These conditions have been studied and categorised, and then related with the specific case of the Siege of Mostar in order to understand how citizens took advantages of them for daily life activities.

A key step in the research was the comparison of the elements of the Siege, resulted in the spatial layer of *war-spatiality*, with the current spatial outcome of Mostar's resilience: what is left from those spaces? Are their traces still visible nowadays? A constant comparison and overlay of these two maps have allowed me to explore interesting findings on which I then based on the design.

Landscape's duality

The landscape, in times of war, was both source of attack and defence, resulted in a physical duality. The study and categorisation of landscapes' conditions of spaces related with their military uses led me to define two categories: on the one hand, conditions that defined unsafe landscapes while on the other hand defined landscapes of survival. I chose to take in consideration and investigate only these two extreme conditions due to the materials analysed, although I am aware that there is a lot happening in between and that these two categories are strongly interrelated.

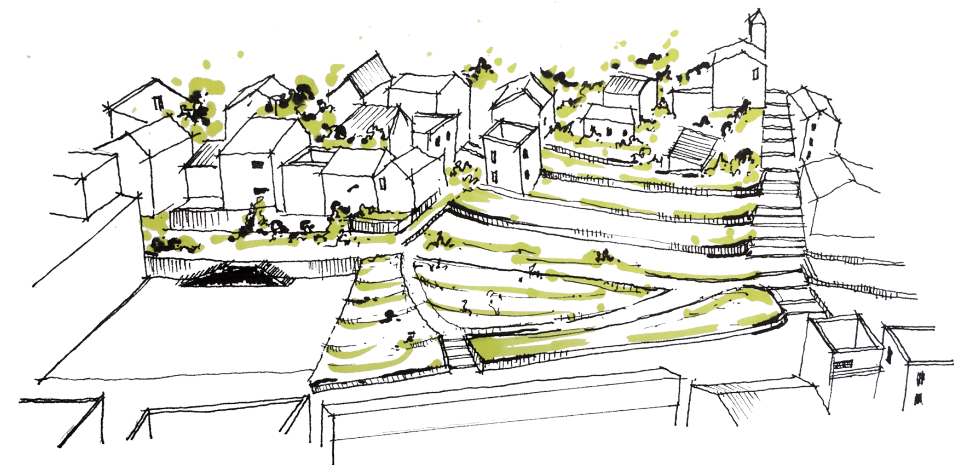
In the *following pages*, it is addressed how spatial conditions of unsafe and survival landscape are translated into the specific case of Mostar.

Regarding unsafe landscapes, extended areas were the location for sniper positions, while exposed spaces were the zones at higher risk, almost impossible to safely cross. This led citizens to define spatial solutions to move safely throughout the city, defying safe lines of movements: defence lines, trenches, safe crossing areas on the Neretva.

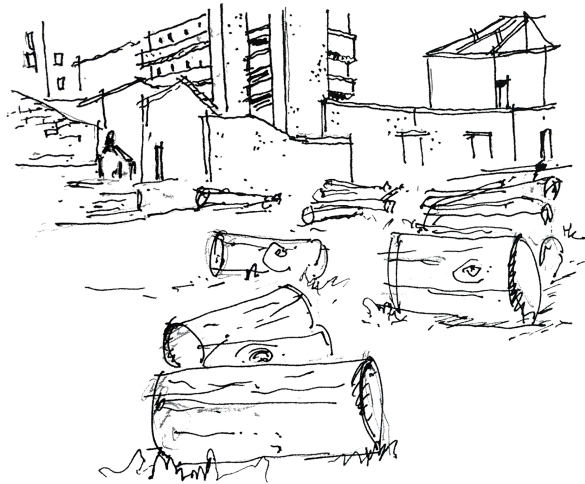
The spaces characterised by a more protected environment are defined as survival landscapes. Enclosed areas – delimited by high-rise buildings and slops with dense vegetation – were good spots for gathering. Long-term stay were established in areas that were impenetrable, surrounded by dense vegetation and well protected with spatial devices (sand bags, containers, wooden panels). Kitchen gardens occurred in the courtyards, confined areas with limited movement available. Water and food distribution took place in provisional areas: semi-enclosed spaces delimited by high-rise buildings, although not completely safe due to the openness on two sides.



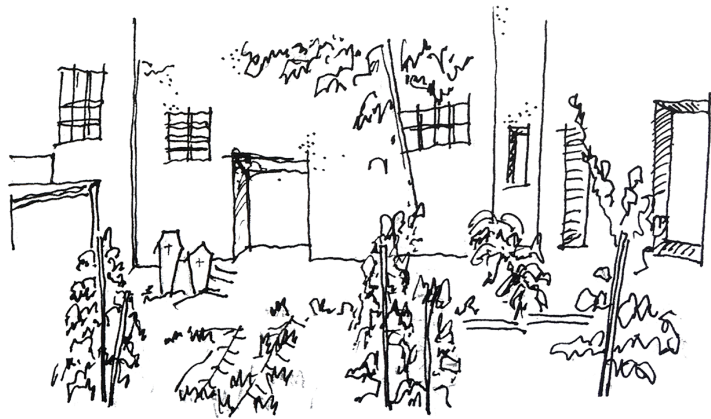
Zone of higher risk: mostly abandoned - due to the close fight - in the spaces between residential buildings vegetation took soon over



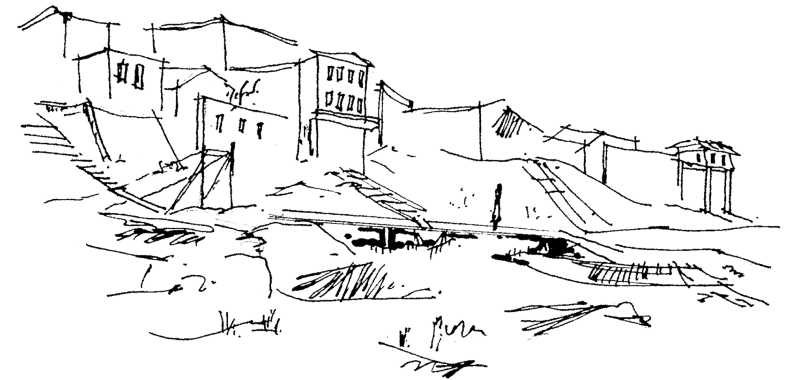
Vegetation on natural slopes as protection from sniper fire - yet terraces were used as cemetery



Trees were source of protection - at the same time wood was used to warm up



Kitchen gardens as main source of food - space for graves

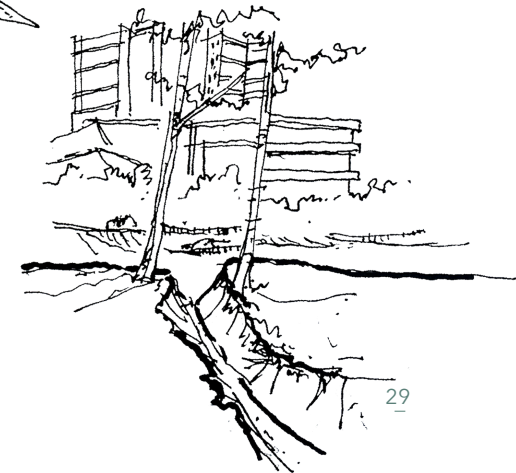


The Neretva river itself was source of attack and defence. It represented safety when people crossed it to reach the Enclave area



Used for family washing - although it was unsafe

Bosniak militias dug trenches taking advantage of the steepness of its banks to move safely on open fields



Design approach

Through the analysis, I explore the potential of the survival landscape and only afterwards I define the tool to be used in the design, proving that the war-imposed spatial conditions of the survival landscape, implemented by citizens, still have a productive force.

During the process of design-making only the survival landscape and its spatial conditions were taken into account, cutting out the unsafe landscape. This is because (as shown in the map *Analysis of the main elements, current situation* p. 68), comparing the spaces of resilience with the current situation, it is evident that the safe and protected spaces during the war are now abandoned or residual areas in the city, avoided by citizens.

As outlined before in the problem statement (p.18), the reconstruction failed to assimilate the spatial solutions emerged during the Siege: the new survival landscape and its spatial conditions disappeared in a frenetic process, and with it all the effort put by citizens to react to the conditions of isolation imposed by the war. Therefore, I faced the need to dig deeper into theories of reconstruction to understand how to place the project in the right direction.

The specificity of the analysis led me to build up a scenario of reactivation through a transversal approach: exploring the potential of the hidden survival landscape, of the actors involved and of the current conditions and

then promoting encounter, dialogue, interaction among different actors, by learning from the war and responding with a design intervention to the current problems. I chose to initially tackle the design with a provocative approach, heavily relying on speculation. In other words, I opted for implementing the survival landscape with extreme, disruptive visions. This first approach to the design-process was used as starting point to open up a discussion with the citizens, in order to reveal the qualities and functions of the survival landscape that citizens would otherwise never be able to perceive because covered by the reconstruction's layer.

In order to build up this discussion, I conducted a participatory analysis with

the one-day workshop *co-design* in Mostar. During the workshop, citizens of Mostar had the possibility to give opinions and reflect on the disruptive scenarios that I prepared.

Afterwards, I elaborated a final design based on the two approaches. The design interventions aim at open up reinterpretation of some areas along the city to socially reactivate it. It is important to notice that some of the principles elaborated in the first phase of the design were checked and redefined after the development of the final proposal, reconsidering some aspects of the design strategy.

Relevance

"Throughout history, cities have been targets as well as casualties of war. But in some cases, such as Mostar, the systematic destruction of buildings and bridges has been a means of erasing altogether the memories of a community and its presence from a specific location. As consequence, architecture has become the enemy. Indeed the destruction of historical buildings and places of memory can be early-warning signs of ethnic cleansing, as dehumanisation and destruction of heritage are two of the first steps in a genocidal process" (Piquard, B., & Swenarton, M. 2011, p.6).

In cities that have experienced war the latter becomes a memorial, visible in museum, cemeteries, even through organised tours along the ruins. As Piquard and Swenarton stated, for those living their daily life under siege, the culture of war or occupation is a major source



'Ground zero', 1994 from cidom.org

of vulnerability. But it also triggers coping strategies and modes of resilience in the forms of creative responses in terms of values and social behaviour (Piquard, B., & Swenarton, M. 2011, p.7). This is what we should highlight in traumatic contexts.

The aspiration of this research

project is the construction of a new urban landscape, in alternative present or near future, for the city of Mostar, capable to adapt itself to new needs of society or events. The design promotes adaptability, by embracing changes and constant open transformations. The biggest ambition however is the

changing in the image that society has of Mostar through the project: by evoking war-spatiality through a dynamic project, citizens will confront the war. Adding social public spaces, the survival landscape is enriched of a new social meaning, helping to define new memories of a community and a whole identity for the city. In my opinion this is the way to look back at a tragic event and remember what was achieved, using resilience and abstracting spatial conditions of war-time to develop a project that enrich the city. Hopefully, war will become one of the many historical layers of events that shaped the urban environment, one of the many narratives that shape the city.

One of the main restrictions of this method is that is only applicable to post-war scenarios and has a strong site specificity. However, if we are able to abstract the method itself, it could be applied to other circumstances and current problematics. The key is to identify the spatial conditions behind a place and exploit them.



*The Old Town, aerial photo
by Anna Saracco*

02

Theoretical framework

In order to build up a project on solid ground, this chapter presents a brief investigation on theories of *resilience* and *reconstruction*, focusing on war-time and post-war scenarios.



Theories of resilience

The concept of resilience isn't novel in architecture's literature. Scholars and practitioners (Lahoud, 2010; Davis, 2012 - just to mention some) have explored the theme mainly in terms of capability to restore a physical space after a human disaster.

According to Lahoud (2010) *"Resilient city is one that has evolved in an unstable environment and developed adaptations to deal with uncertainty"*. A resilient city is hence capable to adapt to the shock of an unexpected traumatic event. It is important however, as Hanna (2016) points out, to

distinguish between recovery and return. The resilient city, indeed, doesn't simply return to the previous status quo as if nothing happened. It rather builds on the trauma it experienced, developing new equilibria.

Doubtlessly, if we recognise that architecture may have healing capacities on an annihilated place, this should hold for devastation brought by men's action just as from natural forces. Very little, however, has been written on how resilient architecture can tackle the challenges that arise from war scenarios.

A first, distinctive feature of war-time resilience can be explained as follows. In the case of natural disasters, resilience is something that mainly takes place afterwards - once the catastrophe has already ended its course. When it comes to resilience to war, on the other hand, the adaptation phenomenon has a quotidian dimension. In other words: it happens day by day through continuous processes of spatial adaptation and production. We can hence see the city as an *"intelligent, adaptive evolutionary system"* (Malfroy,

1998) that develops, during war-time, under the pressure of its inhabitants' necessities rather than according to formal planning (Malfroy, 1998; Moystad, 1998; Hanna, 2016).

Adaptation is hence another key feature of resilience in the war city - just as it is for resilience to natural disasters. This concept, in the war resilience context, can be briefly defined as any modification to the urban environment meant to (re) build *"an everyday normalcy, as opposed to a state of shock"* (Davis, 2012; Hanna, 2016).

A third notion that can be associated to war-time resilience is acceleration. Doubtlessly, the built space is constantly changing and being reshaped by countless phenomena. Nonetheless changes in the urban environment usually take quite a long time to be accomplished, and in the end the process itself almost goes unnoticed. This however is not the case in a war scenario. During conflicts both pace and scale of such mutation dramatically increase, making the adaptation process

undergoing quite evident (Hanna, 2016).

All of the described patterns of resilient cities can be encountered in the case of Mostar, as it will be more accurately discussed in following sections. A minimum practice of everyday life was exercised within the enclaves in the city. Some schools were established in the basements during the conflict. Smaller stores and bakeries had their doors open. Residents adjusted their spaces and the way they use it in order to go through the traumatic events.

All these acts together formed a statement of resilience - an open process of continuous adaptation to the changing conditions of the war (Hanna, 2016). As a result, different parts of the city managed to survive the conflict, even if with some inevitable losses to the built environment and the urban life. *"The transformation of the city had limited the major destructions along the fighting lines and provided a space for a minimum level of everyday life practices within the territories marked by such lines"* (Hanna, 2016).

international governments, numerous projects have been underway since the beginning of peace-time to meet the urgent need for housing, public health, education, and urban infrastructure, mostly within the heavily damaged East Mostar. Almost all the structures in the Old Town, as well as the destroyed public buildings located elsewhere in the city, were rebuilt in close imitation of their pre-war appearances. However, these were isolated projects, with no overall plan for the reconstruction of the city.

In order to intervene in the intermediate process of alternative reconstruction and positively contribute to it, I faced the necessity to dig deeper in the theories of reconstruction.

As Sultan Barakat has shown, the choices undertaken in the process will shape not just the urban fabric but also social relationships, collective identities, the sense of belonging and the opportunities to move

towards a sustainable peace. Barakat argues that *“what really matters is not just what reconstruction is able to deliver but how it is able to deliver and when, because ultimately, reconstruction is the achievement of a state of mind reached through a process of community empowerment. (...) Reconstruction as a developmental challenge is about addressing the micro level needs of communities within a macro national strategy driven by the need to reinforce peace as much as by the need to induce growth”* (Barakat, S. Wardell, G. 2005).

Many studies have recommended that the most successful post-disaster plans are centred on local human needs and engineered according to local capacities in order to sustain long-term progress. As Jon Calame states, *“isolated restoration projects undertaken by foreign agencies that do not strengthen local self-reliance are frequently counter-productive. Any schemes for*

recovery initiated by foreign interveners, regardless of how carefully formulated or executed, will prove inadequate if they fail to engage the public which they serve through direct involvement, and ultimately, through the transfer of responsibility” (Calame, J. 2005).

Successful reconstruction must be envisaged as *“a local challenge that must take account of political, social, cultural and economic circumstances within the national and regional context in question”* (Royal Geographical Society, 2003).

Therefore, *“post-war recovery is a multifaceted process that addresses simultaneously physical destruction, psycho-social trauma, economic limitations and political instability. The term recovery alludes to a long-term process rather than a ‘tangible’ outcome and implies repair and healing, equally of people and environment”* (Oliver-Smith, A. 2005).

Theories of reconstruction

Reconstruction is a key issue in post-war contexts. As stated before, the main problem in the city of Mostar is the lack of general vision in the process of reconstruction and the involvement of citizens. Mainly conducted by foreign donations from



Plan of Mostar, city scale

03

Site analysis

The chapter outlines a thorough analysis on different scales of the war-spatiality in Mostar during the Siege in 1993-1994, moving from the story of Mostar to the spatial outcome of the *resilient city*.





The story of Mostar

Location

Mostar is a city and the administrative center of Herzegovina-Neretva Canton of the Federation of Bosnia and Herzegovina. Situated on the Neretva River, Mostar was named after the bridge keepers (*mostari*) who in the Ottoman times guarded the Stari Most (Old Bridge) over the Neretva (Heffernan, K. L. 2009, p.19).

On the following page:

Plan of urban fabric
of Mostar, city scale

Mostar is located in an unique landscape: the morphology of the terrain represents a crucial element in the image of the city. The Neretva River shapes the contours of the physical structure and the street's scheme.



Historical development

To fully understand how the city has been modified by the war-conditions, an analysis of the urban tissue from a historical point of view has been conducted. When I first analysed the city, it was immediately clear that the historical and political background are still visible in the urban pattern.

Mostar is:
an Ottoman city (15th Century/1878)
an Austro-Hungarian city (1878/1914)
a Socialist city (1945/1992)
and a War city (1992/1994).

All these historic epochs left different layers of spatial planning that define discontinuity in the urban tissue.

Ottoman city

Historical evidences of the inner center of present-day Mostar go back to the mid-15th Century (Pašić, 2004). Mostar was first a small town developed on the East side of the Neretva River. In 1468, under the Ottoman empire, the urbanisation of the small settlement took place following oriental laws (Bottlik, 2017). Shortly, the Ottomans started to expand on the West side, developing an ingenious irrigation system using the Radobolja River as source. The city followed two functional units: *čaršija* or *bazaar* – craft/commercial center – and *mahalas* – residential quarters. The tightly built commercial part surrounding the Stari Most on the East side was characterised by narrow streets full of small shops, while on the right bank of the Neretva the settlement followed an east-west direction along the Radobolja.

The strategic geographical location helped Mostar to become one of the most important commercial centers of the area, with well developed connections. The valley on the West side was used for agricultural purposes, irrigated through the canals. The city reached a completed urban entity in 1670, with a population of 10.000 people (UNESCO, 2005). It remained the same until 1878 with the arrival of the Austro-Hungarian occupation.

Austro-Hungarian city

The period of the Austro-Hungarian Empire left its mark on the image of the city with several transformations. Eastern european traditions were evident in the architecture of cultural buildings and new residential areas (Bottlik, 2017). Economic and social transformations destroyed the agricultural society, replacing it with an urban, industrialised one. The spaces for work and living – functionally and physically separated during the Ottoman Empire – came together.

On the following pages:

Urban development: Ottoman city,
Austro-Hungarian city, Socialist city

The city was expanded towards the west and north, and the center of the town – previously located around the Stari Most – lost its importance. The urban structure was reorganised following the European model of wide axis, the boulevards, with an orthogonal grid and single-family villas. Military zones were established to the north and south of the city, while mountains on the east created a natural boundary for urban development. Industrialisation brought the railway, on the line of the present-day Bulevar. Catholics religious buildings came up during the period (Suri, 2012).

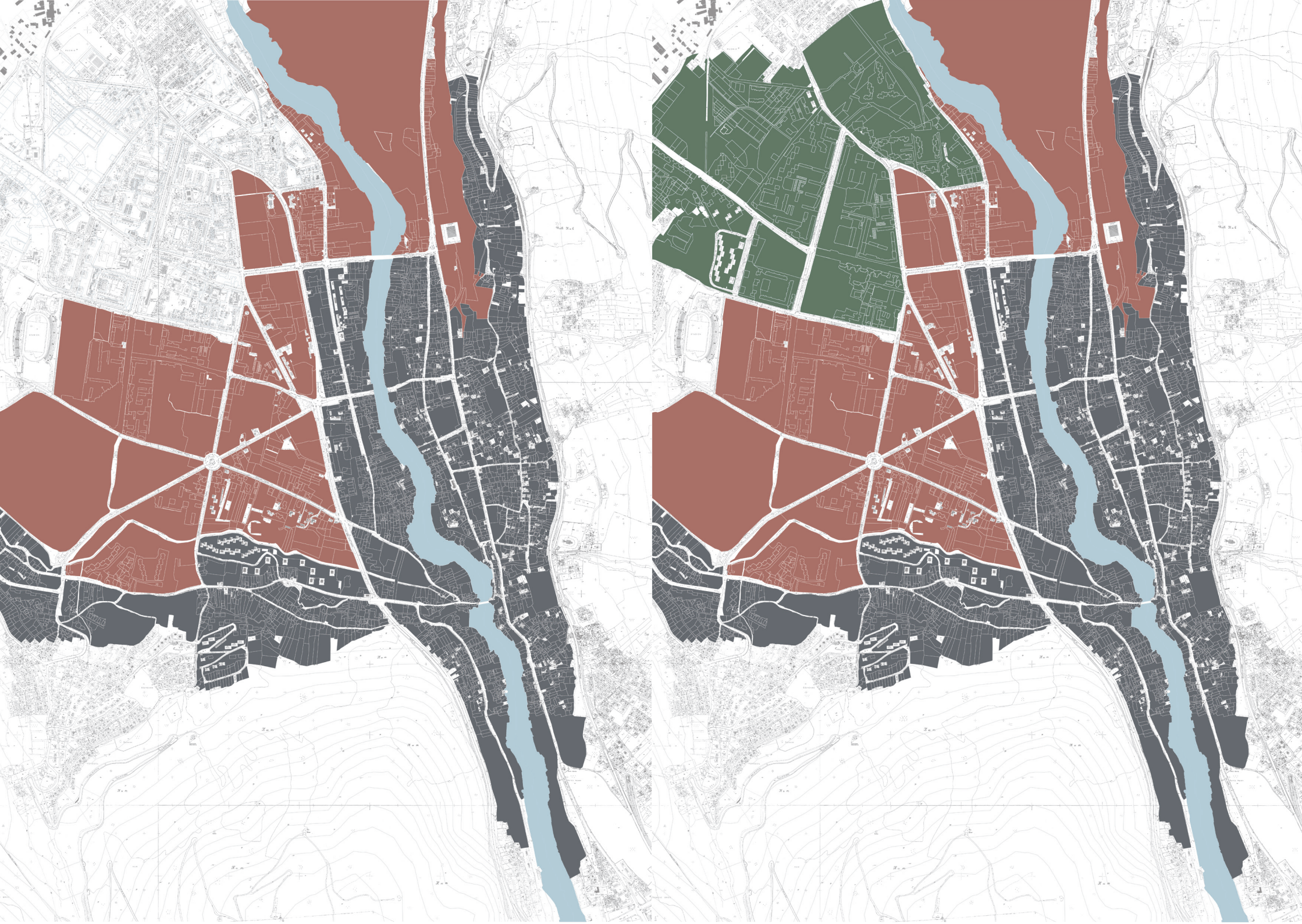
Socialist city

The end of the First World War signed the end of the Austro-Hungarian Empire. In 1945, it became Federative Socialist Republic of Yugoslavia. The industrial development proceeded apace with the establishment of a variety of industries in and around Mostar (Suri, 2009). The west side was expanding rapidly due to the labour needs of a developing economy (Bottlik, 2017). The centre was located on the right bank of the Neretva, with high-rise complex of residential buildings. However, the old town centre became a touristic attraction (Pašić, 2004).

War city

The Siege (1992/1994) has visibly altered the urban structure of the city. The citizens had to take into account new system of spatial designation and control (Piquard, B., & Swenarton, M. 2011), changing the social function of places to respond to the basic need of survival. They created a *resilient city*, adapting it to the conditions of isolation with a variety of spatial solutions.





War spatiality

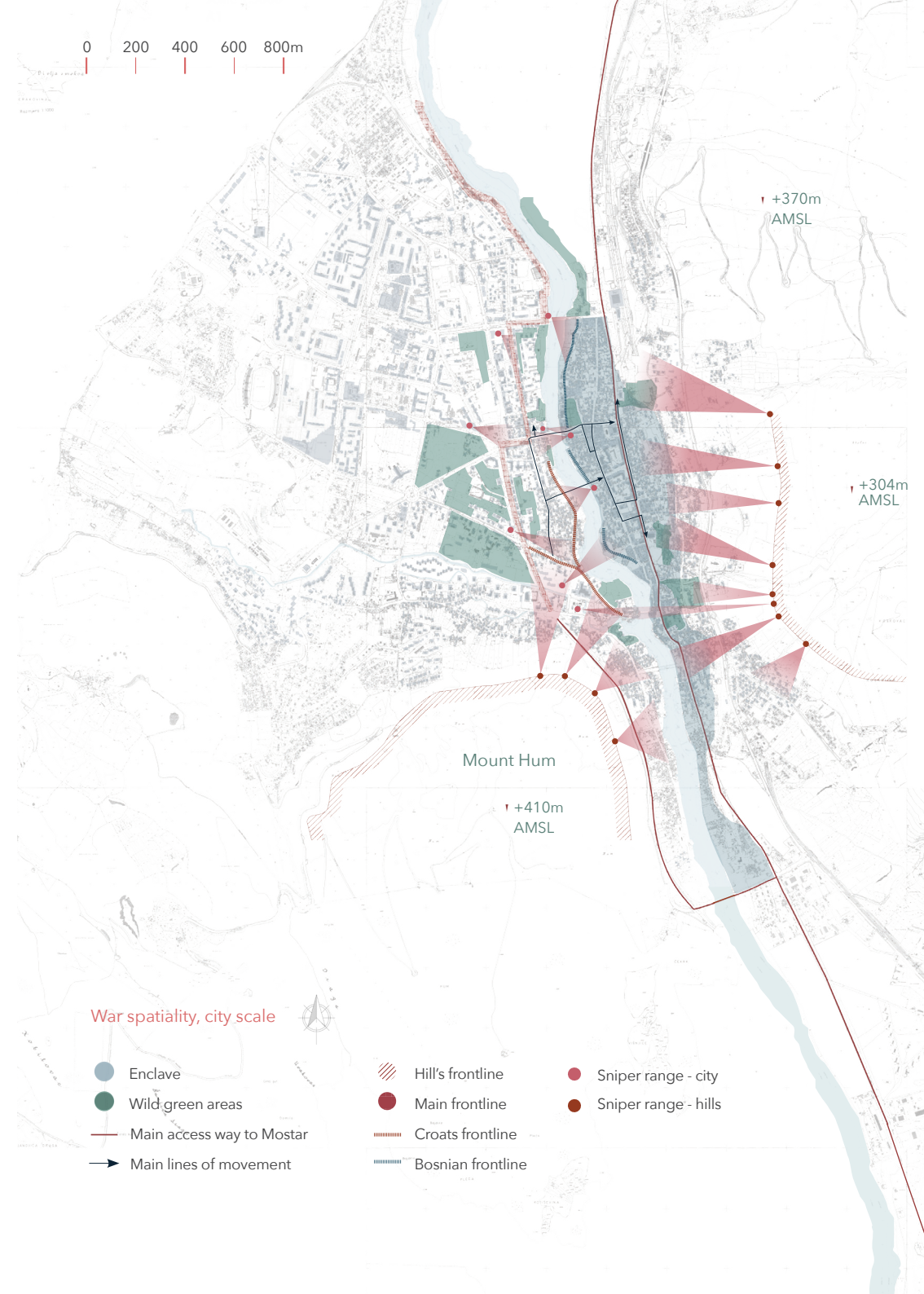
The Siege of Mostar

The Siege of Mostar was fought from 1992 to 1994, resulted in the deaths of about 2,000 individuals. Initially lasting between April 1992 and June 1992, it involved the Croatian Defence Council (HVO) and the Army of the Republic of Bosnia and Herzegovina (ARBiH) fighting against the Serb-dominated Yugoslav People's Army (JNA) after Bosnia and Herzegovina declared its independence from Yugoslavia.

As the conflict matured and the political landscape changed, the Bosnian Croats and Bosniaks began to fight against each other, culminating in the Croat-Bosniak War. Between June 1993 and April 1994 the HVO besieged Bosniak-concentrated East Mostar, resulting in the deaths of numerous civilians, a cut off of humanitarian aid, damage of religious and cultural buildings and destruction of the bridges of the city (Makaš, 2012).



Snow in Mostar, 18.02.1994
from cidom.org



City scale, 1993-1994

On the city scale, the analysis is conducted from the landscape architectonic (and urbanist) point of view to determine the newly established spatiality between the limits of the Siege, focusing on the period between June 1993 and April 1994.

The map **War spatiality-city scale** shows the main elements of the Siege, the main lines of movements from west to east Mostar and the front lines.

The different historical morphologies offered different degrees of protection. The tightly built Ottoman town provided more protection as the crossings were covered by other buildings. The dense urban morphology, characterising the core of the Old Town, offered a wider range of



'Ground Zero', 1994 from cidom.org

spatial solutions. On the west side, the orthogonal street network of the Austro-Hungarian empire increased danger, as some axis were totally exposed, while the Socialist part, with large opened and exposed areas in between high-rise residential buildings, was at high risk of

sniper attacks.

The specific topography of Mostar affected the Siege: hills were strategic points of views for Serbian militias and later Croats forces. Mostar were fired from atop Mount Hum (the highest point in Mostar): whoever controlled

this checkpoint controlled the city.

The river banks, characterised by open fields, offered no protection. In order to move along the river banks, citizens dug trenches, taking advantage of the steepness of the soil to define a network of path able to connect part of the city unprotected. Otherwise people used gardens where possible to move in safety. The river banks were also used for family washing, although were easily under attack: a lot of people died in this way.

It is interesting to notice the high amount of vegetation that took over in some parts of the city, remained abandoned due to the proximity of the front lines. It was in fact dangerous for the civilians to chop trees and collect the wood for fire. These lines are still marked due to the alteration of vegetation.

Frontlines

People were fighting along two frontlines of the HVO militias. The main frontline was established along the Austro-Hungarian Boulevard, 100 meters west of the Neretva river. This line divided the city physically and functionally from May 1993 to late 1995 (signing of Dayton agreement). The second frontline was towards the river, using the steepness of its banks for protection and allowing for a long distance view on the fields on the east side. The closer people were to these lines, the higher was the risk of casualties due to the exposition to fire.

Croats forces took soon full control of the west side of the city up to the Boulevard, arresting Bosniak man of fighting age, forcing entire families out of their homes and expelling them to the east side of the city. East Mostar became the Enclave: stretch to the hills and towards the airport area, it was completely isolated, with an estimated population of 40.000 to 55.000 people. There were 6 hours of electricity every 48 hours, and almost no aid from outside for long periods of time.



Resilient city is one that evolved in an unstable environment and developed adaptations to deal with uncertainty .



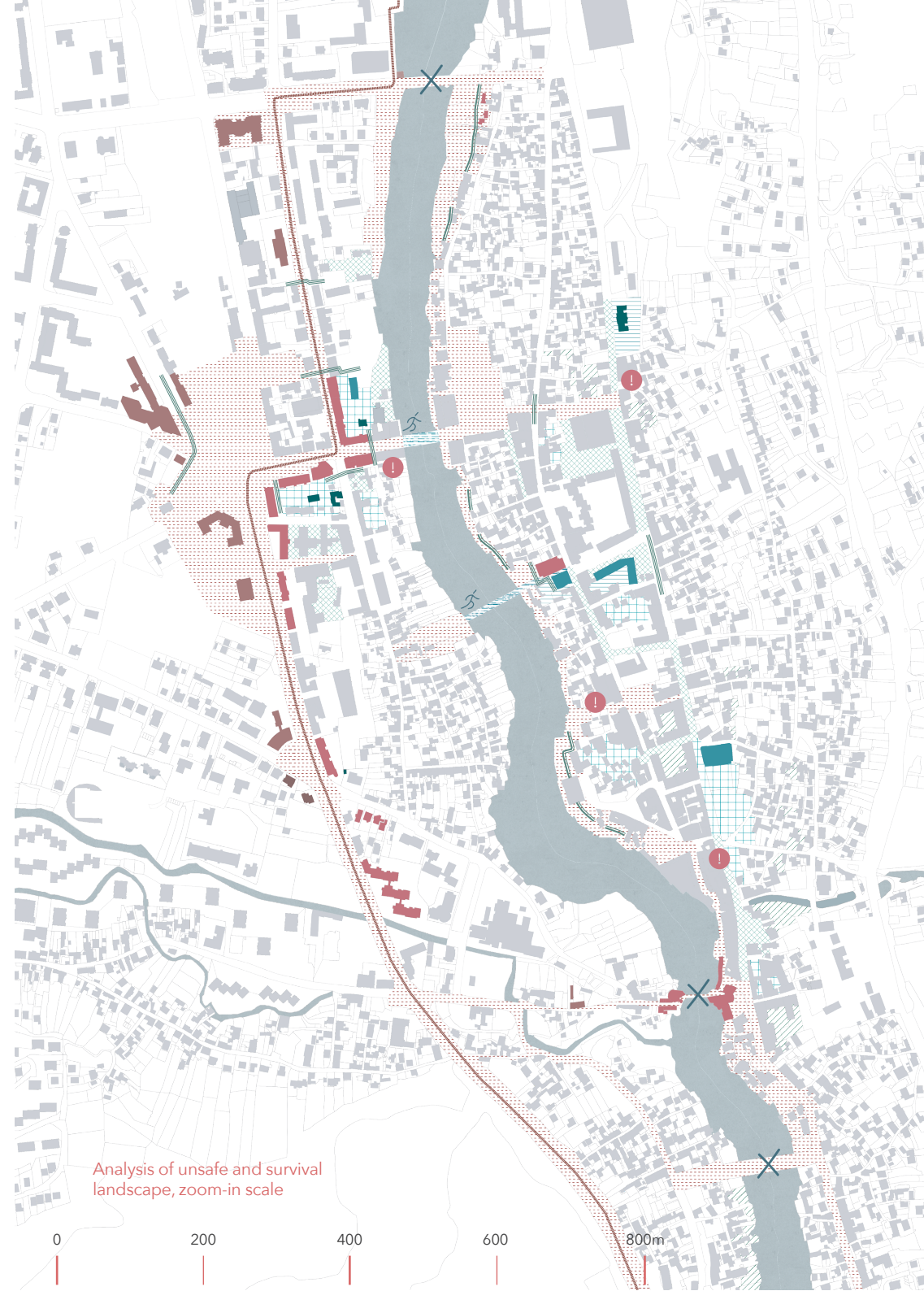
Lahoud, A. 2010, p. 19

The resilient city

The war urban conditions, characterised by the lack of electricity, water, food supplies, led citizens to react and develop new forms of stability for daily life.

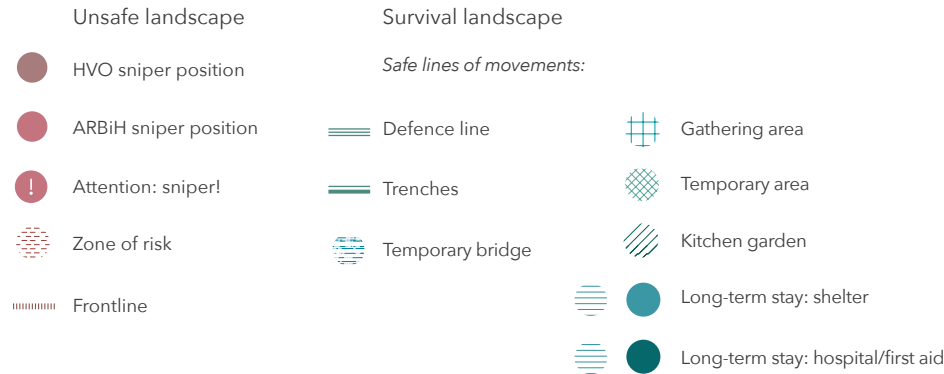
The map **Analysis of unsafe and survival landscape, zoom-in scale** on the opposite page shows the war spatiality in the area where the war was heavily fought: between the main frontline along the Boulevard and the hills on East Mostar. I translated the spatial conditions to this specific area, where they define unsafe (in red) and survival landscape (in green). Here, citizens took advantages of them to determine defence and protection sites, strategic areas, zone of risks, shelters.

Unsafe landscape is characterised by open-view areas with no protection. Streets turned from physical connection to zone of risks.



Analysis of unsafe and survival landscape, zoom-in scale

Analysis of unsafe and survival landscape, zoom-in scale



High-rise buildings were used as sniper locations, while the intersections between buildings were exposed to sniper range. On west Mostar, the Bulevard was the most dangerous part of the city, impossible to safely cross, heavily damaged from nine months of constant shelling. Spanish square was called *Ground Zero* – a key spot for the enemy militias. Santicéva street was for the civilians a deadly spot. The Bulevard marked since the Siege the division of the city: the east part was called Bulevard Narodne Revolucije while the west one had a Croat name – Bulevard Hrvatskim Braniteljima – Boulevard of Croats Defenders.

In such situation, citizens had to take into account temporary architectural solutions to safely move in the city: big curtains were erected between two houses to protect the streets from the snipers and allow the passage of civilians (*fig.1*), signs appear on the main alleys to indicate *snajper! dan i noc* – sniper day and night (*fig.2*) – visual barriers were assembled by inhabitants, made of any spare material that was available (rubbish containers, cars) that could act as shield from bullets or sniper view (*fig. 3*), trenches were excavated.

The survival landscape is characterised by a more

protected environment, with the presence of shelters.

The daily life was conducted on ground or in underground spaces (basements) as the higher parts of building were dangerous. Much of the Enclave area (east side) was in sniper range with only buildings offering protection: if you could see any part of the west bank than a sniper could see you. Citizens had limited protection from artillery and mortar fire. To reach the west bank, one had to clamber across temporary bridges made by wooden panels from doors or closet (*fig. 4*), dodging sniper fire, only to then endure the street-fighting, house to house. Only then, they could spend the night in a bombed-out theatre or find shelter in the remaining buildings. Enclosed squares were used as gathering point, when the enemy ceased fire (*fig. 5*).



Fig. 1 Mostarskog bataljona, February 1994
from cidom.org



Fig. 2 Sniper sign, photo by
Wade Goddard



Fig. 3 Braće Brkića, 1994,
from cidom.org



Fig 4. Temporary bridge, 1993 from Archive "Centra za mir", Mostar



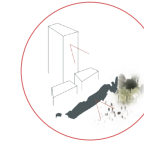
Fig. 5 Maršala Tita, 1994 from Archive "Centra za mir", Mostar

In the next page, it is outlined how these areas, characterizing unsafe and survival landscapes, are based on specific landscape's conditions that determined war-time uses.

Spatial conditions

Extended

Exposed



Definition

Lengthened
stretched out space
with clear view on long
distances

Unprotected
spaces from snipers
and bombs attacks

War-time uses
of unsafe landscape

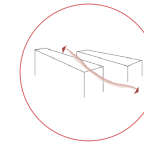
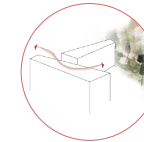
Sniper positions
from HVO and ARBiH
militias positioned in
high-rise buildings

Zone of risk
resulted in spatial
solutions for safe lines
of movements

Spatial conditions

Enclosed

Semi-enclosed



Definition

Bounded
spaces delimited by
high-rise building and
dense vegetation

Delimited
by high-rise buildings
that block attack on
two sides but open on
the other two sides

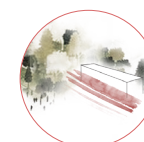
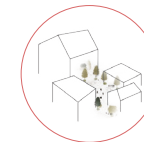
War-time uses
of survival landscape

Gathering areas
in safe/protected
squares/courtyards
with easy way out

Temporary areas
water and food
distribution points,
main lines of
movements, short-term
gathering points

Confined

Impenetrable



Limited extent
space surrounding
by high-rise building
with limited available
movements

Inaccessible
from outsider users
due to richness of
vegetation or because
well protected with
spatial devices

Kitchen garden
protected courtyard as
only source of supply

Long-term stay
areas with shelter
and hospital/first aid
station



Destroyed HIT, from Archive
"Centra za mir", Mostar



Former HIT department store,
aerial photo by Anna Saracco

Spatial outcome

It is now clear that the war changed completely the urban conditions of Mostar. What is left from these changes? What is the spatial outcome of Mostar's war-spatiality? A key step in the research was the comparison between the spaces of resilient city and their current spatial outcome.

After the process of reconstruction, it is still possible to find in Mostar scars of the war: left over spaces in some neighbourhoods, abandoned areas, ruins. These are interposed between new residential and cultural buildings reconstructed as they were before.

On the following page:

Analysis of the spatial outcome
- current situation

- Post-war rebuilt buildings
- War-endured buildings
- Resilient buildings
- In-between buildings
- Ruins
- Residual areas
- Abandoned areas



Analysis of the spatial outcome
- current situation

*Post-war rebuilt buildings:
mostly as new residential areas,
rebuilt as they were before the war*



*Resilient buildings:
damaged during the war, they have
been adapted and restored only in part
(one floor) to be illegally used nowadays*



War-endured buildings

*In-between buildings:
as the soil-property is private, some
owners built new residential houses in
between ruins*



*Ruins:
The Razvitak, former department
store now left as ruin*



*Residual areas:
endured the war, but currently not
used*



*Abandoned areas:
usually surrounded a ruin*



*Potential areas of intervention,
conceptual masterplan*

04

Site conclusions

The identification and categorisation of the current residual areas in Mostar is presented in this chapter, outlining how these places represent the potential areas for the design intervention.



On the following page:

Potential areas of intervention

- Current accessible spaces
- Dense vegetation
- Residual spaces
- Sparse vegetation
- Active network
- Potential network

Findings

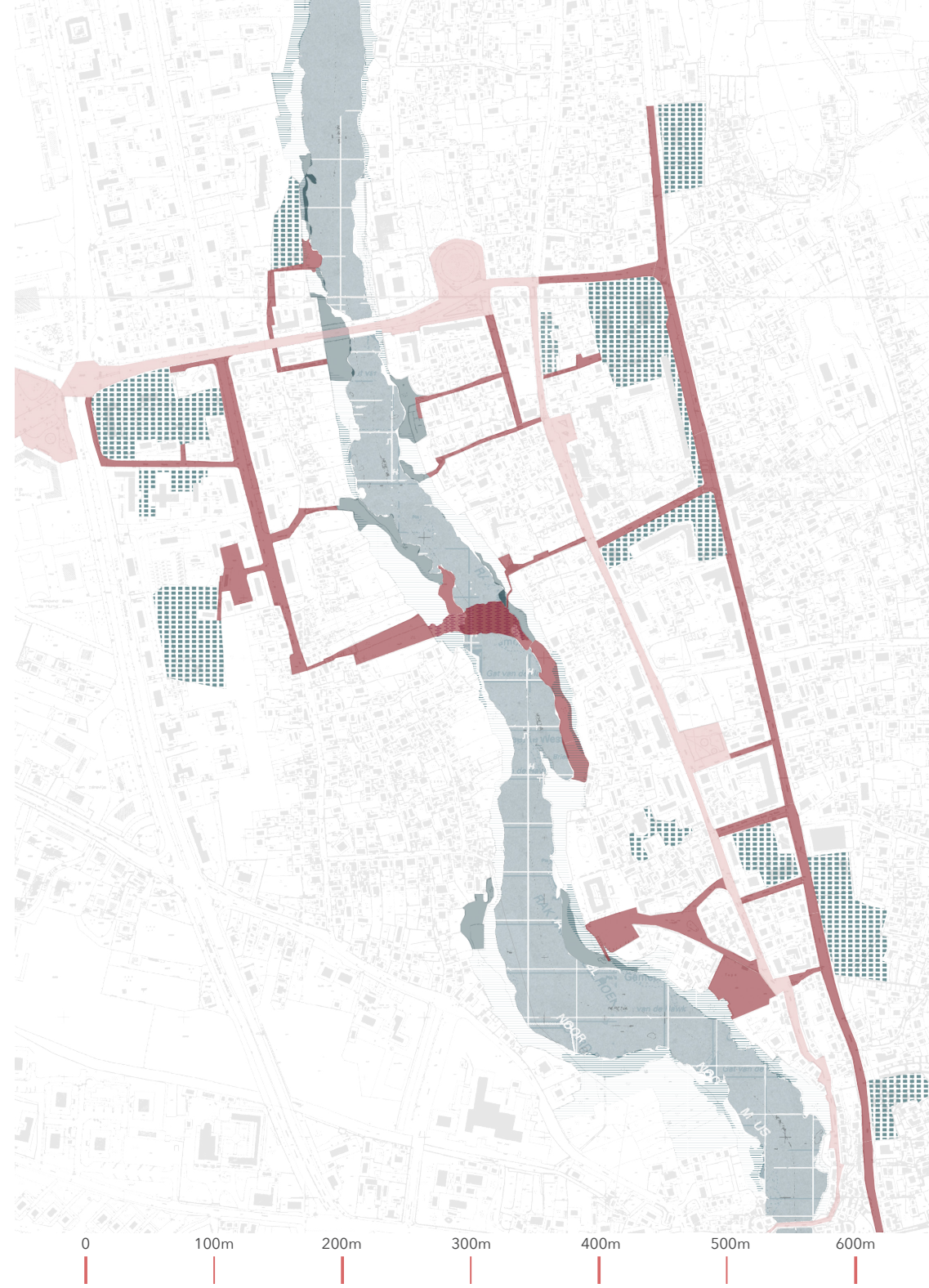
Comparing the spaces of resilience with the current spatial outcome of the war-spatiality, it is clearly evident that the safe and protected spaces during the war – part of the survival landscape – are now abandoned or not used, while the areas belonging to the unsafe landscape were reconstructed shortly after the end of the war.

Why? The specificity of the landscape created in Mostar great opportunities for warfare: the wide Boulevard for example, as a key spot for the militias for its central position and openness, was the point where the war was heavily fought. In fact, the most unsafe areas were along the main roads, connecting Mostar with the surrounding cities. After the war was over, the main lines of movement were prioritized for reconstruction as aid was needed and the city had to function again.

On the contrary, as there was not anymore the urgency for protection, the survival landscape soon disappeared, generating residual areas where citizens no longer felt safe: it was there where they had to spend nights looking for shelter, gathered to survive the shelling, where they lost a husband, a friend, a son.




However, these are in my opinion the areas with strong landscape potentials, characterised by specific spatial conditions and existing natural and manmade elements that were used in the past by citizens for various urban social practices. The aim of the design is to create the possibility for citizens to reuse and appreciate these spaces again.

The map **Potential areas of intervention** shows the current residual spaces along the city that belonged to the survival landscape and that can be part of the design intervention.



Site conclusions

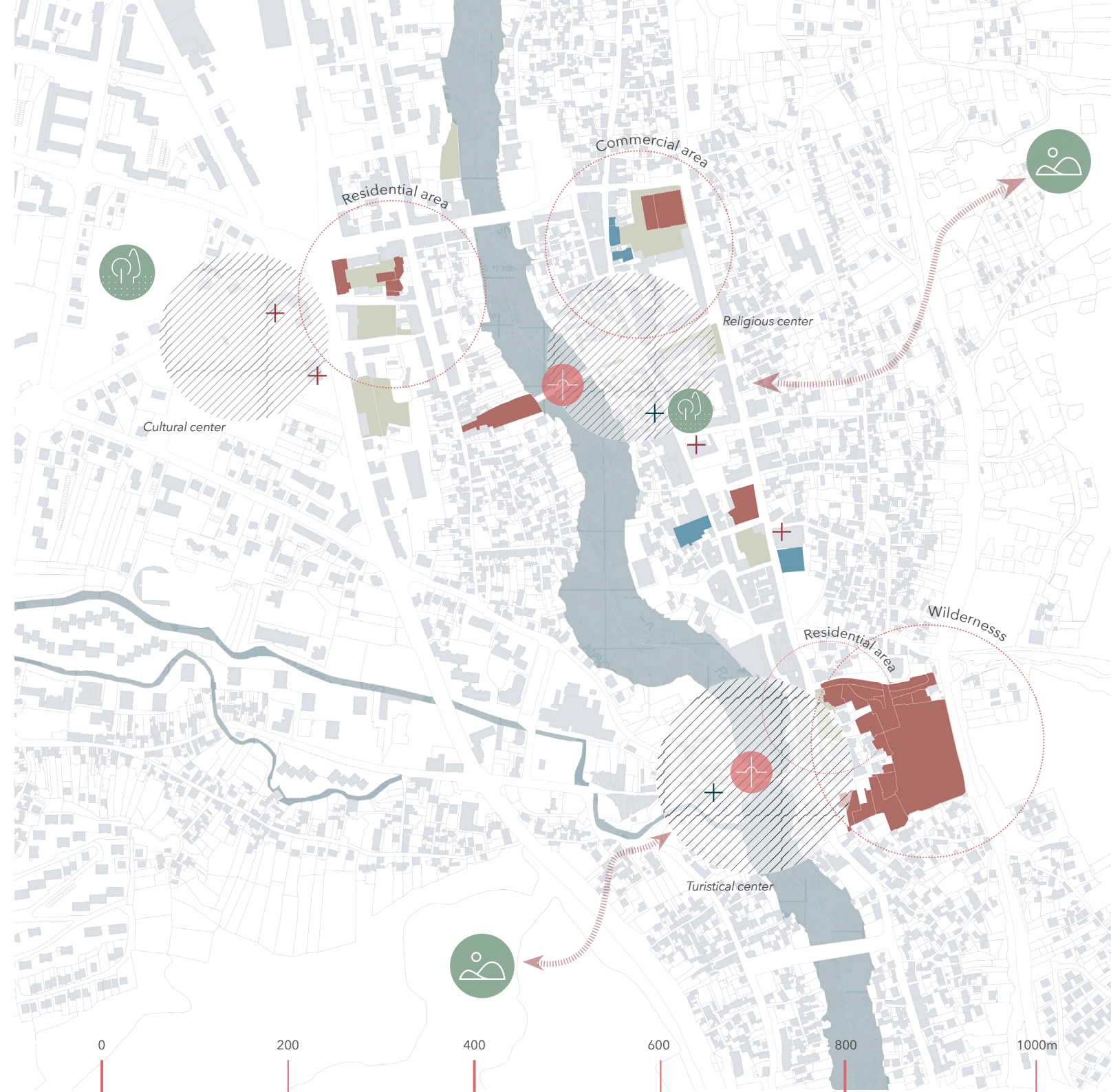
Analysis of the main elements, current situation

-  Abandoned area: dense vegetation, ruins
-  Temporary space: in-between courtyard/street with vegetation
-  Residual square: regenerated but currently not used
-  Urban park
-  Hills
-  Pedestrian bridge
-  Point of interest - local
-  Point of interest - tourist

Classification

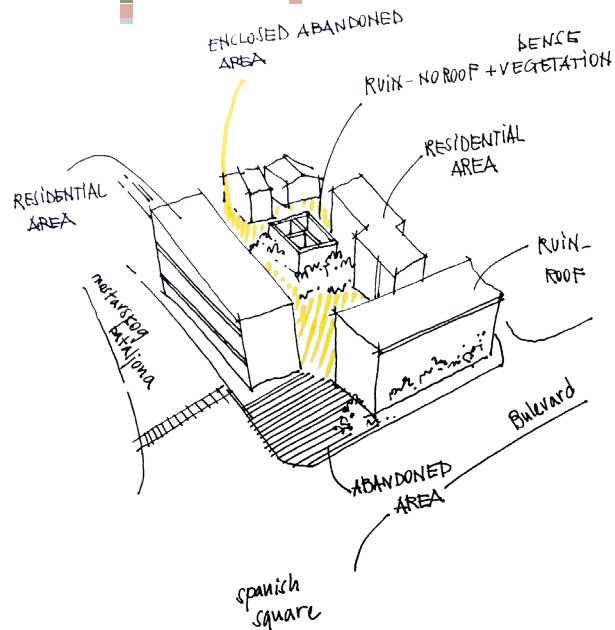
After the analysis of the current situation, I choose to take into account and analyse further only the former survival landscape – now resulted in abandoned areas, temporary spaces and residual square – investigating its spatial conditions.

From the analysis it emerges that, while the survival landscape is now forgotten, the dangerous areas during war-time – unsafe landscape – were rebuilt as they were before and are now the main zones of attraction (i.e. the turistical center of the Old Town).

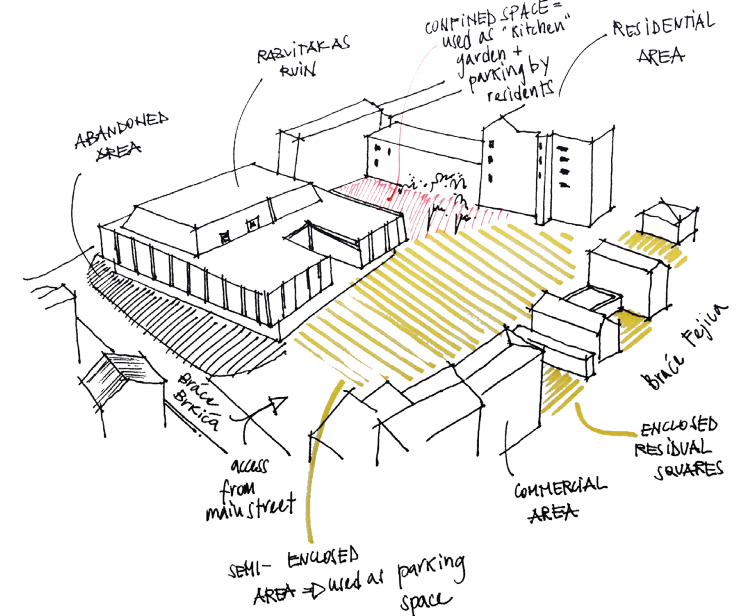


In the next pages, an abandoned area, a temporary space and a residual square are analysed as examples for the same typologies identified in the previous map (p.68). The diagrams grasp the materiality and the spatial conditions of each site.

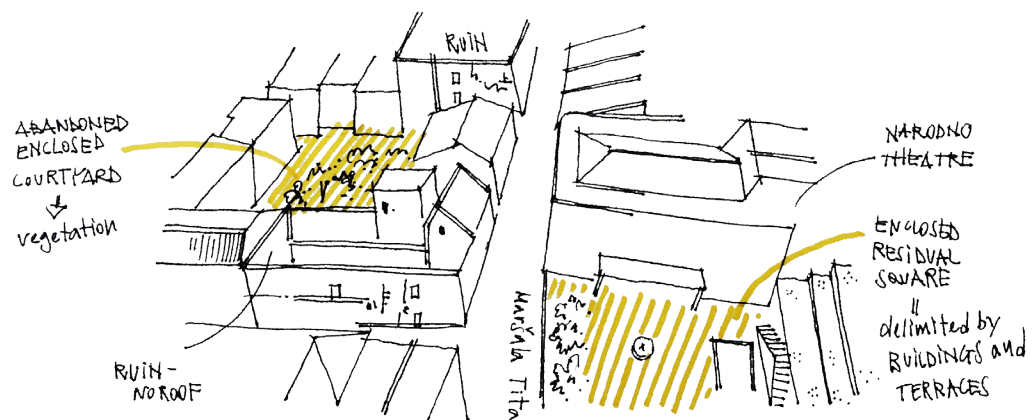
- Abandoned area: enclosed space with dense vegetation, ruins and occasionally used as illegal parking



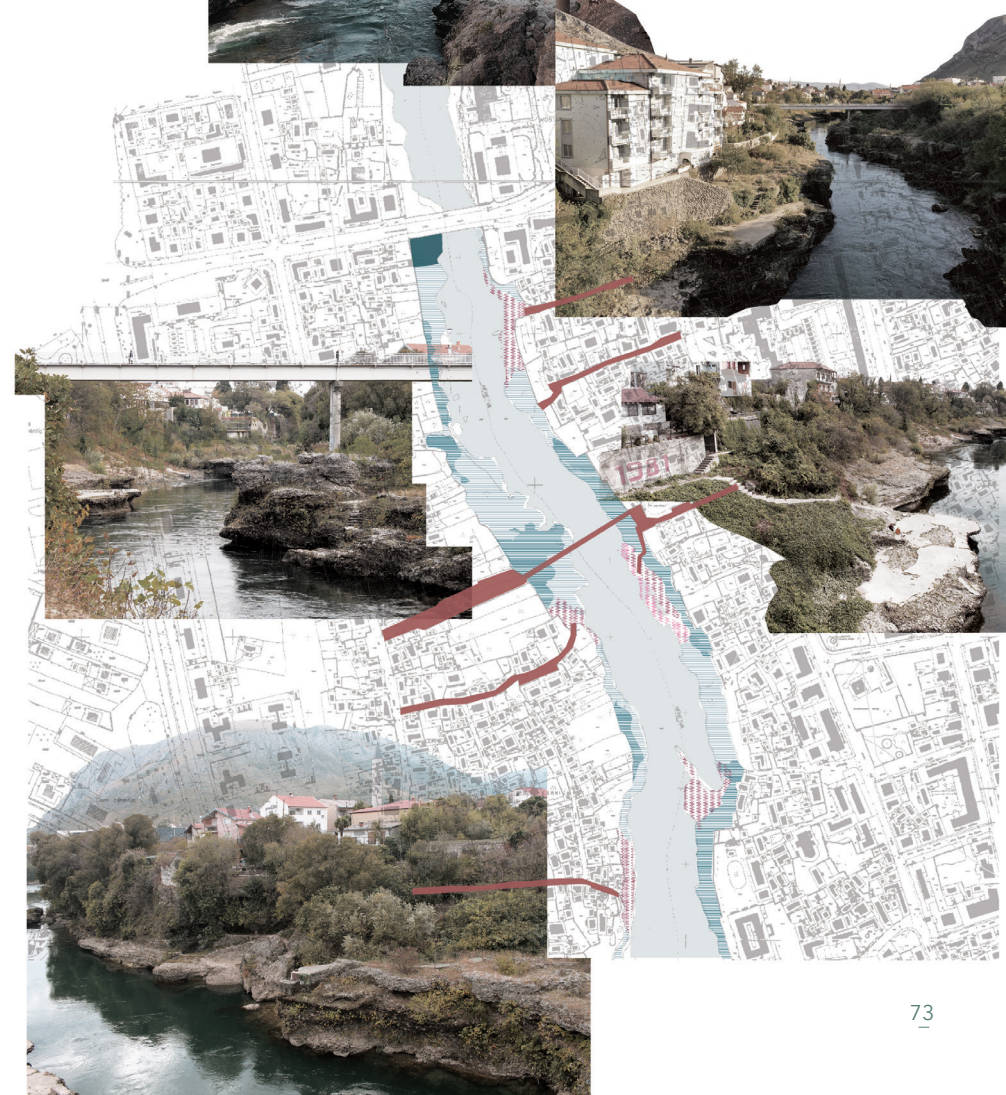
- Temporary space: semi-enclosed area in-between courtyard/street, used as parking spot. The confined part behind the ruin is used as illegal parking



- Residual square: regenerated after the war, currently not used









Neretva - main
elements, collage



On the previous page:

Neretva - main elements,
collage

-  Built
-  Access
-  Vegetation
-  Dense vegetation
-  Accessible
-  Accessible with low tide
-  Steps

Neretva and its spatial conditions

The Neretva river has to be included in the survival landscape. I choose to take in consideration the area surrounded the pedestrian Bunur bridge. During the war, citizens built a temporary bridge here, as it was the safest point to cross. Caves were used to hide, and the existing steps provided an easy access on the river banks. Today, it is still possible to recognise the spatial conditions of the area that defined a protected environment.

Current resilience

Today, it is still possible to recognise some degrees of citizens' resilience: the images on the following page will show some examples. The effort put by citizens to adapt areas along the river banks and in the city for activities is taken in consideration in the design process.

Some enclosed courtyards are used as kitchen gardens by the residents. Photo by author



The terraces along the river banks are private, used as orchards or kitchen gardens. Aerial photo by A. Saracco



Paths have been created by citizens to move along the river banks. Aerial photo by A. Saracco



Cafè illegally expanded towards the river banks and used the spaces as outside café garden. Aerial photo by A. Saracco



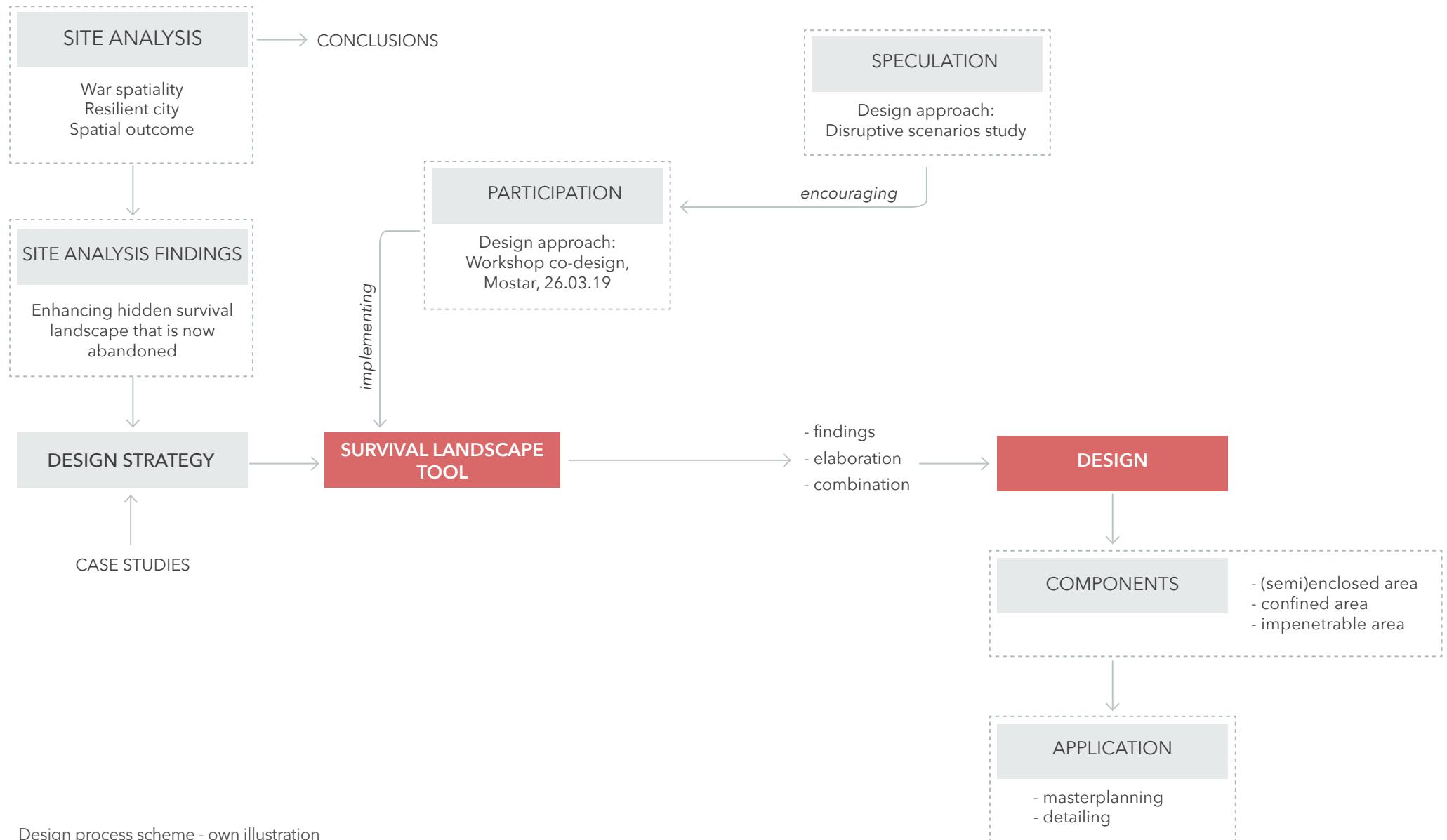
*First game, workshop co-design,
Mostar*

05

Design process

The next chapter outlines the design process till the definition of the final design. It illustrates the principles used to build up a tool box on which the design is then based.





Design process scheme - own illustration



Photos by Yanninck Milpas

Case studies

The Bluff

OMGEVING Landscape Architecture
Ypres, Belgium, 2015

OMGEVING, (2015, December 28). *The Bluff*.
Retrieved from <http://www.landezine.com>

"In the context of cultural tourism project, subtle measures in and around the site have been taken so that visitors can see what the unique landscape framework in which the fighting took place looked like. The works in this unique landscape have been executed subtly and without disturbing the underground. The path leads visitors to The Bluff, where the English positions were 10 metres higher than and just 40 metres from the German line. The project allowed the image of the raw, bleak wartime landscape to be recaptured. The former lines are indicated by steel strips in the ground and differences in level are emphasised by steps" (OMGEVING, 2015).

Although the context of intervention is completely different, the project gave me an idea on how to emphasise the topography of a war-site. In fact, it enhances with minimal interventions the battle terrain and the specific topography that affected the military strategy.



Photos by Lou Vernin



Parckfarm

Alive Architecture, Taktyk

Thurn & Taxis, Brussels, Belgium

Alive Architecture; Taktyk, (2017, March 15).
Parckfarm. Retrived from <http://www.landezine.com>

"The designers consider the site as a spatial, social and economic bordercondition that was to be challenged. The **recognition of the «as found» qualities** on the former railway valley informed their proposition: the site was seen as an inspiring and rare sunken linear space punctuated by bridges to activate. We discovered an impressive network of local actors that contributed to turn the edges of this wasteland into collective gardens and animal farms. We set up a public open call for pluridisciplinary teams to realize and activate the Parckfarm: each team was invited to propose and co-produce an active installation and to organize several events on the site" (Alive Architecture; Taktyk, 2017).

The designers recognised the potentiality of the hidden qualities of the site, and the need to reactivate it. The use of participatory design has assured the reactivation of the site as space for social activities. During a conversation that I had with Petra from the studio Alive Architecture, I understood the need to build up and keep trust with the inhabitants as key issue in this kind of projects.

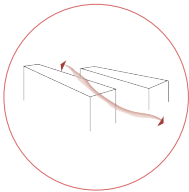
Survival landscape tool

Spatial conditions

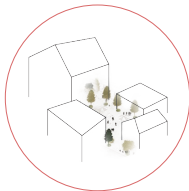
Enclosed



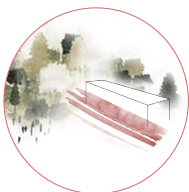
Semi-enclosed



Confined



Impenetrable



War-time uses
of survival landscape

Gathering areas
in safe/protected
squares/courtyards
with easy way out

Temporary areas
water and food
distribution points,
main lines of
movements, short-term
gathering points

Kitchen garden
protected courtyard as
only source of supply

Long-term stay
areas with shelter and
hospital/first aid station

Current situation
of residual landscape

Residual square or
courtyards used as
parking spaces by the
residents

Residual commercial
street with vehicular
circulation, the sides used
for illegal parking

Courtyards with no-roof-
ruins and low vegetation

Abandoned ruins,
inaccessible due to
dense vegetation inside
and surrounding

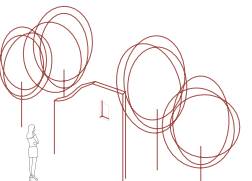
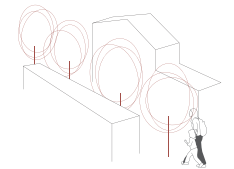
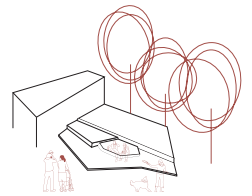
Future situation
Possible programmes

Renovated square as
meeting point/local
activities and events

Temporary activities:
exibithions, events

Community gardens

Ruins as memorial

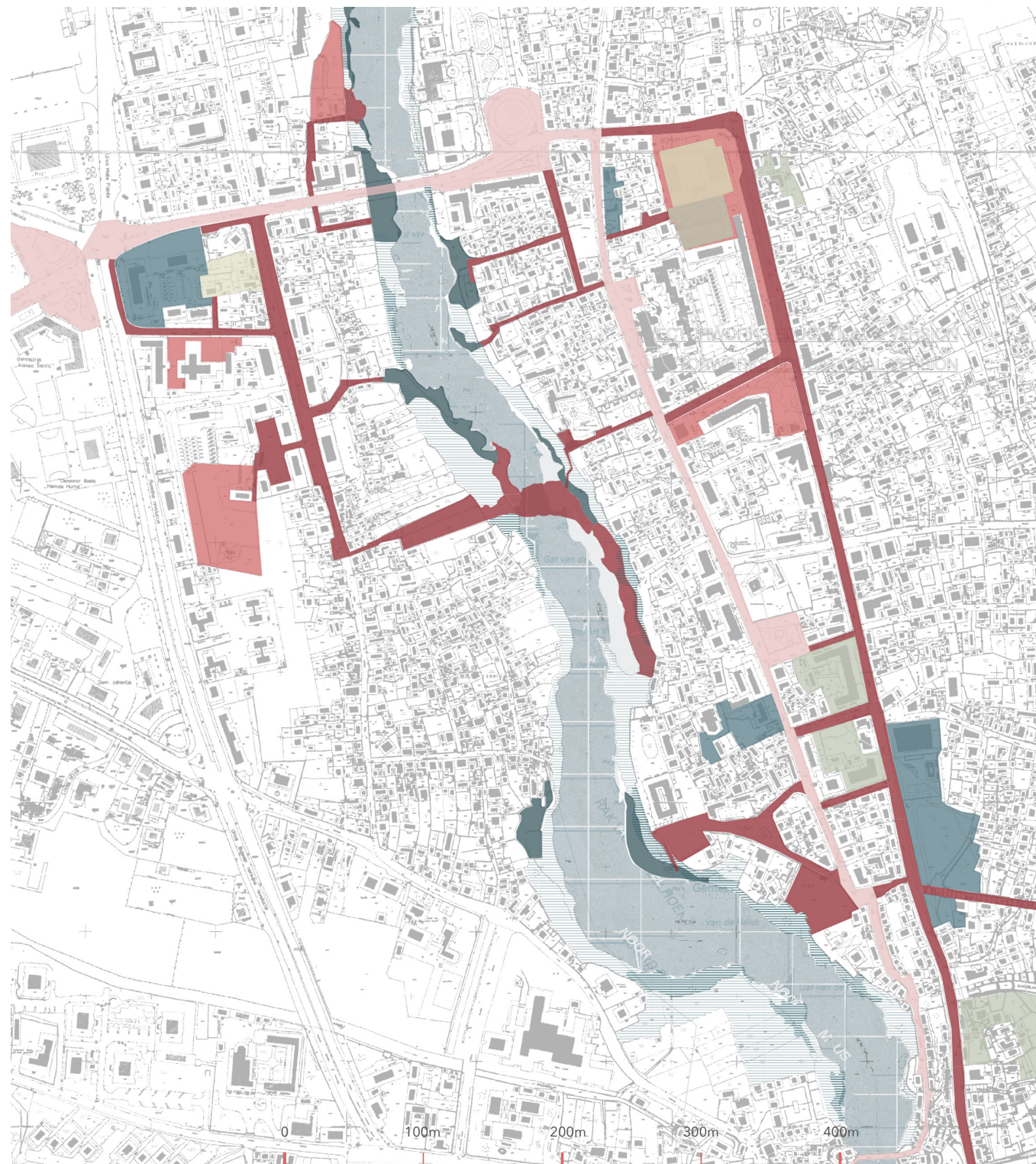


- Currently accessible spaces
- Dense vegetation
- Sparse vegetation
- Enclosed area
- Semi-enclosed area
- Confined area
- Impenetrable area
- Active network
- Proposed network

Survival landscape tool

In the previous chapter, I outlined the potential areas of intervention, analysing the materiality of the categories identified. The spatial conditions of the survival landscape – enclosed, semi-enclosed, confined and impenetrable – are used as tool to investigate the residual and abandoned areas in Mostar that belonged to the survival landscape during war-time.

The main aim of the design is to exploit these spatial conditions, making them visible through the design interventions. The areas will be connected by an active network, implemented when missing with a new one. The survival landscape tool is therefore the base for the design, that will be implemented with participation and speculation (as explained in the following pages), proving that the war-imposed spatial conditions of the survival landscape, implemented by citizens, still have a productive force.

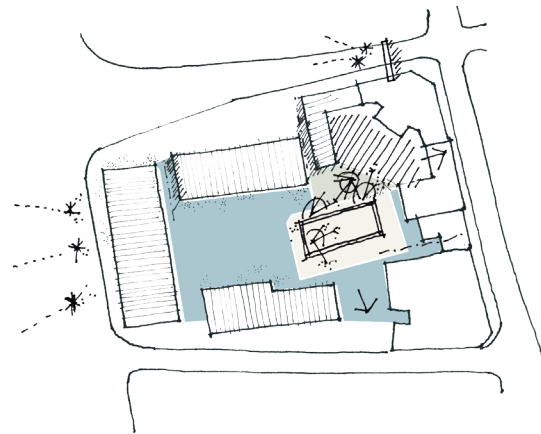
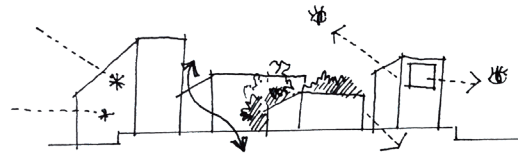
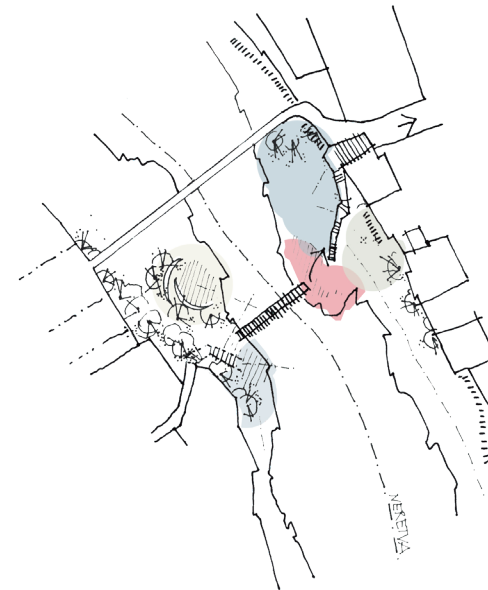
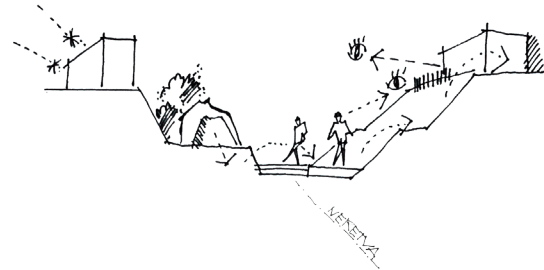
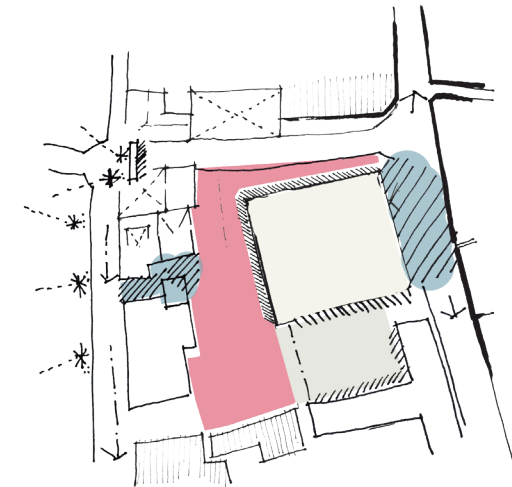
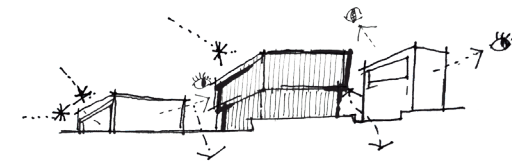


In order to better understand the survival landscape tool, I compare how the spatial conditions identified are declined in three areas during war-time and at the current situation. I chose to analyse the areas that present different conditions all together: a residential courtyard on west Mostar, next to the Bulevard; the riverbanks under the Bunur bridge; the area around the (former) Razvitak department store.

In the first example, the buildings offer protection from sniper fire and define an enclosed courtyard for citizens to temporary gather.

It may be counter intuitive to define an open space such the river as part of the survival landscape. However, the specific conditions of this area allow for the definition of protected spaces. For example, caves on the west bank were used by citizens to hide during sniper attacks, while the steepness of the banks defined a more enclosed environment.

The area behind the Razvitak was used as temporary point to collect water from a tank or to chop wood to warm up during winter.

Residential courtyard*Riverbanks, Bunur bridge**Razvitak department store*

War-time spatial conditions - own illustration

Residential courtyard

Riverbanks, Bunur bridge

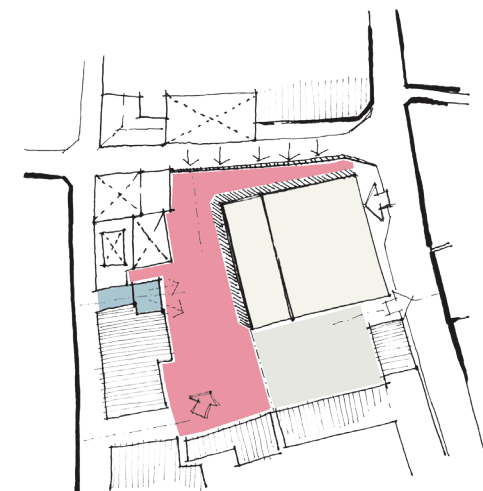
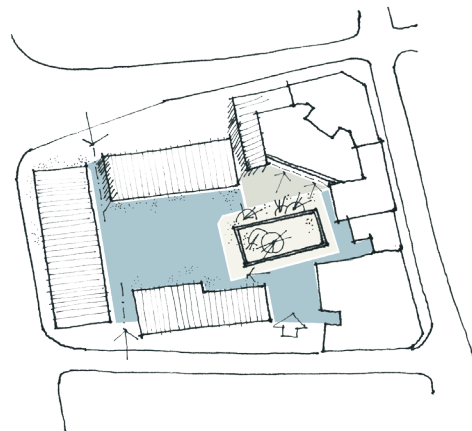
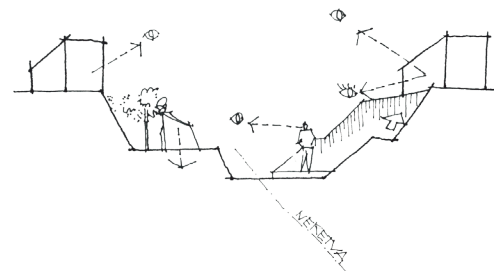
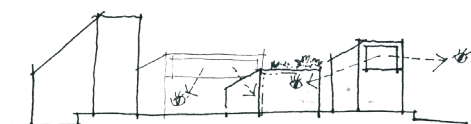
Former Razvitak department store

Currently, the three areas present the same spatial conditions as war-time, as the configuration of the buildings and the elements did not change.

However, these areas are now abandoned due to their conditions. For example, some of the buildings in the residential courtyard are now left as ruins, inaccessible and impenetrable due to dense vegetation.

The riverbanks are now difficult to reach due to overgrown vegetation and they are not maintain: when you go down you discover trash, sewage and other deposits, partially covered by vegetation. The Neretva, that was before site of social events, has been almost forgotten.

Finally, the Razvitak department store was heavily damaged during the war. Left as ruin, it is the scene of illegal activities such as drug distributions and illegal parking.



Current spatial conditions - own illustration

Speculation

Design approach

In order to understand how can such spatial conditions be exploited in order to switch citizens' attitude towards the residual hidden survival landscape, I explore different techniques. I chose to initially tackle the design with a provocative approach, heavily relying on speculation.

"Speculative design is a discursive practice, based on critical thinking and dialogue" (Mitrović, I. 2016). Speculative fictional design has been chosen because it stimulates debate and discussion, as a starting point for a scenario of reactivation. It creates space for new perspectives, with the purpose of understanding what is better for the future of Mostar.

As Geoff Manaugh stated, the establishment of intermediary spatial products can transform how human beings understand the spaces around them with the help

of various devices. In the case of Mostar, speculation is used to uncover previously inaccessible aspects of the built and natural environment – spaces of resilience and their spatial conditions – showing the variation in the landscape that can be captured and made visible through the design interventions. In this way, the landscape could be reinterpreted and newly understood, catalysing new, potential spatial relationships between citizens and their own environment.

In the next pages, I present some of the extreme, utopian, disruptive visions prepared in some of the areas identified in the previous map **Definition of areas of intervention**. These visions were presented to citizens during the workshop as part of the games to open up a discussion, creating different narratives on how design interventions could influence the space.

Interventions on the riverbanks and
demolition of the Bunur bridge





Intrusive concrete platforms on the riverbanks
under the Bunur bridge



Swimming pool on top
of the Razvitak,
public park in the courtyard

Design process

ENHANCING
THE SURVIVAL LANDSCAPE

ENHANCING
THE SURVIVAL LANDSCAPE

Design process



Reactivation of residual square in Marsala Tita:
circular structure to enhance enclosure

Participation

Design approach

Workshop Co-design

Mostar, 26.03.2019

In order to build up this discussion, I conducted a participatory analysis with the one-day workshop *co-design* in Mostar. Citizens had the opportunity to give a new image to those areas in Mostar that are now abandoned: what kind of activities are missing? Where do they imagine these activities?

The workshop had a duration of two hours. 32 people (students and workers) participate and play three set of games, all based on the survival landscape tool and speculative approach. The games allow for a moment of interaction between citizens and gave an insight into their needs. Inhabitants are those who experience the city the most and therefore, making a creative contribution in the research is the key for a successful design intervention.

“

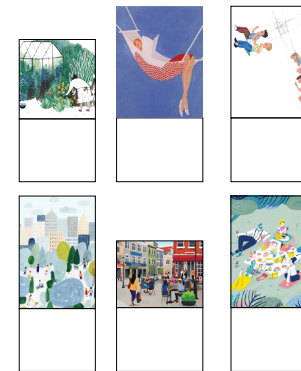
To bring citizens together we need new social and cultural activities: now nothing is happening in Mostar.

”

Role game

Game 1

Understand the needs of citizens. What activities would you want in Mostar? Where?



Description

You can find here a series of 30 cards, each one represents an activity (related with the city and the river: swimming, diving, open-air market, playground). If an activity important to you is missing, you can add it on the (10) white cards available. The aim of the game is to identify the activities that shouldn't miss in your ideal version of Mostar. The cards will be placed on a board representing the map of a part of Mostar.



32 participants



Range age: 21-26 University
30-40 Mixed



20 minutes



Video and photos
documentation



Notes from participants

Steps

Step 1: Form mixed groups of 3 to 5 people

Step 2: Each participant places, in turn, a maximum of 6 cards from the 30 available

Step 3: To move an activity that another participant previously placed on the board, you must discuss with your team why you want to move it in another spot

Step 4: For each card, rate from 1 to 5 how important the activity chosen is in your opinion

Step 5: Discuss with the other participants the final result

Role Game, photos from the workshop



Planning guidelines

Game 2

Discover how much citizens value 10 planning guidelines identified as possible directives for design interventions



32 participants



Range age: 21-26 University
30-40 Mixed



10 minutes



Video and photos
documentation

Description

This second game is aimed at discovering how much citizens value 10 "planning guidelines" that I identified as main directives of my intervention in the city. In other words, the objective is to grasp what are the most important dimensions to be taken into consideration while planning, and what on the other hand could be left aside.



“

What to do with Neretva?
We always talk about what
to do with Mostar, right? But
actually something can be
done with the Neretva.

”

10 guidelines:

1. Leaving the city unchanged
2. Preserving the memory of the war
3. Increasing green spaces
4. Focusing on sustainability
5. Enhancing Neretva as icon of Mostar
6. Bringing back Neretva as public space
7. Leaving Neretva unreachable
8. Providing public spaces to socialise
9. Increasing Mostar's attractiveness to tourists
10. Decreasing Mostar's attractiveness to tourists

Complete the photo!

Game 3

Understand to what kind of changes citizens are open for.






Description

You can find here a set of 5 photographs of abandoned areas in the city. You have to choose between two figures/elements that will complete the photo: one is related to an essential scenario (i.e. small interventions fitting with the current situation), the other one is related to an extreme scenario (i.e. completely revolutionising the status quo).

For each figure, participants have to associate a word from a list presented to indicate the reason behind the choice.

Words

- Cost
- Sociality
- Green
- Water
- Play
- Tourism
- Memory
- Ecology

-  32 participants
-  Range age: 21-26 University
30-40 Mixed
-  30 minutes
-  Video and photos documentation
-  Notes from participants

“ We really need more green spaces, one park is not enough for the city. And think about sustainability, sure! ”

Steps

- Step 1: Form mixed groups of 3 to 5 people
- Step 2: Choose one of the two figures available that complete the photo
- Step 3: Each participant places, in turn, the figure chosen on the photo
- Step 4: Associate one of the words from the list to the choice you took
- Step 5: Do the same (step 2/3/4) for each photos available
- Step 6: Combine the figures on the same photo to compose your own scenario

Complete the photo!, photos from the workshop



06

Findings, evaluation,
combination

The following chapter summarises the principles chosen, it combines the design approaches and open up the way for the final design proposal.

“

Mostar is gone! All we have left is the name. Now it's time to reactivate the space and make a new city.

”

Findings

The workshop shows that citizens are really willing in taking part in redefining and reactivating Mostar. The games were useful to have an insight into their needs. Deriving from these approaches, combining with the results of the analysis, I derived three main planning guidelines: 01. Increasing green space; 02. Providing public space to socialise; 03. Bringing back Neretva as public space.

From the disruptive scenarios presented, citizens were open to extreme interventions along the river banks. However, they consider the ruins as part of the history of the city, and they claimed the need to maintain them as they are now. Moreover, they expressed the need for more green public space in Mostar, that has to be combined with spaces for social activities to preserve the

culture of the city.

Another interesting finding is that most of the citizens recognised the areas proposed – part of the survival landscape – as common, public spaces for social activities before war-time. For example, the natural platforms under the Bunur bridge were used for big events, to attend diving shows or for leisure activities during summer time.

The attitude of citizens towards these residual, abandoned areas led me to understand the need to reactivate them as social public spaces. However, the participants did not define specific activities to happen in the selected sites: this has driven my design choices towards interventions that are open to a wide range of possibilities for daily practices.

01. Increasing green space

02. Providing public space to socialise

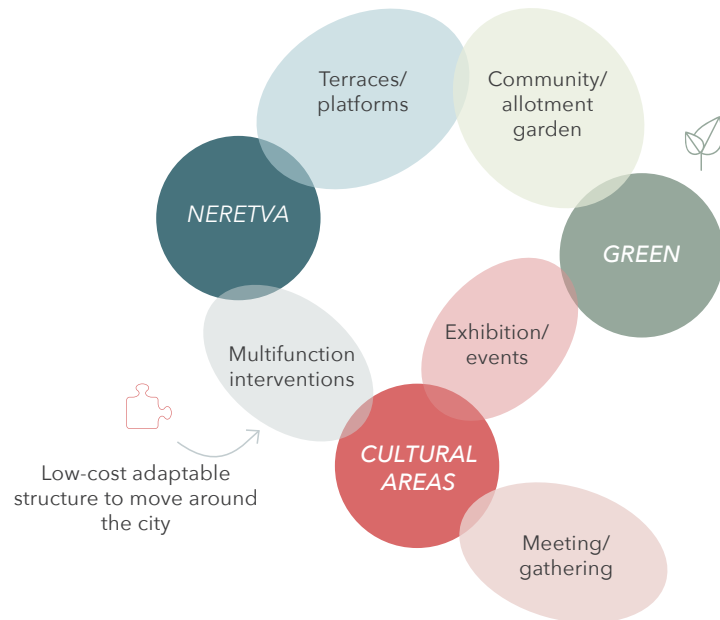


03. Bringing back Neretva as public space

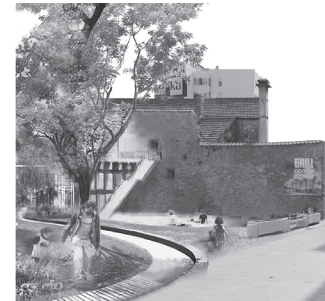
Evaluation

Analysing the results of the workshop and considering the needs of inhabitants it is possible to define three main components that have to be part of the design intervention: Neretva, green, culture. The aim is to define spaces for culture, information and awareness.

Therefore, I faced the need to define physical interventions that can be used for events, exhibitions, study sessions, work, and at the same time can be accessed by everyone to take a walk, a place to stop by and relax or just to be observed without accessing it.



Combination



Public park



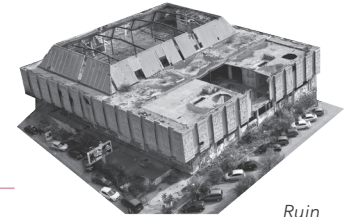
Garden



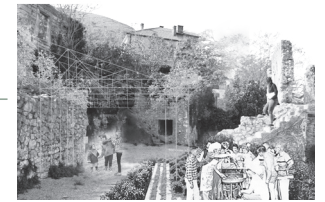
Multifunctional space



Local market



Ruin



Playground



Public space to socialise



Cultural place





*Platforms and corten structures,
Bunur area*

07

Design

The final proposal is presented in this chapter with various media, as a conclusion of the research and design processes.

Components

Phases

After evaluating the disruptive scenarios and the results from the workshop, I combined the approaches with the survival landscape tool. The design interventions aim at open up reinterpretation of the areas identified.

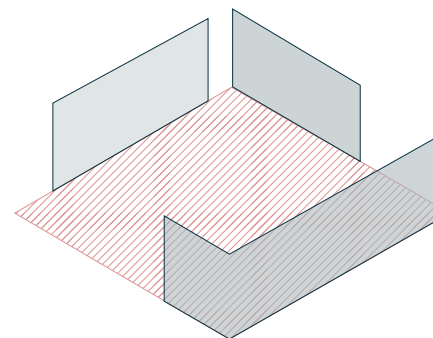
The project is developed in three phases. The main aim is to enhance the spatial conditions of survival landscapes: (semi) enclosed, confined and impenetrable.

In the first phase, spatial conditions are exploited and enhanced through physical topographical interventions, without defining functions. This is the basic scenario, using and modelling the existing terrain.

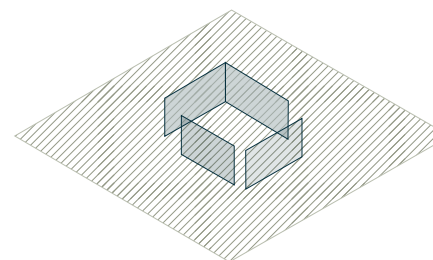
In the second phase, it is defined the network that connects all the areas of intervention. The network is marked with biodegradable painting. It is a temporary intervention to attract and make citizens aware of the new spaces designed. Over time, the painting will fade away and eventually disappeared.

The third phase represents the ideal scenario: the design interventions provide space for a variety of activities, all directed towards a regeneration of a cultural heritage and a definition of a sense of community. The final proposal, enriched with speculative and participatory analysis, proves that the spatial conditions exploited still have a productive force.

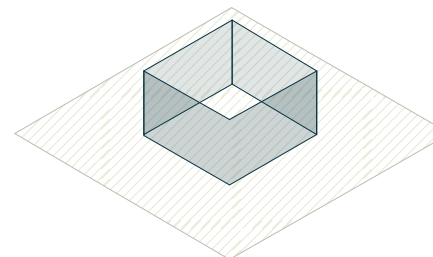
Spatial conditions
- current situation:



(Semi) enclosed

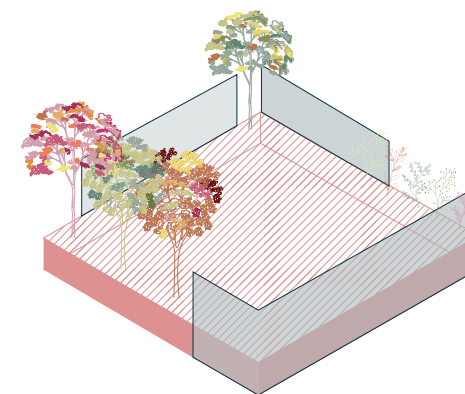


Confined

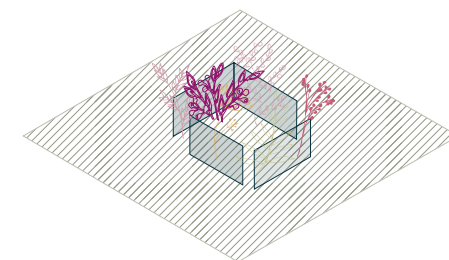


Impenetrable

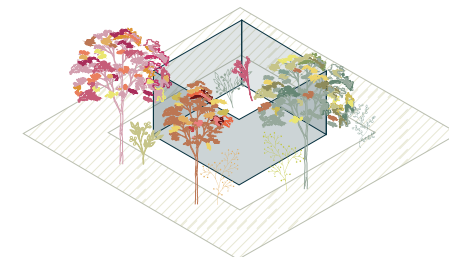
First phase:



Play with the topography of the site: raising or lowering the existing level

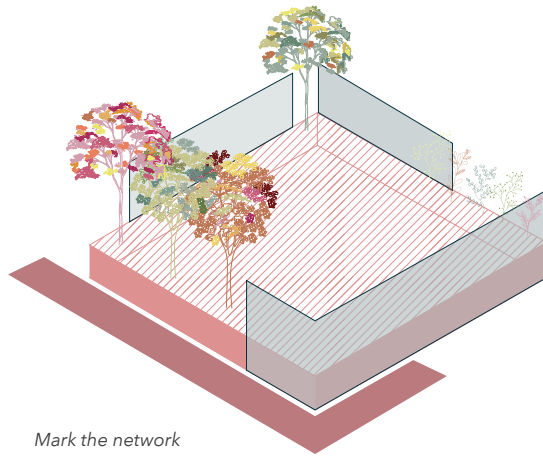


Low vegetation to emphasise the limited access



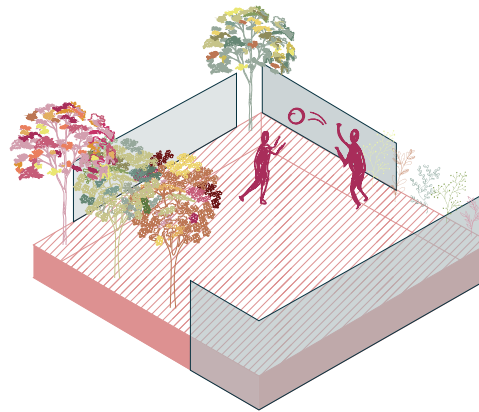
Enhance the ruin as sculpture - defining an inaccessible void surrounded

Second phase:

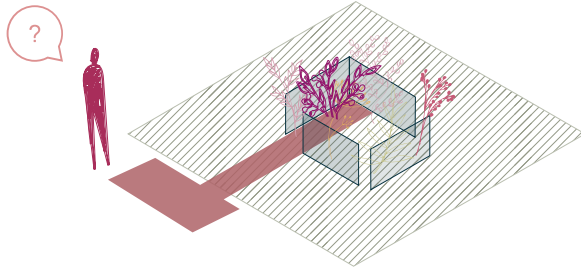


Mark the network

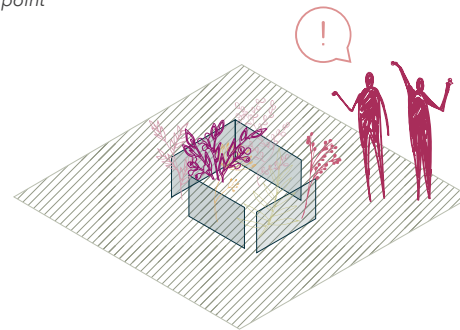
Third phase:



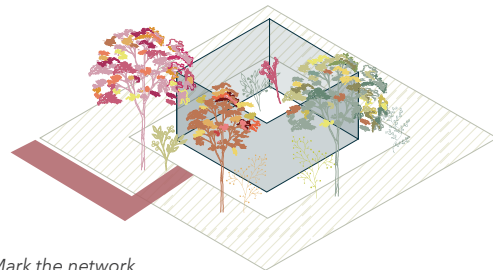
Cultural meeting point



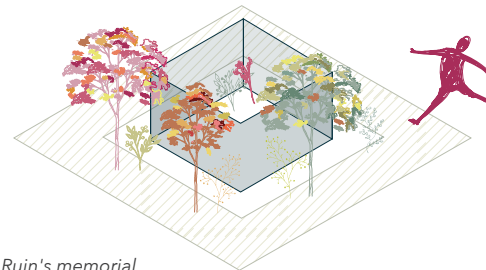
Mark the network



Community garden



Mark the network



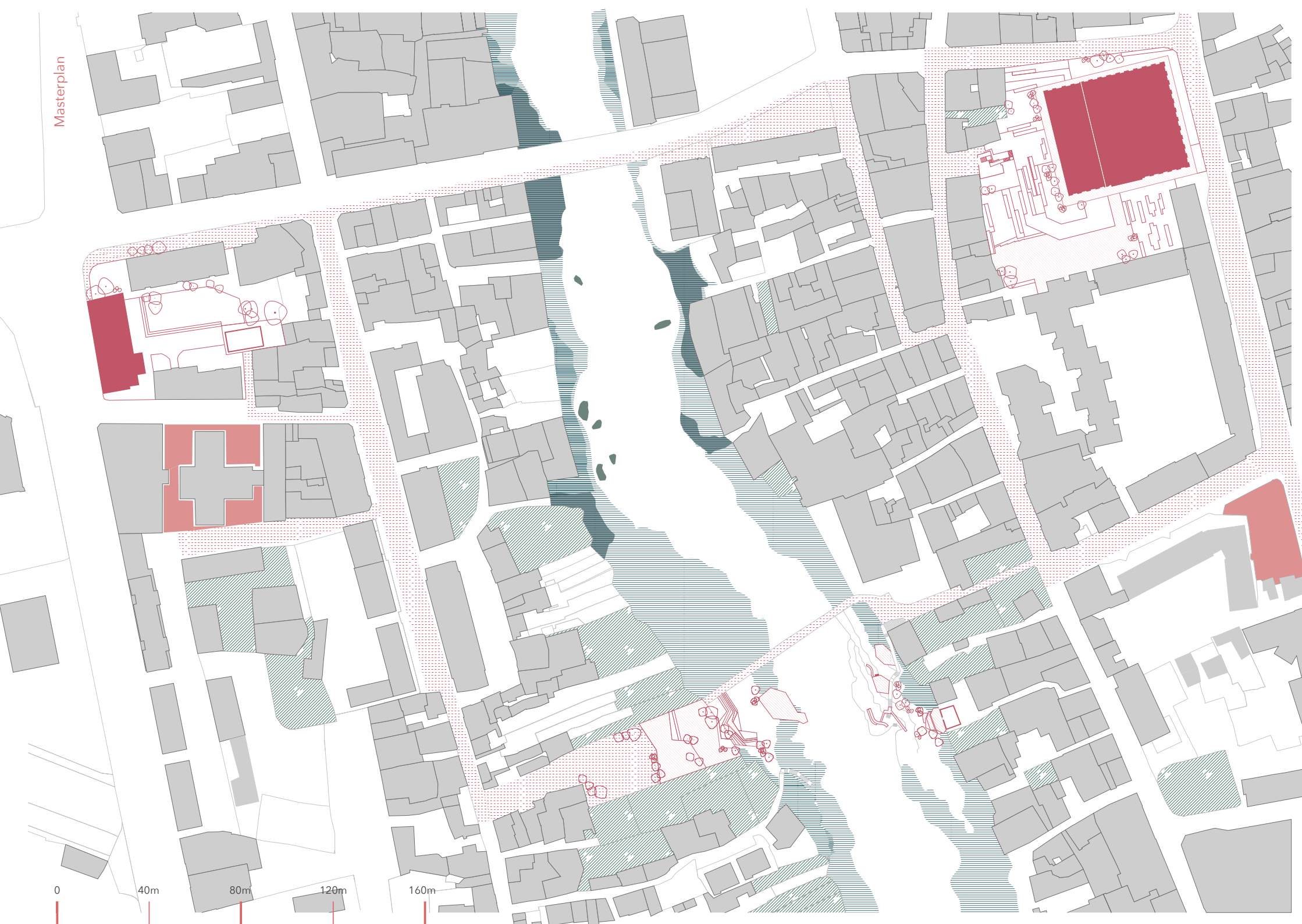
Ruin's memorial

Application

Three areas have been chosen as example to show how the general strategy just explained works. These areas were selected because they incorporate all the spatial conditions that the design wants to enhance, as already explained at pag. 88.

Although the whole analysis is on war-space conditions, the design interventions do not enhance war-spatiality. They aim instead at switching citizens' attitude towards these areas, now abandoned due to the trauma caused.

Topographical interventions are designed for no specific function, using the existing elements and the topography of the site. Consequently, I defined some possible activities that can happen on site.



Residential courtyard



On the previous page:

Masterplan

-  Current accessible spaces
-  Dense vegetation
-  Sparse vegetation
-  Semi-enclosed area
-  Marked network
-  Design proposal
-  Existing green areas



Masterplanning

As previously explained, a marked network connects the three areas of interventions and goes inside them, enhancing the existing elements of the sites that were used before as scene of public social events. The project is developed around these existing elements and makes them easily accessible.

Moreover, the network touches the existing green areas along the city, including them into the wider system of the interventions.

In the *following pages*, a comparison between existing situation and design scenario is presented for the three areas of the masterplan. As you can see from the photos, currently these spots are abandoned, used for illegal parking or not accessible due to dense vegetation. The interventions model the terrain, raising or lower it to define a series of steps, terraces and ramps treated in Brač stone, typical of the pedestrian area of the city.

Riverbanks, Bunur bridge



Former Razvitak department store



Design

Detail plan of the design intervention

Detailing

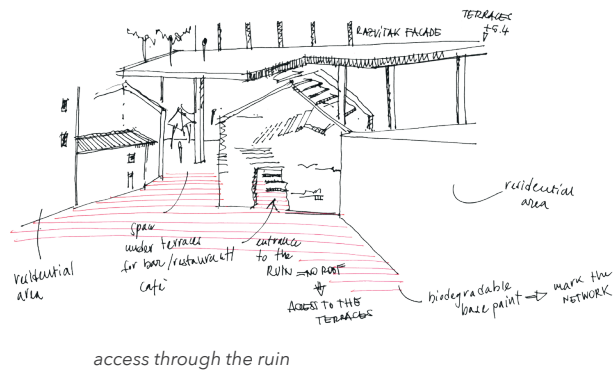
Two areas – the former Razvitak department store and the riverbanks under the Bunur bridge – have been further developed in a detail design and are presented in the following pages as example for the treatment of spatial conditions. Although there is a general strategy to deal with spatial conditions, each spot needs to be developed based on the existing elements and topography of the site.

Former Razvitak department store

As previously outlined, this area is characterised by the former Razvitak department store, that now lie in ruins. The area surrounded is used as parking space.

The intervention enhances the characteristic of enclosure of the site, embracing the Razvitak. A void surrounds the ruin, defining it as an inaccessible. The ruin has been celebrated by the design: a series of horizontal terraces at different levels provides continuous views on the Razvitak's facade, defining a journey around the narratives of the bas-reliefs, illustrating the *stecci* (human and animals stylized figures with symbolic ancient meanings).

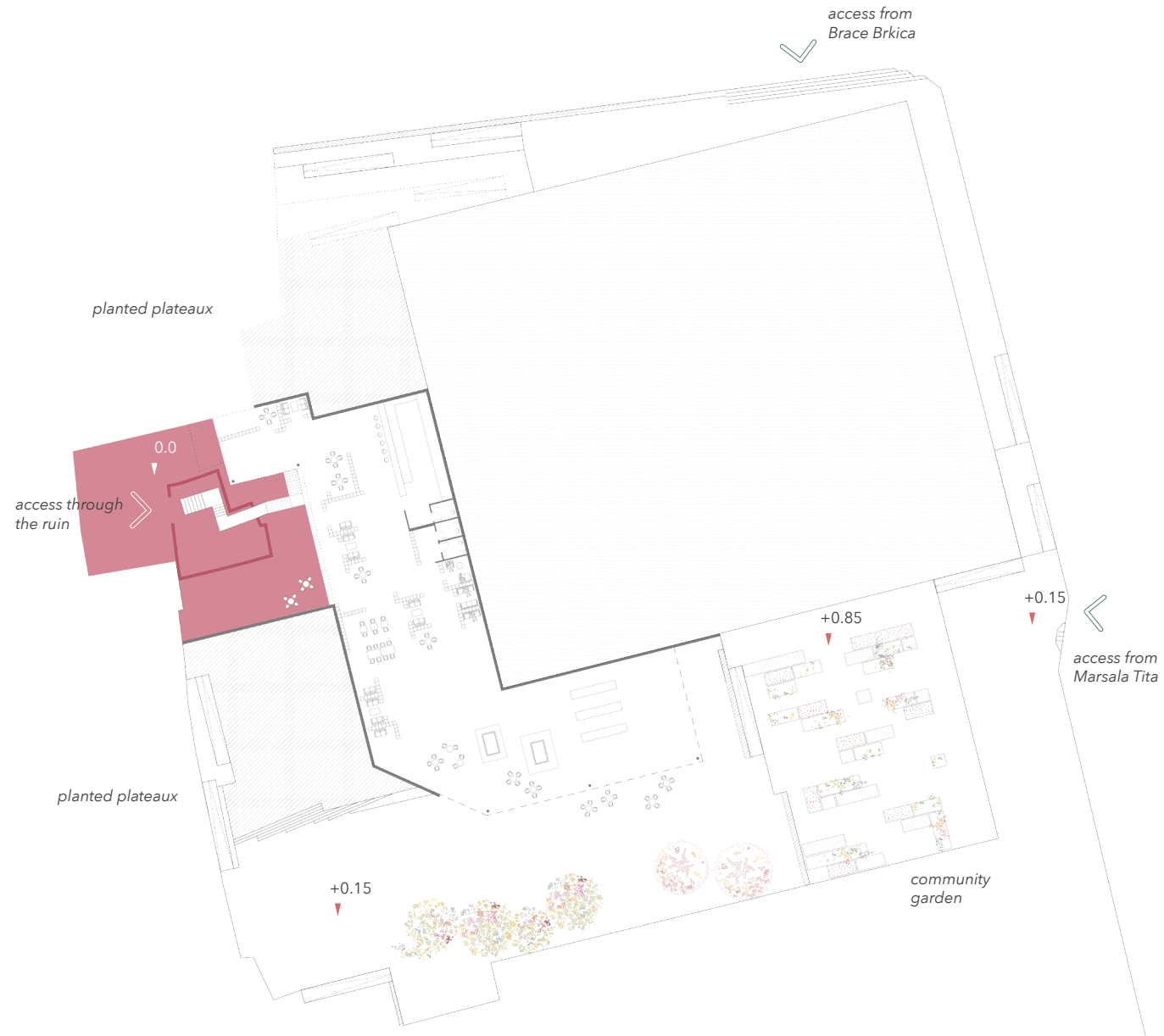




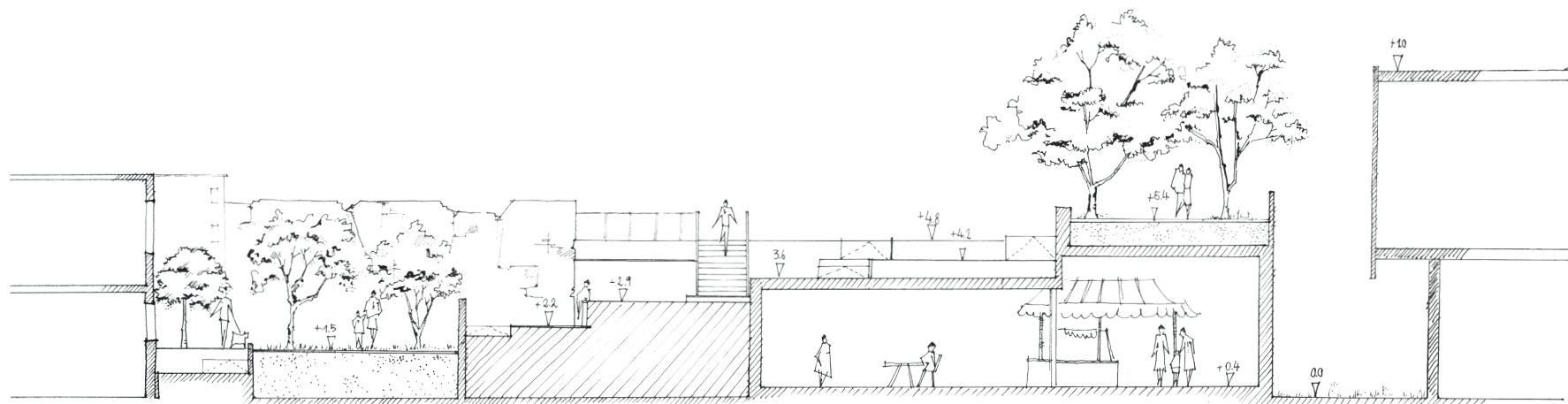
The terraces are formed as plateaux ranging from paved to extensively planted. The series of steps, terraces and ramps are treated in brač stone as the pedestrian street Brace Fejica, giving continuity to the area.

A second ruin presents in the site has the same importance as the Razvitak and it is treated in a similar way, defining an intermediate hollow space. However, it is also used as access space for the terraces, with steps along the walls.

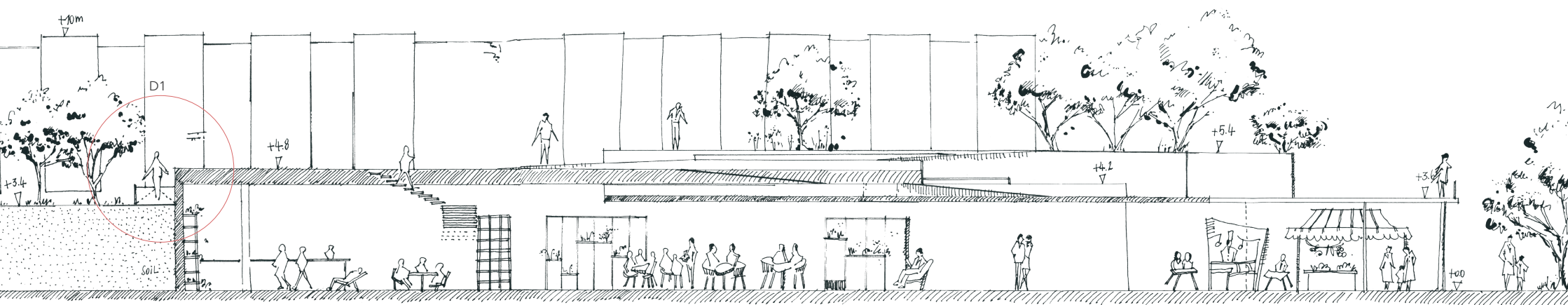
Moreover, under the platforms there is space for cafés, tables to study and work together, but it is also possible to set up a local market where citizens can sell the vegetables produced in the community garden.



Section A-A



Section B-B



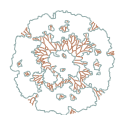
0

5m

10m

Planting scheme

The higher platform at the level +5.4m presents light trees, which crowns allow to see through and look at the facade of the Razvitak. The fences are a continuation of the topography, rising up in concrete and defining at the same borders and seats.



Sophora japonica



Cornus florida



Cercis siliquastrum



Ambrosia artemisiifolia



Capsella bursa-pastoris



Ilex crenata



Anchusa italica



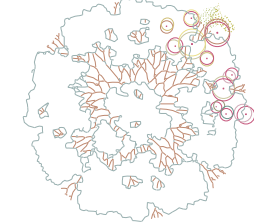
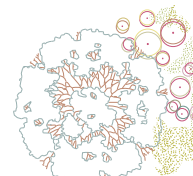
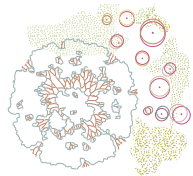
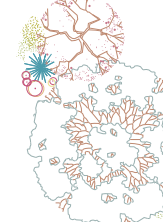
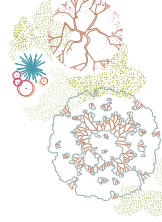
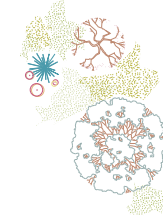
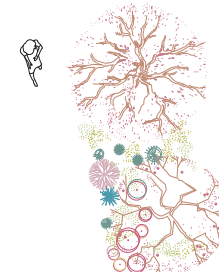
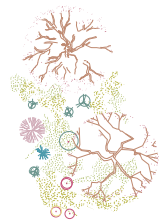
Grass

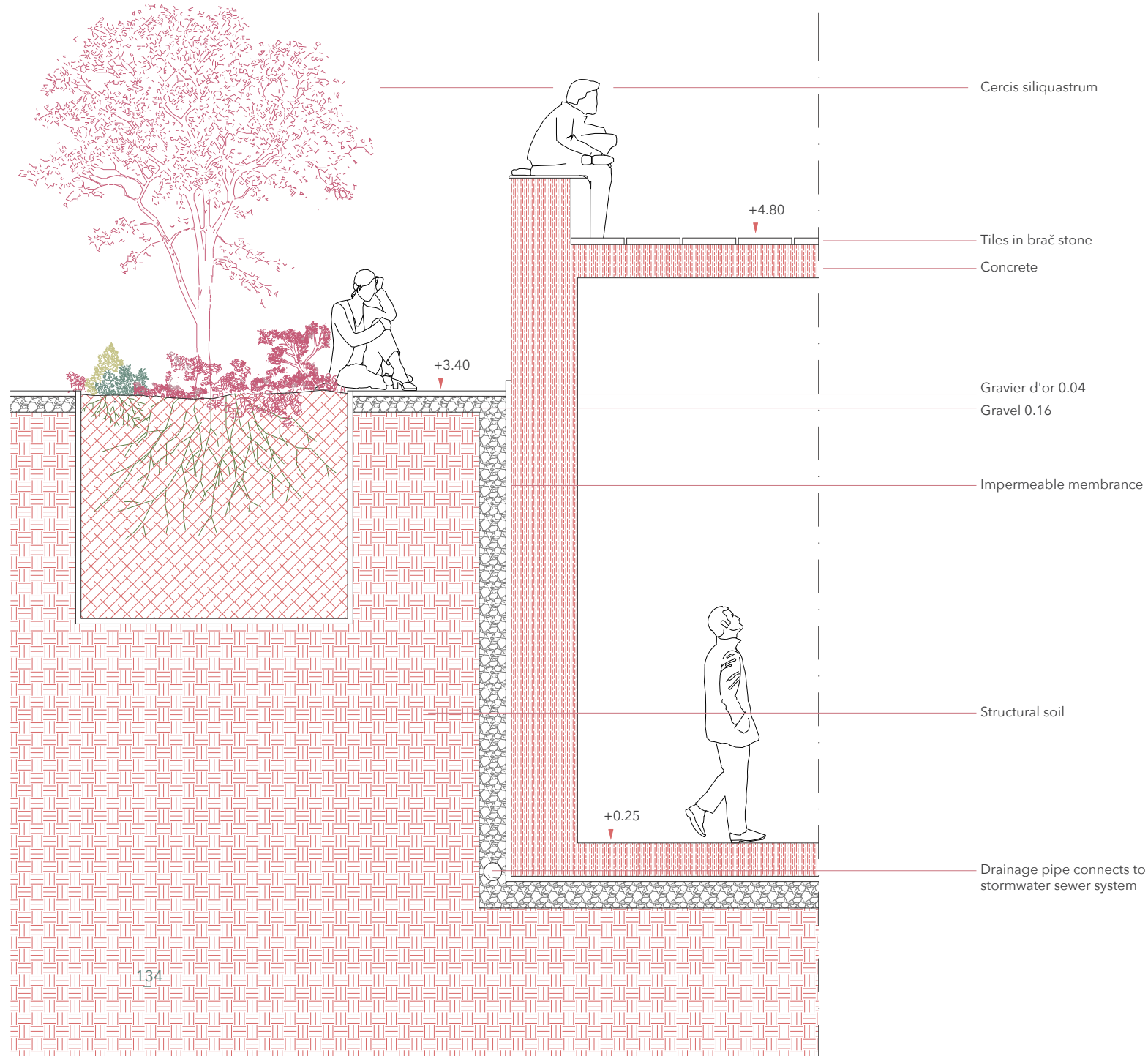


1 - 2 years

3 - 5 years

6 - 10 years





Detail D1

The planted plateaux presents a layer of compact gravier d'or that allows the water to go inside, yet defining a walkable path accessible for wheelchairs. As previously explained, the paved platforms are treated in tiles of brač stone.

Plan of the
community garden

A part from platforms that are meant to enhance those ruins, I also came up with other interventions. During my fieldtrips to Mostar, I noticed that the residents use the inner confined courtyard as informal kitchen garden. I have interviewed them, and they express the need to have a space that can serve as community garden.

Hence, one of the platforms at the level +0.85m is used for a community garden, alternating permeable surfaces with crushed bricks and bark to plants. The plants selected are typical of the area and define a colorful surface in the inner courtyard.



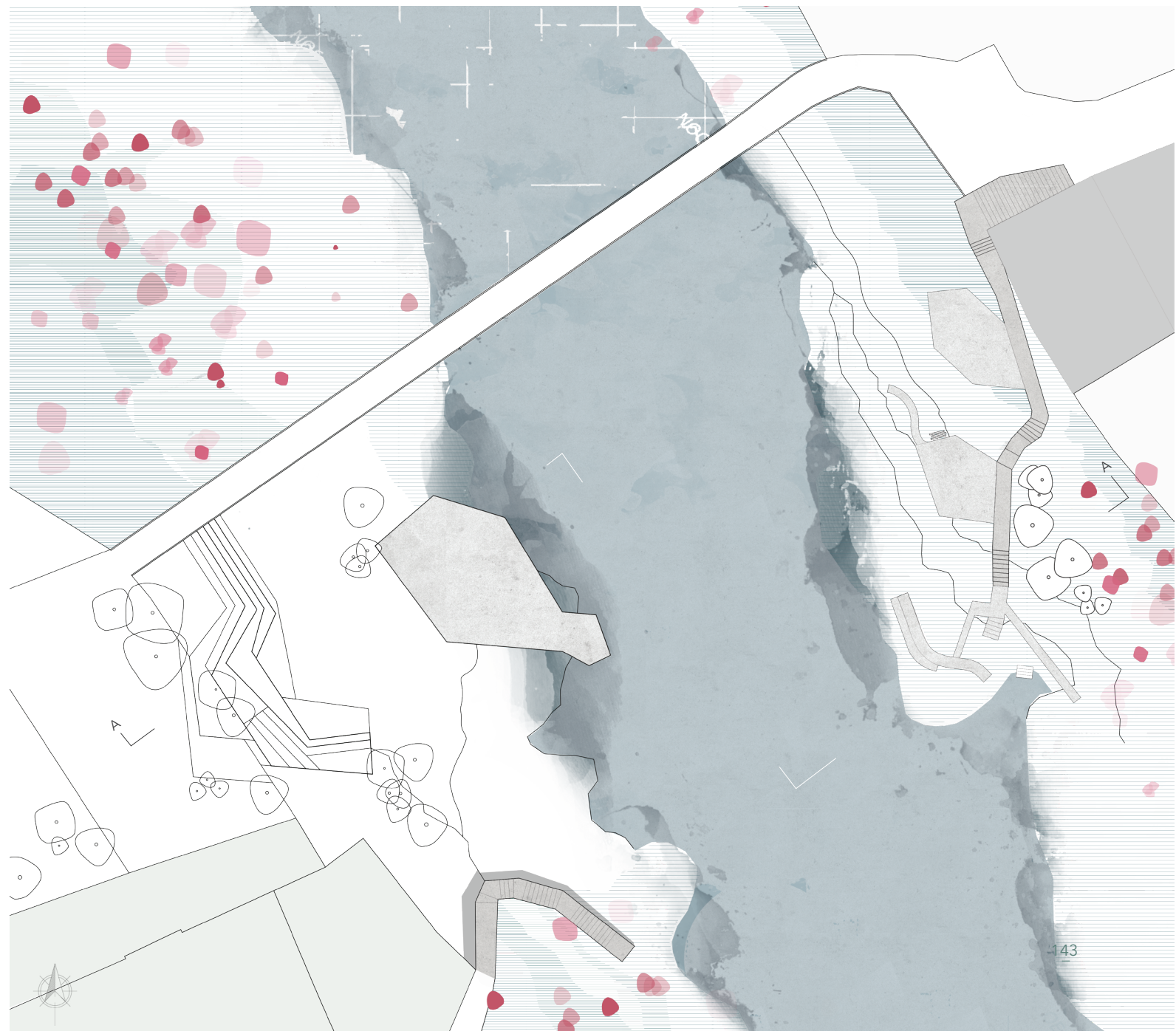




Riverbanks, Bunur bridge

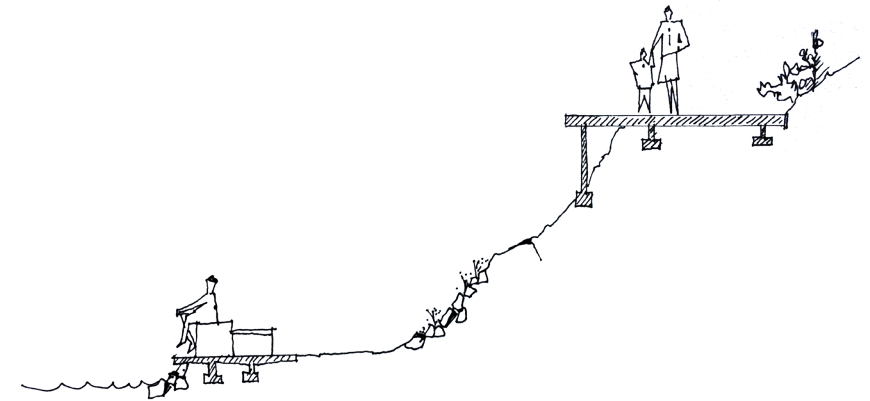
The second area of intervention lies along the riverbanks under the Bunur bridge. During the war, the specific conditions of the area defined a protected, safe environment, part of the survival landscape. Currently, it is difficult to access the riverbanks and the lower parts present trash and other deposits.

Here, the aim of the design intervention is to enhance the existing elements, for example the steps on the east bank and the platform in concrete on the west bank that was used to dive. A series of platforms in concrete makes the existing pathways more accessible, linking the different levels from the Bunur bridge to the lower natural platform.

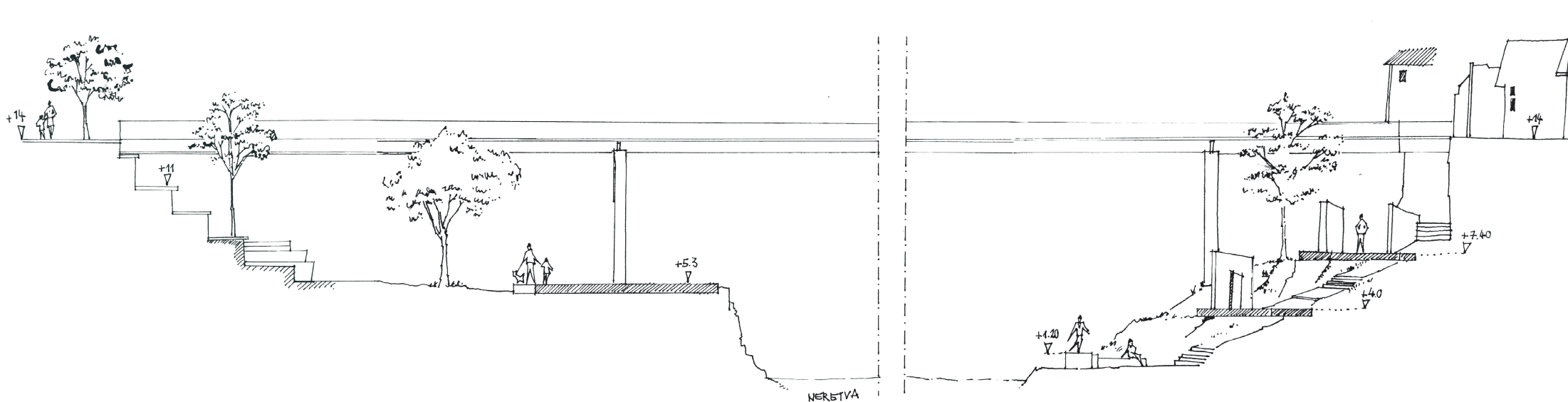


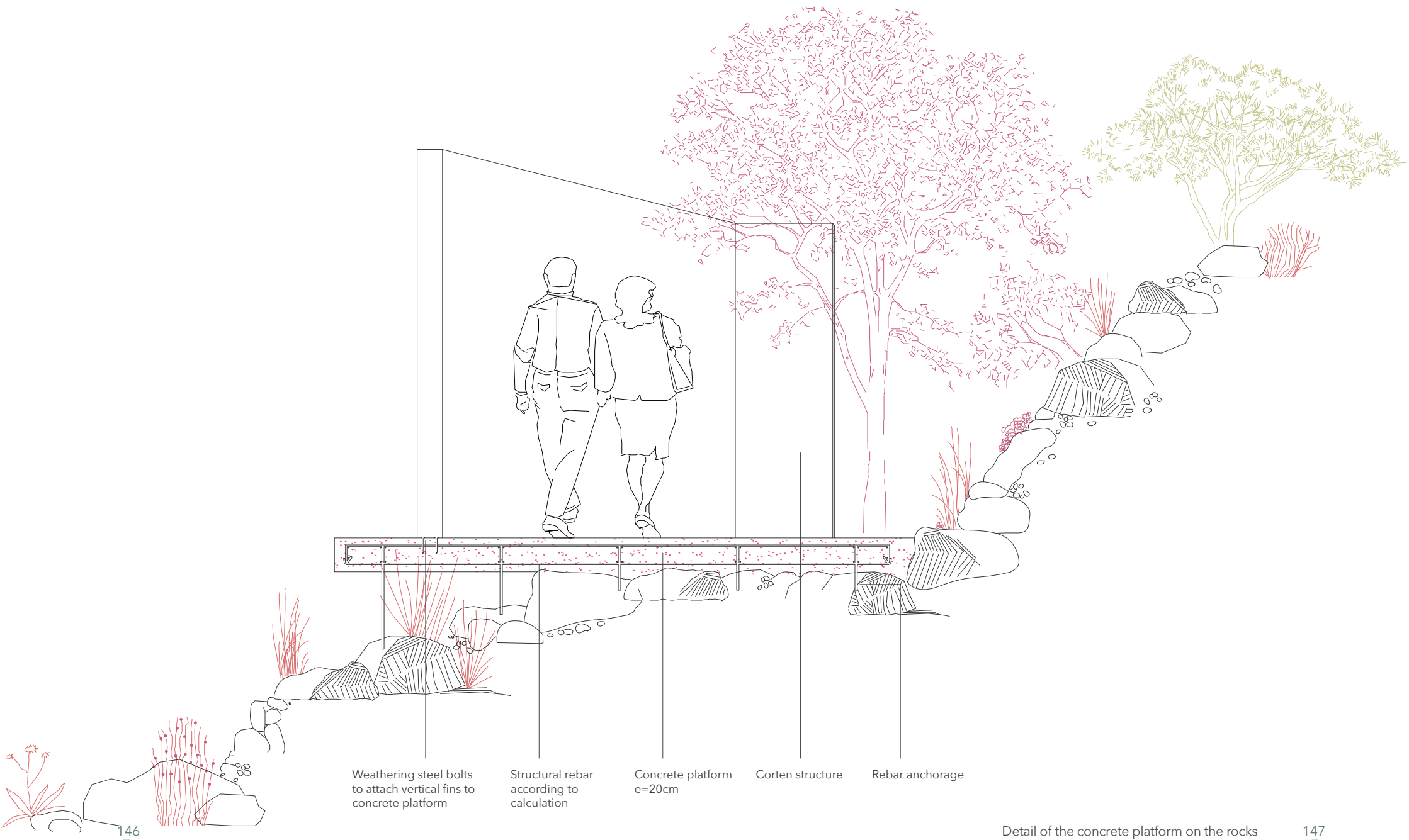
The platforms not only allow to easily reach the riverbanks: they also open up views on different level to enjoy the Neretva river.

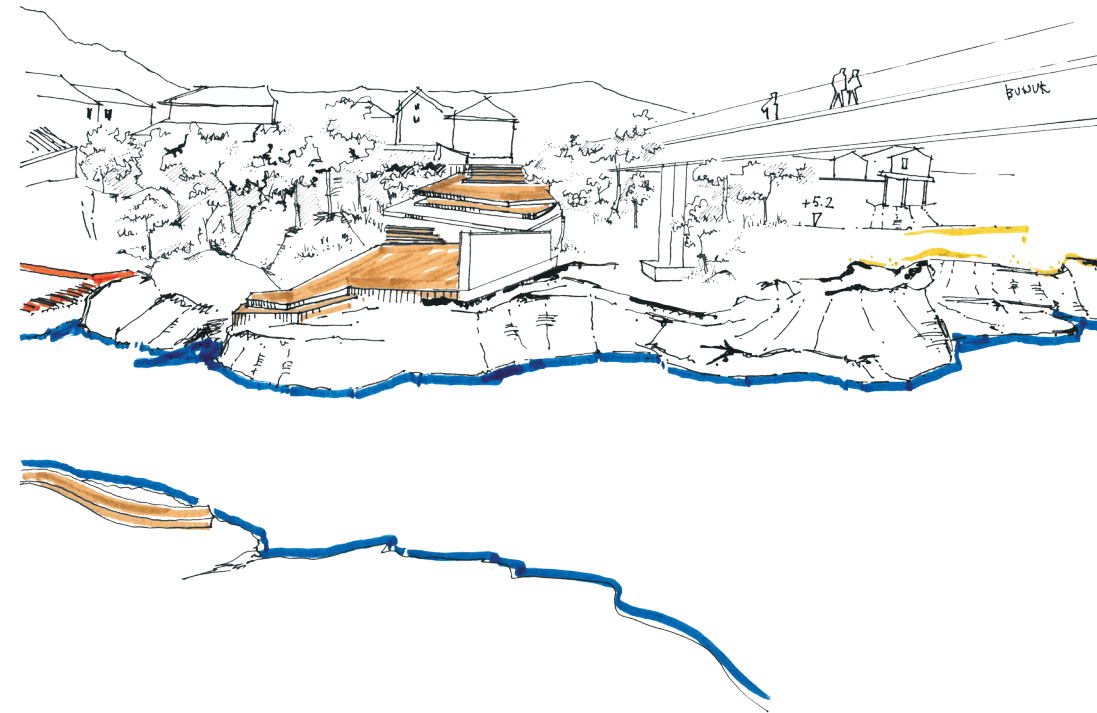
Vertical structures in corten frame the views on the river and enhance the condition of enclosure on this specific spot. These structures could be moved where needed on different locations.



Section A-A







West bank



East bank



08

Conclusions

The end. The following chapter brings you back to the objective of the research and connect it with the project.

The main objective of this research was to demonstrate that the war-imposed spatial conditions of the survival landscape still have a productive force. The analysis investigates the potential of these conditions to then translate it into the design interventions.

Defining a new level of memory and replacing the current attitude of citizens, making it possible to reuse the residual areas, was certainly a hard-to-achieve goal. Nonetheless, I'm positive such objective is reachable with this project. The different phases of intervention on the resilient survival landscape are indeed designed to enhance the characteristics of such places and bring back the social value to the city of Mostar. Furthermore, as difficult as it is to overcome the traumatic memories related to those places, reacting to the design interventions can stimulate a new attitude in citizens toward the survival areas themselves.

Certainly, the reactions of inhabitants toward the interventions will be different – depending on the age, cultural background, profession and other characteristics. Nonetheless, any kind of reaction can be beneficial to the purpose of the project. A negative response would at least result in some discussion about the interventions, while positive feedbacks could even lead citizens to actively participate in the maintenance of the places. Both daily activities and bigger events may indeed trigger an unprecedented enthusiasm among residents, as the workshop demonstrated.

Certainly, the active participation of people would be a desired outcome. By creating a landscape that is appealing, citizens will hopefully be willing to adapt to the current situation – something that was not possible during post-war reconstruction – and develop local activities. However, it is important to bear in mind that the ultimate goal of the

project was to enhance spatial conditions, not to define activities. Hence, as long as those spatial conditions are rediscovered as potentialities rather than liabilities, the project can be considered to be a success – even in case people will only pass by and observe the interventions without actually using them for specific activities.

The choices made during the whole process have been challenging. The speculative and participatory approaches guided the design since the beginning, opening the way to a lots of possibilities. What proved to be most difficult was certainly the combination of all these approaches into a cohesive framework. I'll leave it to the readers to judge whether this led to a success or a failure, but certainly the outcome was pretty unique. The process undertaken was indeed extremely personal, and I'm sure that if someone else undertakes the same approach, the result would can differ significantly.

What about scalability? Would

it be possible to replicate the design interventions in similar contexts?

Post-war situations are all extremely various, and each location presents its own unique features and necessities. *Enhancing the survival landscape* relies strongly on the specificity of the site, therefore the research undertaken and consequently the design interventions were tailored on the case of Mostar, after a deep analysis and personal considerations. Certainly some best practice and a general framework can be drawn from this work and be applied to other cases, but no new intervention in post-war zones can do without a custom-made strategy. For each post-war scenario, understanding the spatial dimension of the conflict is crucial. As Piquard and Swenarton point out, what is important in each different context is the investigation of 'strategies and modes of resilience in the forms of creative responses in terms of values or social behaviour' (Piquard, B., & Swenarton, M. 2011, p.7).

Reflections

Introduction

We are constantly being confronted with images of conflicts, from the civil wars in Libya and Syria to the war in Afghanistan. By accident as well as by design, human activity has become catalyst of change in the global landscape. Through the eyes of a landscape architect, architecture and the surrounding landscape are part of the background of these conflicts, determining the battle terrain and defence strategies.

It is a reality that seems far away from us, until we are not called to confront it closely. When I chose Mostar as the site for my research, I questioned the role of landscape architects in post-war cities and how we can intervene in a scarred territory. I was not totally aware of the complexity of the events that occurred during the Bosnian war. Due to my background in architecture, when I

first approached the site I was fascinated by the clear differences in the organisation of the city, the transformations of buildings and typologies that led me to start investigating Mostar from a historical point of view. In this complex city, the historical narrative is displaced in a spatial sense: from the Ottoman core to the Habsburg center to socialist and post-war extensions.

Only after a deep analysis, a long visit to the site and a confrontation with a reality so far from me I realised that the traumatic event of the Siege risked to obscure the settled narratives of the urban life that was developed through centuries. I then realised the urgency to investigate the Siege from a morphological point of view, putting it into a long-term historical framework: the Siege had and still has in Mostar a strong spatial connotation.

It was only at that point that I questioned the way a conflict has played out through the space, the reactions of citizens to reorganise and reshape the city in order to respond to the basic need of survival. All of this resulted in the creation of spaces of resilience, the starting point of this research.

Structuring and visualising these notions, and developing a coherent project that deals with the survival landscape defined by citizens between 1993-1994 are the aim of my graduation research.

The relation between research and design

From the last September, when I started my graduation year, I discovered a city with a rich social, historical and architectural background, far behind the Siege. Through literature analysis, two field trips and interviews with

citizens I explored and got to know the city. The main question since the beginning was *how to intervene in a complex context of a post-war city respecting its rich story*.

The city of Mostar has been shaped through centuries by external rulers, from the Ottoman Empire to the Austro-Hungarian occupation, that imposed their models in the existing urban tissue. During the war, these models were appropriated by citizens, modified and coherently merged into a new logic, aimed at surviving. The identity of Mostar is therefore also based on these adaptations – an integrative survival landscape that mirrors the culture of resilience of its citizens and needs to be addressed in a future design. Citizens recognised the great landscape's potential, even in the terrible conditions of the war, while nowadays it has been completely forgotten.

The reconstruction failed to assimilate the spatial solutions emerged during the Siege: the new landscape and its spatial conditions disappeared in a frenetic reconstruction, and with it all the effort put by citizens to react to the conditions of isolation imposed by the war.

This made me understand the need to call for a reflection upon the landscape. Through the analysis, I explore the potential of the places that war – directly or indirectly – generates, before defining personal point of view and interpretations, and only afterwards I define the tool to be used in the design, proving that the war-imposed spatial conditions of the survival landscape, implemented by citizens, still have a productive force. This method needs a constant comparison with theoretical understanding of concepts of *adaptation* and *resilience*, translated in the

relationships between human and space during the war. Moreover, I faced the need to dig deeper into theories of reconstruction (Barakat, S.; Calame, J.) to understand how to place the project in the right direction.

The specificity of the research influenced significantly the content of the design. In fact, the spatial conditions of the enclosed, protected spaces of defence during the war are declined in different ways in the design intervention. The solutions elaborated are constantly interrelated with the research and the analysis behind – in a direct relation with the methodology and outcome of this research. Rather than proposing a new design, my aim was, and still is, to build up a scenario of reactivation: exploring the potential of the hidden survival landscape, of the actors involved and of the current conditions and

then promoting encounter, dialogue, interaction among different actors, by learning from the war and responding with a design intervention to the current problems. The project proposed emphasises the character of the site, maintaining and reusing existing elements that characterised the space as survival landscape and adding topographical interventions to enhance spatial conditions.

The choice of the research method, scientific relevance and the possibility to abstract it

In order to completely understand the dynamics of adaptation applied by the inhabitants during the Siege, this study from the very beginning went hand in hand with a historical, political and anthropological analysis of the war. The study of resilient spaces has never been conducted on

the city of Mostar, therefore very little material was available. I therefore collected information from interviews with citizens that lived in Mostar and photographers and journalists that spent months there during the war. I extrapolated data from old photos and texts, documentaries and archives to then build up analytical maps based on my personal interpretation of the information collected.

At the beginning, it was not easy to approach the theme from a landscape architecture perspective, as it is really about urban conditions. That is why I moved my focus to the potentialities of the site, reading the changes in the natural and man-made landscape, following the traces that history left that are not anymore visible. In this way, I defined a tool of neutral spatial conditions related with military uses, I

categorised them and only in the end I was able to use such tool as base to identify different spaces of resilience, understanding how citizens take advantage of the landscape itself as resource for daily life activities, and apply it to design. Of course, there was a lot left to interpretation. Hence the need to combine the method based on a landscape approach, resulted in the creation of the analysis/design tool, with participatory design. With participatory design, I am looking for testimonies by who lives the city everyday, what it is really needed to enhance residual areas of a former survival landscape and socially reactivate Mostar. Citizens are those who experience the city the most and therefore, making a creative and active contribution in the research is the key for a successful design intervention. It is a different way of approaching a post-war site, used as starting point for

debate and discussion with the citizens, in order to reveal the qualities and functions of the survival landscape that citizens would otherwise never be able to perceive because covered by the reconstruction's layer, introducing new narratives to the historical ones. The example of *Parckfarm* (Brussels, Belgium) has been studied in order to understand how to relate with citizens and used as example to organise the workshop co-design in Mostar (26th March 2019).

The specificity of this research offers one way to approach the site, but several other meanings, conclusions, and necessities can emerge from the analysis of a different place. The value of this method is the definition of a tool derived from neutral spatial conditions and therefore applicable to other post-traumatic context, if there is the possibility to extrapolate informations from war-archives.

Moreover, the focus of the combined method is proposing a way to approach an unknown site, dragging site-specific conclusions that will frame the design process. As I said, it was a lot about interpretation, so it is up to the designer to define a method that can better fit with the delicate approach to a traumatic context.

The relation between the graduation topic, the studio topic, the master track

This project is part of the studio *Neretva recollection: materiality of war, flowing memories and living archive*, with the aim of exploring urban and landscape transformation of the Neretva river, its banks and the city of Mostar started in the wartime between 1992-1994 and translating these informations into a design intervention. My research has been framed by

the general topic of the studio, and takes a specific position in looking into the inhabitants' non-violent spatial reactions. It revolves around the spatial conditions that significantly transformed the city and its narrative. Moreover, this research and the consequent design interventions explore and understand the landscape in all its layers: spatial structures, historical structures, contextual structures and the relations between all resulting in one complex system that involves economic and social processes. The project looks at different scales, always interrelated, from the specific spots with its own qualities to the wider system of survival landscapes in the city. In this way, the theme is part of the broader studio flowscales, that explores landscape as infrastructure: landscape architecture interventions have influence on urban and territorial transformation processes. Here, the site is

viewed as a complex, spatial structure composed of visual landscape, the history, the context. The programmatic choices and the spatial design interventions are inspired by the physical and cultural landscape of Mostar, but rather than this by the memory behind the events of the Siege, considering the project as a long-term evolution of the city.

Societal and environmental relevance

In cities that have experienced war – as in the case of Mostar – the latter becomes object of memorial, visible in museum, cemeteries, even through organised tours along the ruins. As Piquard and Swenarton¹ stated, for those living their daily life under siege, the culture of war or occupation is a major source of vulnerability. But it also triggers coping strategies

and models of resilience in the forms of creative responses in terms of values and social behaviour (Piquard, B., & Swenarton, M. 2011, p.7). This is what this research wants to highlight.

Intervening in a post-war context that still presents scars of the war is not an easy task, but I considered it as an urban and landscape design challenge. I personally think that healing a post-traumatic urban context such as Mostar would be utopian. A necessity arises: to think of a project capable to deal with the resources offered by the site, with what was left first by the war and then by the reconstruction.

Conveying the forces of Mostar's inhabitants becomes necessary in order to reactivate the site and translate barriers into connectors between space and user. This challenge could be achieved only through a social program

based on participatory design, involving in the project itself the community, the residents, the city. As external contributor who did not endure the war, I faced the need to partially rely on citizens, their knowledge and their needs, to develop a coherent social and cultural programme. However, during the process I always tried to look for a balance between my knowledge and their contribution, combining my ideas with their opinions. I strongly believe that having inhabitants as active actors and participants, involved in the idealisation, realisation and maintenance of the project, is the key for a successful design intervention. Moreover, the design intervention is made to be used by citizens themselves. I assume they will be willing to maintain the new areas because a lot of them have actively taken part in the workshop in Mostar, showing that they are open for new interventions and they really

want something happening in their city.

Ethical issues and dilemmas

Due to the specific theme of the research I faced different kind of moral issue. When a city goes through a traumatic event – the war, in the case of Mostar – the difficulty for a designer is how to deal with memory, with people that lived something you can't fully understand.

In this complex context, I had to take a firm position – the biggest ambition of the research is the changing in the image that society has of Mostar. By evoking the war spatiality through a dynamic project, citizens will confront the war. Adding social public spaces, the survival landscape is enriched of a new social meaning, helping to define new memories of a community and a whole identity for the city. In my opinion this is the

way to look back at a tragic event and remember what was achieved, using resilience and abstracting spatial conditions of war-time and use them to develop a new project that enrich the city. Hopefully, war will become one of the many historical layers of events that shaped the urban environment, one of the many narratives that shape the city.

Another issue faced in the development of the research was the difficult political situation of Mostar. As some citizens² explained during the workshop, the government is not involved in undergoing projects: the financial support comes from NGO, that most of the time are foreign. The presence of numerous ruins witnesses that it doesn't invest in the city because it can't make a profit out of it.

Finally, one of the main problems encountered was the lack of communication

with elderly citizens, who were not willing to participate in the workshop and to release interviews. According to younger citizens that I met, the old generation do not recognised anymore Mostar as their own city: "What is left of Mostar for them is just the name"².

What did I learn from this year?

The main achievement till now is the understanding of different ways to deal with problems. As a student from Architecture first and Landscape Architecture later, I was used to respond to problems in a 'technical way': taking a pencil and try to sketch a possible solution, looking into previous examples from literature and other researches. The possibility to explore a new method of dealing with a difficult context, going to Mostar and

absorb all the informations I could from who lived the war, listening to what people need now in their city, was essential for a relevant development of the theme of resilience. It gives me the opportunity to understand that a designer can communicate with users with other means than plans, sections and technical drawings. Design is also about feelings, emotions, sensations: with the project, I hope to raise them. If I had more time, I would have liked to test my findings on another location, to strengthen the global relevance of the research.

Notes

1. Piquard, B., & Swenarton, M. (2011). Learning from architecture and conflict. *The Journal of Architecture*, 16(1), 1-13

2. Interviewed by author to citizens, Mostar, 26. 03. 2019

Adaptation:	Citizens recognise the great landscape's potential and exploit its conditions to develop spatial devices to adapt the city to war-conditions
Layers:	Different traces of elements on the urban tissue from past, present, future conditions
Narratives:	Development of new layers of memory to add to the previous one through story-telling
Participation:	Design approach where citizens (users) are involved in the design-making
Process:	Development through time of a certain condition or situation that still has traces of previous states
Resilience:	The positive attitude of inhabitants to react to the conditions of isolation imposed and develop adaptable strategies to conduct daily-life activities
Speculation:	Design approach to address challenges and opportunities via disruptive scenarios to define the most desirable future
Transition:	Specific phase of a process where the conditions are not defined

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Thank you for reading!

Isabella