Across two worlds

Participatory Designing for Urban Adaptation Justice
in the public spaces of Černý Most, Prague

Acknowledgment

This thesis wouldn't exist without the contribution of many people and organisations. First, I want to thank my mentors, Gerdy Verschuure-Stuip and Geertje Slingerland, for guiding me, pushing me and helping me with this thesis for the past year. I really appreciate your feedback and all the time and effort you gave me. I also want to express my thanks to the Department of Urbanism, namely Roberto Rocco and Caroline Newton, for teaching me about participation, social inequalities and spatial justice. I want to say a big thank you to TU Delft and all its facilities and employees, providing me with coffee, clean desks and technical support.

My infinite gratitude goes to the organisations at Černý Most, Jahoda and Neposeda, for all the time, energy and help they gave me during my participation events. Unfortunately, I cannot list all the respondents and participants in participation, but they definitely deserve a thank you for all the impact they had on me. I will never forget that. Thank you to all the people and organisations I interviewed, Viktória Mravčáková a Kristina Roman of Spolka, Andrea Midlochová of IPR, and Renata Srbová of Praha 14.

Finally, I am forever grateful for the support of my family, who provided me with the privilege of studying at this university debt-free. Thank you to my partner Klára for support, love and patience along the way. Thank you to my friends for feedback,

presentation tryouts and all the fun in the studio, specifically, but not limited to, Marijn Vreriks, Wessel Koolhaas, Filippo Barbarisi and Sabína Martináková.

After six years of studying landscape architecture and finishing my master thesis I am satisfied with the result of this project and I feel proud and relieved. Participatory designing was one of the most important and fun things I have ever done and I hope this is not the last time I will encounter it. What is landscape architecture without people? Who is landscape architect without empathy? Only through trying to stay in the messiness can we design places that allow everyone to be themselves.

Abstract

Climate change impacts disproportionately the most vulnerable citizens in urban areas. Meaningful participation can be one of the tools to combat urban adaptation injustice, as understanding vulnerabilities and co-creation with vulnerable groups of citizens can help create adapatations that are fair to everyone.

In Prague, Czech Republic, post-war neighbourhoods house the majority of the residents, but the public space in these areas is often overlooked, undermaintained and exlusive.

This thesis analyses the realm of urban adaptation justice, participation with socially vulnerable groups of citizens and public spaces of Černý Most in Prague. In collaboration with two local NGOs, three participatory events in the field were designed and executed: A streetwalk with homeless people, A neighbourhood walks with residents, and A co-design workshop with socially vulnerable teenagers.

These events helped uncover a social conflict in the neighbourhood, resulting in alterations of the public space to intentionally exclude certain groups of citizes. This exclusion results in hurting everyone and reinforcing and redistributing sources of vulnerability.

The design consists of general neighbourhood design principles that are usable throughout the whole district. The final part is a design of a new public park, addressing the conflict, designed using the outcomes of the participation events and proposing a new future for the neighbourhood.

Table of contents

Fig. 2   Drawing, source: Author

01 **Introduction**

„*Because you give total annihilation more than a line and it will swallow your story whole. No single moment can exist outside of it.*"

Jacob Geller in Art in the Pre-Apocalypse

1.1   **Study motivation**

I was fascinated with landscape architecture since I realised I could work with trees instead of walls as a designer. The idea of public space formed with live materials seemed very interesting to me, as I never realised that designing natural world is possible. Buildings seemed to rigid, predictable and bound with rules, while landscapes offered freedom, messiness and positive chaos. Houses in my mind are always connected to their price tags and nowadays buildings are becoming a symbol of inequality and power. In my country, landscapes are mostly accessible, free to visit and public and to venture outside and sleep under the trees is a big part of Czech culture and shared heritage. Social aspects are interconnected with landscape architecture to me since the first moment. Streets filled with trees that provide shade for everyone. This kind of fascination has influenced my career and helped me get a job in an NGO called People in Need, that often works with vulnerable and marginalised communities.

This graduation project is a continuation of exploring social aspects of landscape architecture. I was interested in people who I pass but never talk to and in their life experience, especially the one I do not have. My design knowledge comes out of my vision of the world and very often, this vision is privileged and one-sided. I was interested if I can use my education to change the way I think about

space and let people with little-to-no education teach me. For that, I did not choose the attractive historical center of Prague, but an outskirt, prefabricated concrete housing estate, looked at as "communist buildings" by many. This type of housing is where most citizens live and public spaces here are often vast and overlooked. And to my surprise, one of the housing estate was Černý Most, a neighbourhood I grew close to and know well.

Coming back to this place now couple years later with a different set of eyes and a mission is a little bit strange. I always considered the area an "ugly one," but it was the "ugliness" that I often missed in different places. Maybe it is not inherently ugly, but alive, messy and unpredictable in the same ways as all the other landscapes are.

1.2   **Problem field/statement**

Cities across the world have faced impacts of the changing climate in recent decades. These impacts include an increase in average annual air temperature and the likelihood of occurrence, intensity, and duration of extreme high temperature episodes. An increasing number of tropical days and nights is further negatively amplified by the urban heat island effect. The hydrological cycle and the distribution of precipitation are undergoing expected but already ongoing changes: the risk of torrential rainfall and subsequent localized flooding is increasing, as is the variability of flows (droughts vs. floods). Winter rainfall is expected to increase and summer rainfall is expected to decrease, with a significant increase in the number of rain-free days and the risk of drought. The frequency of extreme weather events (storms, tornadoes) is predicted to increase. Home to over half of the world's population, cities are the front lines of adapting to climate change, while they also are the key actors in mitigating a large part of world's emissions (IPCC, 2022; Global Change Research Institute – CzechGlobe et al., 2017).

However, climate change impacts disproportionately burden those part of the population who are already vulnerable, increasing existing risks and leading to further global inequalities. The IPCC Third Assessment Report describes vulnerability as: "The degree to which a system is susceptible to,

or unable to cope with, adverse effects of climate change, including climate variability and extremes" (IPCC, 2001). Integrated perspective on vulnerability in climate literature seeks to integrate both biophysical and social vulnerability (Bruno Soares, S. Gagnon, and M. Doherty 2012). Nonetheless, evidence shows that, contrary to common expectations, adaptation may not reduce vulnerability, as some adaptation measures reinforce, redistribute, or introduce new sources of vulnerability. This is often due to top-down approaches to setting goals and priorities by relatively privileged groups (Eriksen et al. 2021). This underlines the importance of citizen participation to ensure just designing of climate adaptable public spaces.
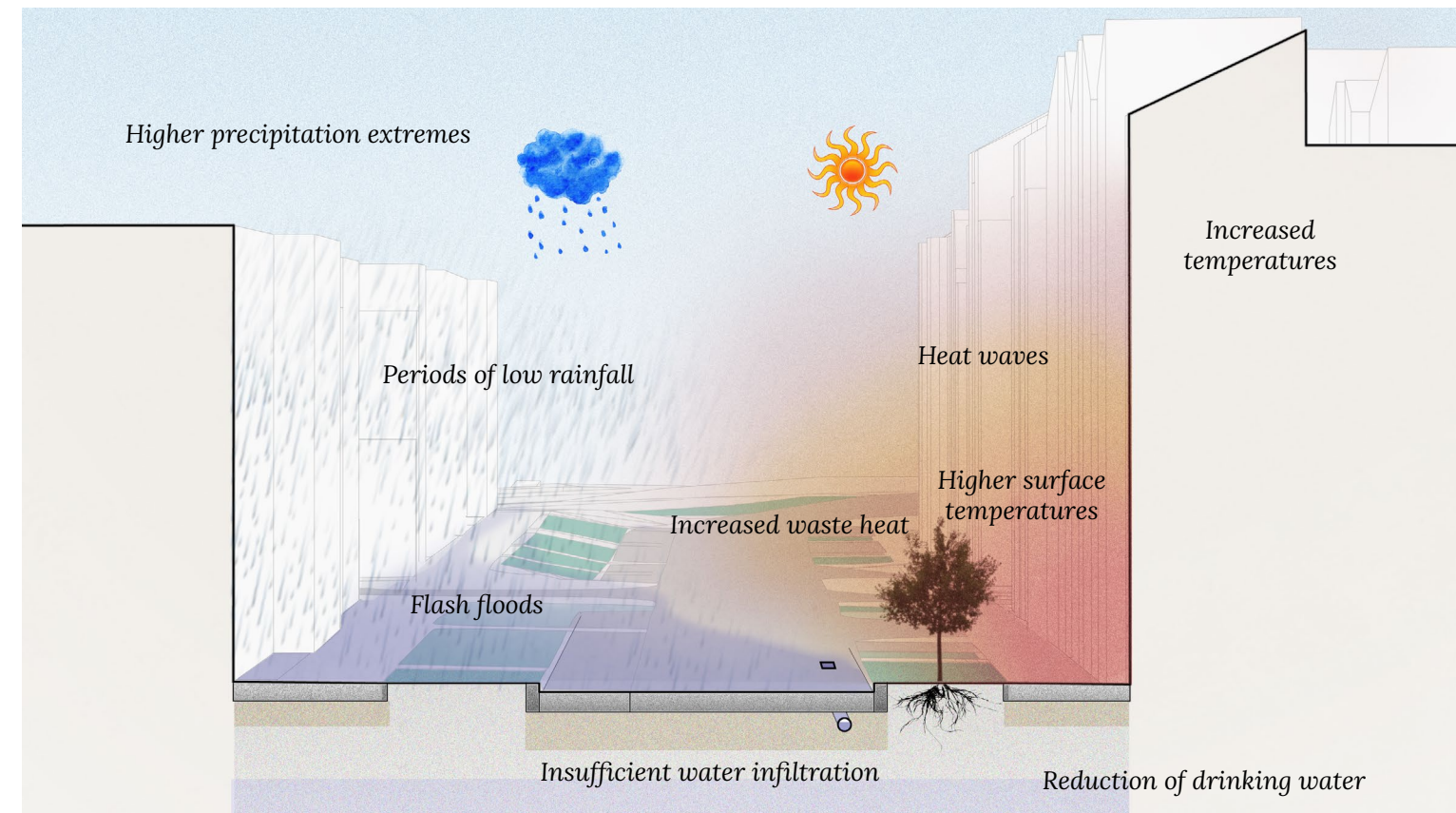

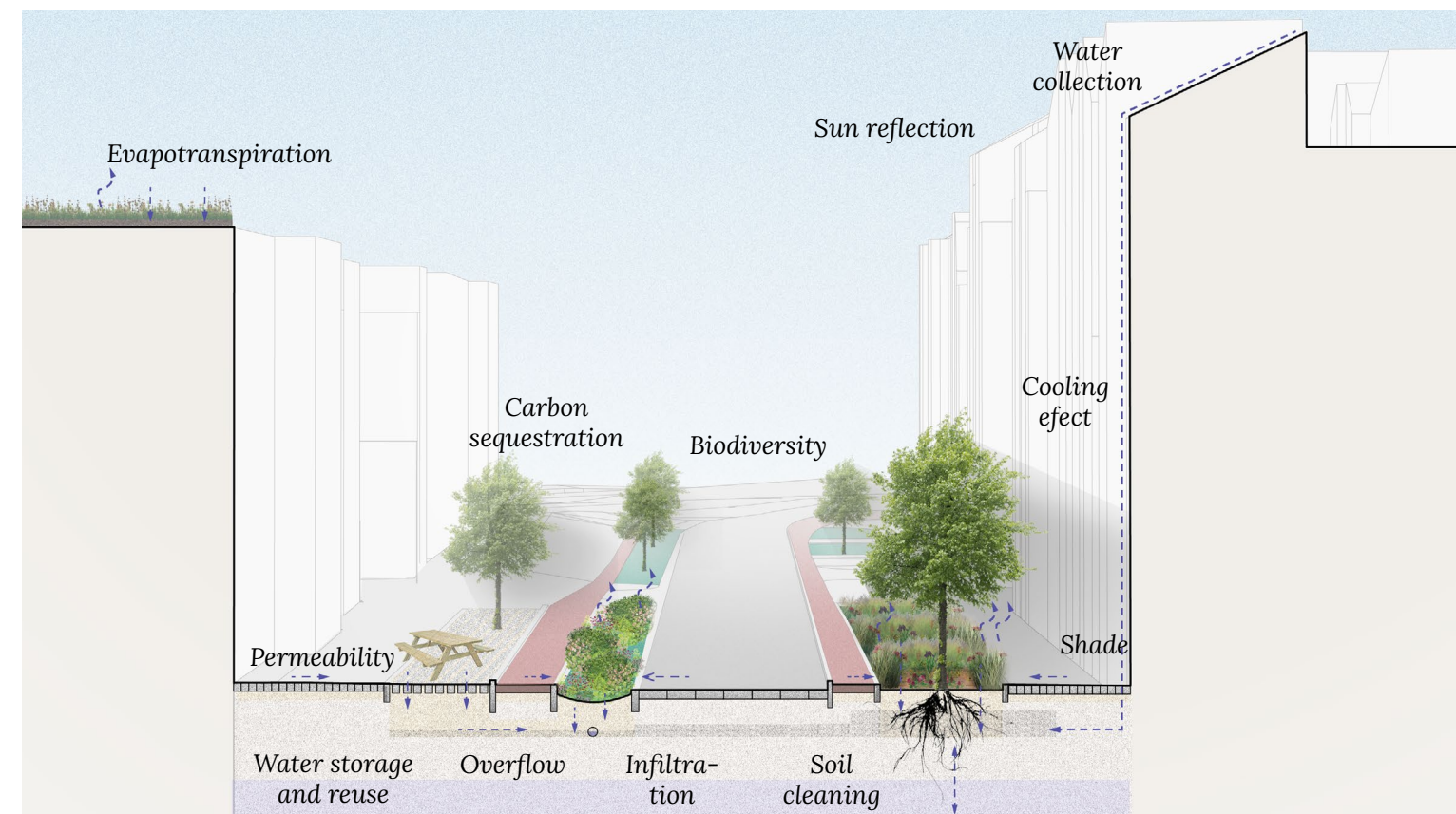Fig. 3   *Climate change impacts, source: Author*

Fig. 4   *Nature-based solutions, source: Author*

1.3 Context introduction Černý most, Prague

Prague is notorious for its well preserved historical, facing big challenges in connection to mass tourism and climate change. But the area of the city district Prague 1 makes up only 1% of the total area of Prague. Majority of Prague residents live further from the city center, in the post-war neighbourhoods made out of prefabricated concrete panels (therefore the slang name "paneláky"). This type of housing can have between 4 to 12 floors, with lower proportion of built-up areas. A lot of this unused public space is dominated by car transportation and short-cut grass areas, while the planted vegetation often doesn't meet its proper natural habitat. A high percentage of impervious surfaces,a low percentage of permeable surfaces and a high wall area index can have a significant impact on the heat comfort of the inhabitants (CzechGlobe, 2017).

One of the the most affected areas by the exposure of vulnerable population (children under 14 years of age and seniors over 65 years of age) to temperature extremes is Černý Most (CzechGlobe, 2017). Furthermore, the adaptive capacity of the inhabitants is rather low, as this neighbourhood has a big percentage of unemployment (Czech Statistical Office 2018).

Today, the neighbourhood houses around 22,355 people (1.7% of the whole population of Prague) (Czech Statistical Office 2018). The area, whose name means "black bridge" in English, was named after a stone bridge over the nearby railway line from Prague to Čelákovice, which was blackened by smoke from passing steam locomotives. An important trade route once ran across the present-day Prague 14, which was later replaced by the very first railway line with steam engine operation in Prague (Šmíd et al. 2022). To this day, there is a busy bus terminal at Černý Most, from which you can travel to Hradec Králové, Liberec, the Krkonoše Mountains or abroad, and which to some extent symbolizes a bridge between Prague and the near and distant surroundings. Preparations for the construction began in 1972 and continued in different stages till 2011. One of the first shopping malls and entertainment zones in the Czech Republic was opened in the neighbourhood in 1997 (Šmíd et al. 2022). The development of the whole district was also helped enormously by the construction of the metro. But even though this area of Prague does not have hundreds of years of history, a lot of different cultural hotspots and events grew in Černý Most. Numerious festivals were created: Street for art, Stop Zevling, Strawberry Fields, food festival Setkání chutí or neighbourhood festivity Černý mošt. Local initiative Praha 14 kulturní started promoting and developing cultural infrastructure in the neighbourhood. A local community center Plechárna was built next to the skatepark and started offering cultural programme not only to the residents of the neighbourhood.
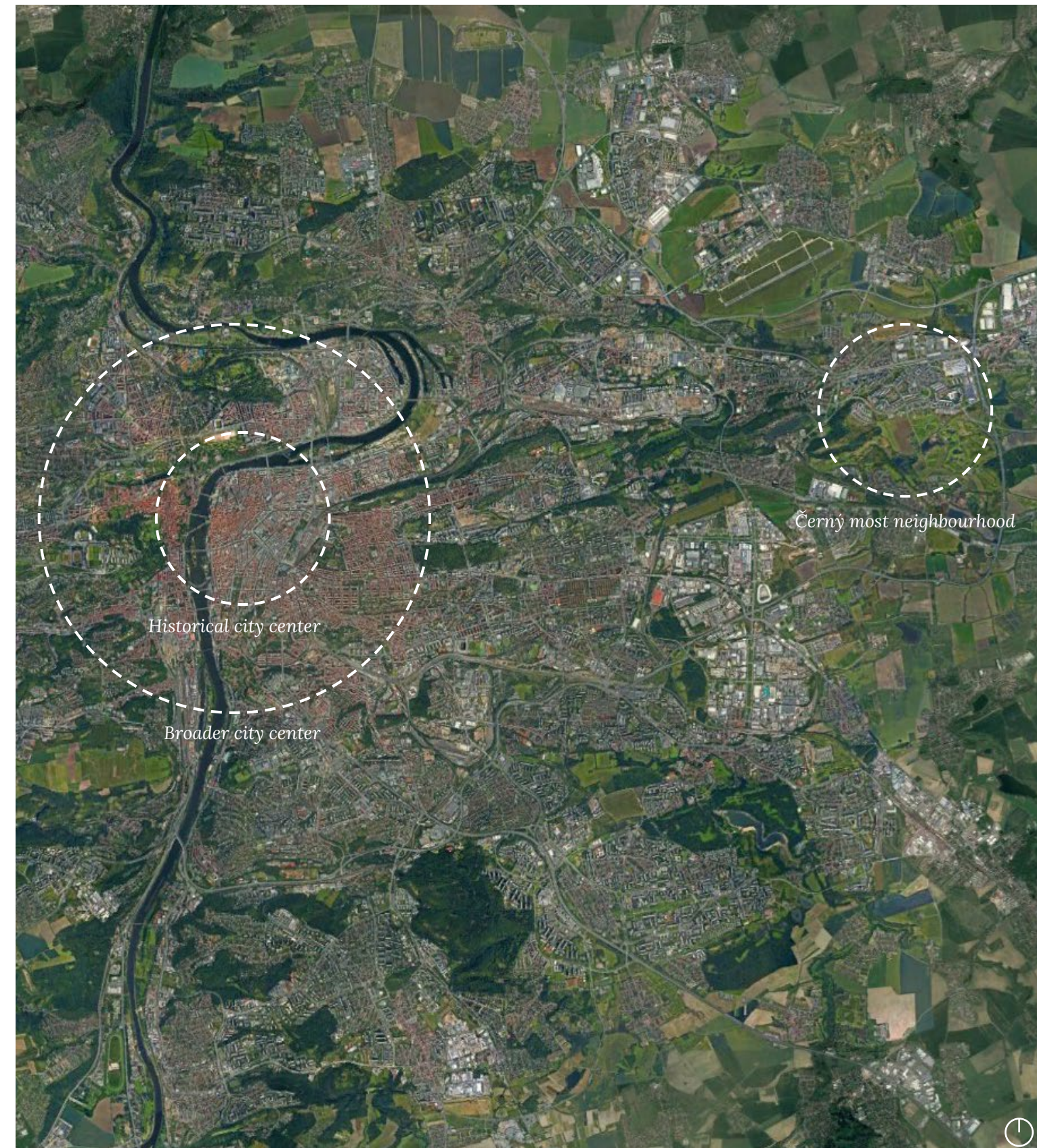

Fig. 5   Aerial photo of Prague, source: Google Earth

The housing estate was built during the late 1970s and the 1980s in several stages. The first section, sídliště Černý Most I, was completed in 1980 and comprised 1,780 flats. The second section, sídliště Černý Most II, was started in 1985 under the Czechoslovak Socialist Republic, but not completed until 1992 after the Velvet Revolution had ended Communist rule. The streets were originally to be named after Communist officials, mostly from the Soviet Union. Instead they were named after Czechoslovak airmen who fought in the French Air Force and Royal Air Force Volunteer Reserve in World War II. The estate is served by the last two Prague Metro stations on Line B, Rajská zahrada and Černý Most, the latter of which is adjacent to a large intercity bus station. There are two smaller Park and ride facilities near both metro stations. The area is also home to a shopping centre, Centrum Černý Most. (Havlovec et al. 2018.)

In the first half of the 1990s, residential construction was being completed in large housing estates in Prague. At this time, neoliberalism began to take hold, advocating a free market policy with minimal state (or public sector in general) intervention in the economy and society and emphasising the responsibility of the individual. Neoliberal policies advocate the privatisation of public goods as an effective tool for raising economic and social standards. In housing policy, rather than building new affordable municipal housing, privatisation of the housing stock

and the emphasis on personal responsibility in acquiring housing is promoted. Therefore, at this time, the state stopped financing the construction of municipal housing. Since 1990, the publicly owned housing stock has largely been privatised, either by returning it to the original owners as part of restitution or by selling it to existing tenants for well below market prices. Paradoxically, however, at this time there is also far from being a functioning market system that could well secure affordable housing for all city residents. The rental housing market at this time is heavily influenced by rent regulation, which, while benefiting many tenants, has greatly increased the difficulty of finding a new apartment. The overall real estate market was not fully functional either, as financial capital was scarce in Czech society at this time and there was no functional banking system in the Czech Republic that provided cheap mortgages. (Brabec, T. 2021)

The Černý Most neighbourhood has a significant amount of council housing and social housing (Brabec, T. 2021). This in combination with ethnically diverse population, consisting of Roma, Vietnamese, Russian and Ukrainian minorities, leads to prejudices and bad reputation among Prague citizens. Media outlets often spread this narrative and give Černý most a reputation of a violent neighbourhood full of crime. The reputation of Černý Most is thus much more the result of

a combination of disinterest in the causes of socio-spatial and ethno-racial segregation, the long-term absence of a housing policy, and, until recently, the general disinterest of the public in the neighbourhood. This creates the feeling that murder and violence are the daily routine and the social stigma of the locality is reinforced (Lehečka, 2022). Although this is not true, it is often enough to set certain segregation in motion and clashes arise. The area is also full of non-governmental organisations and social services working with unhoused people, people using drugs, youth at a risk of social exclusion, immigrants, people living with physical disabilities and others.

Fig. 6   *Historical photo Black Bridge, source: nasepraha.cz*

Fig. 7   *Bridge remains, source: ŠJů, Wikimedia Commons*

Fig. 8 _Historical photo of the construction, source: Linka č.141_

Fig. 10 _Shopping mall, source: Centrum Černý Most_

Fig. 9 _Transfer terminal, source: IPR Prague_


Fig. 11 _Skatepark, source: Plechárna_

Before revolution 1970-1990
After revolution 1991-2011
Recent 2012-Now
Unknown/Out of bounds

Fig. 12   *Development, source: Author, based on ČSÚ*

Černý Most jako Bronx. Za kriminalitou je i obsazování bytů magistrátem

🕐 11. prosince 2022 10:29

Jen během listopadu dva závažné incidenty – 22. listopadu vražda v ulici Bryksova, 1. listopadu školák postřelený vzduchovkou. A 27. září zadržení muže, který zásoboval dealery drog pervitinem a marihuanou. Po zhlédnutí novinových titulků se zdá, že na pražském Černém Mostě není něco v pořádku. Nabízí se srovnání s newyorským Bronxem, který se stal synonymem pro čtvrť s vysokou kriminalitou, a souvisí to také s anonymitou prostředí.
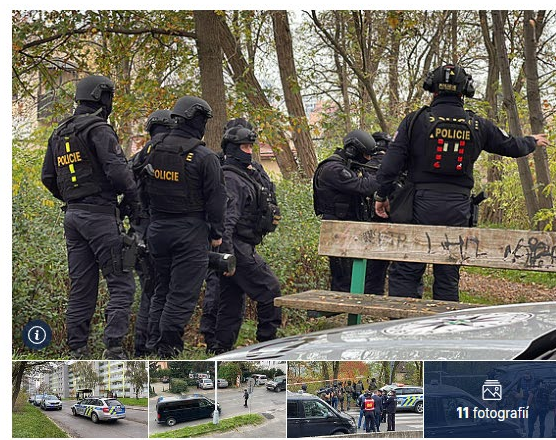
Anonymita je typická pro pražská sídliště. Podle neziskových organizací, které pracují s problematickou mládeží, je však Černý Most v něčem odlišný od dalších „panelových" území metropole.

Fig. 14   *„Černý Most as Bronx. Behind the crime is also the occupation of apartments by the municipality", source: Idnes.cz*

4.3.3 Koncentrace bytů spravovaných Magistrátem hl. m. Prahy v roce 2021
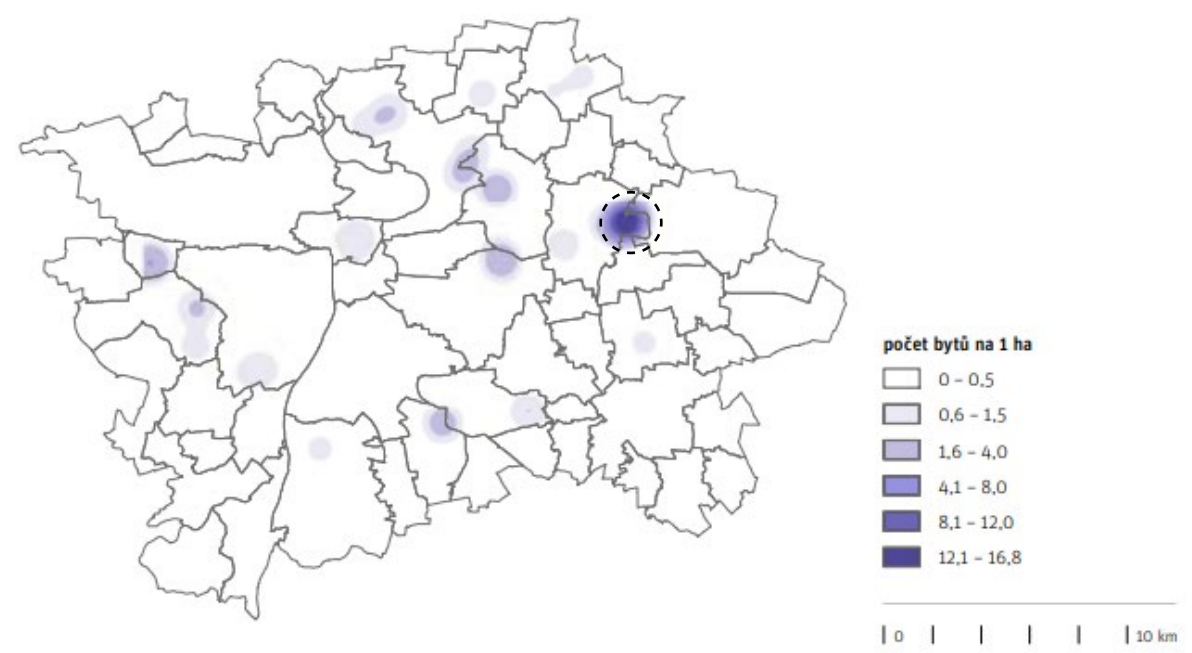IPR Praha 2021 / data: MHMP 2021

počet bytů na 1 ha
0 – 0,5
0,6 – 1,5
1,6 – 4,0
4,1 – 8,0
8,1 – 12,0
12,1 – 16,8

Fig. 13   *Number of council housing and its share of the population in 2021, source: IPR Prague*

PRAHA   STIGMATIZACE

Černý Most, nejstigmatizovanější místo Prahy, nemůže za naše středostavovské obavy

Sever iDnes.cz publikoval článek Černý Most jako Bronx, v němž autor vyvozuje, že na Černém Mostě „něco není v pořádku". Proč jsou podobné nálepky tak oblíbené?

MICHAL LEHEČKA — 16.12.22

Fig. 15   *„Černý Most, the most stigmatized place in Prague, is not to blame for our middle-class fears", source: alarm.cz*

1.4 Relevance

As the world is getting more complex and impacts of Climate Change are progressing, we can no longer depend only on intuition and knowledge of planners. Including local citizens and stakeholders in the planning and design process is needed to ensure more just and efficient adaptation. Furthermore, effort and energy are required to include especially vulnerable citizens into the process. The relevance of this project is in learning, analysing, designing, and also trying out this approach in the span of 10 months. This approach is not tested completely, but only a fraction of the process is executed. Experience and outcome of this process are then relevant in future planning and designing of just and resilient cities.
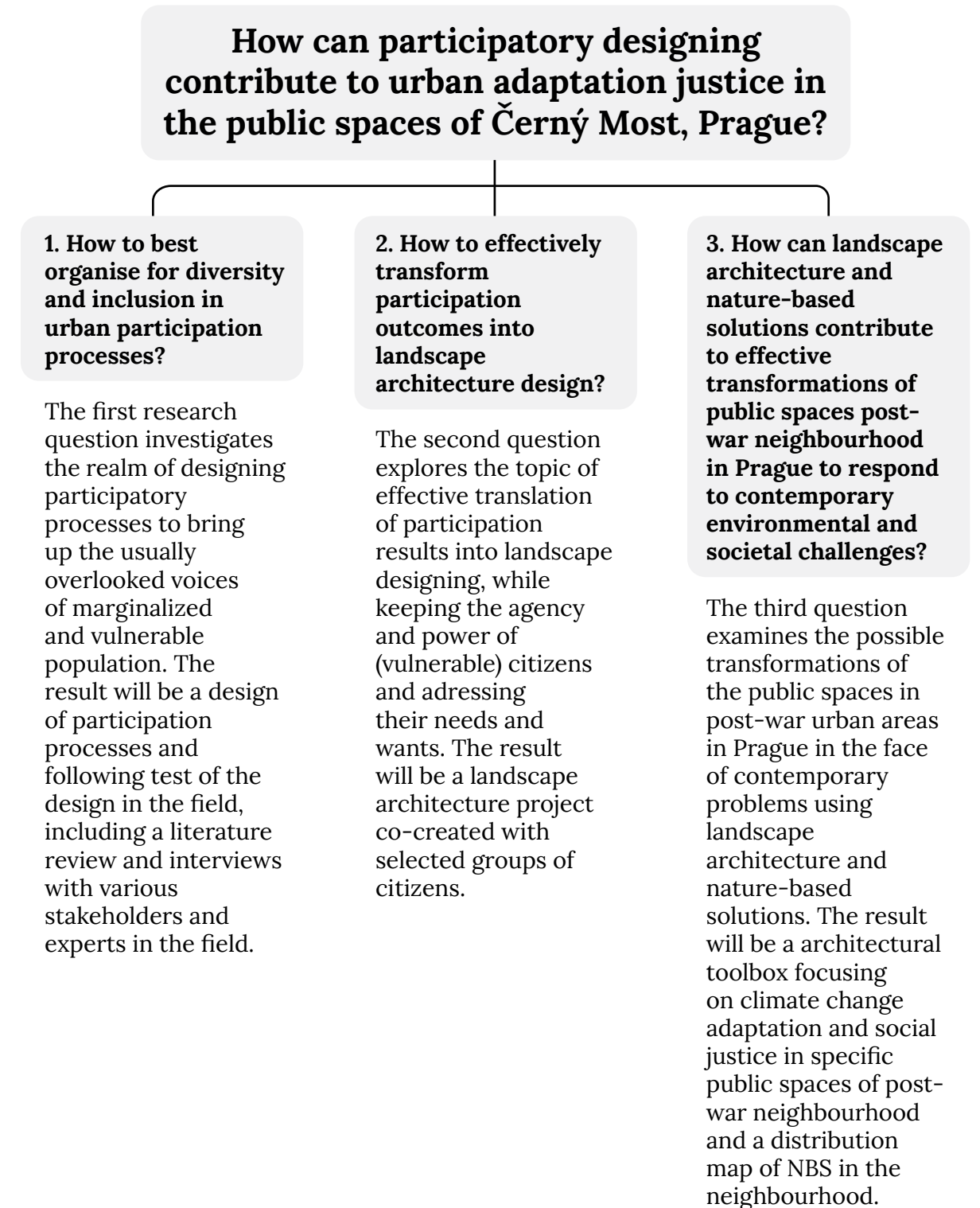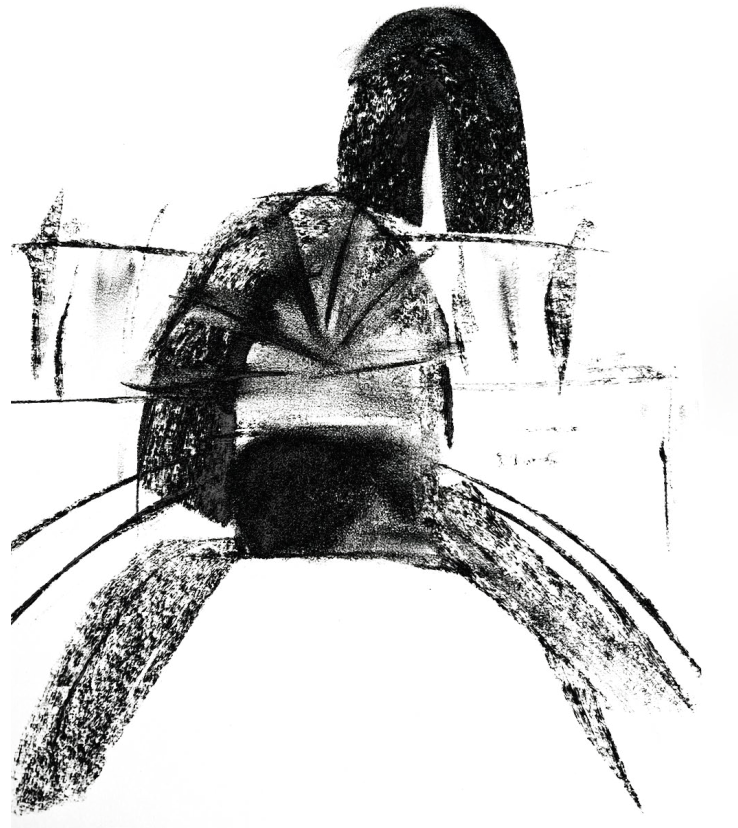
1.5 Research and design questions

How can participatory designing contribute to urban adaptation justice in the public spaces of Černý Most, Prague?

1. How to best organise for diversity and inclusion in urban participation processes?

The first research question investigates the realm of designing participatory processes to bring up the usually overlooked voices of marginalized and vulnerable population. The result will be a design of participation processes and following test of the design in the field, including a literature review and interviews with various stakeholders and experts in the field.

2. How to effectively transform participation outcomes into landscape architecture design?

The second question explores the topic of effective translation of participation results into landscape designing, while keeping the agency and power of (vulnerable) citizens and adressing their needs and wants. The result will be a landscape architecture project co-created with selected groups of citizens.

3. How can landscape architecture and nature-based solutions contribute to effective transformations of public spaces post-war neighbourhood in Prague to respond to contemporary environmental and societal challenges?

The third question examines the possible transformations of the public spaces in post-war urban areas in Prague in the face of contemporary problems using landscape architecture and nature-based solutions. The result will be a architectural toolbox focusing on climate change adaptation and social justice in specific public spaces of post-war neighbourhood and a distribution map of NBS in the neighbourhood.

Fig.16 Photo, source: Author

Fig. 17 Drawing, source: Author

Contrary to common expectations, adaptation may not reduce vulnerability, as some adaptation measures reinforce, redistribute, or introduce new sources of vulnerability (Eriksen et al. 2021).

02 Theory

2.1 Urban adaptation justice

Climate change poses one of the most critical global problems in the 21st century. Extreme events caused by climate change have caused widespread adverse impacts, losses and damages to nature and people. The rise in weather and climate extremes has led to some irreversible impacts as natural and human systems are pushed beyond their ability to adapt (IPCC 2022). Cities are at the forefront of mitigating and adapting to climate change. In urban areas observed climate change has caused impacts on human health, livelihoods and key infrastructure. Hot extremes including heatwaves have intensified in cities, causing the death rate from hot weather rising 30% in Europe in two decades. Temperatures across Europe were above average for 11 months of 2023 (IPCC 2022, Copernicus Climate Change Service (C3S) 2024).

Adaptation plays a very significant role in reducing exposure and vulnerability to climate change. The IPCC 2022 defines adaptation as: „the process of adjustment to actual or expected climate and its effects in order to moderate harm or take advantage of beneficial opportunities. In natural systems, adaptation is the process of adjustment to actual climate and its effects; human intervention may facilitate this" (IPCC 2022).

According to Czech Global Change Research Institute adaptation measures can be divided into three basic categories:

(i) Technical (grey) measures
(ii) Nature-based solutions (or also green and blue infrastructure)
(iii) 'Soft' (system) measures

Technical measures usually provide only one function - e.g. light surfaces on roofs reduce surface temperature. They are used where they are more appropriate or where nature-based solutions cannot be implemented (historic town centres, protected monuments, etc.). The advantage of nature-based adaptation measures is the combination of different functions within one measure - e.g. roof garden - water retention, lower surface temperature, biodiversity enhancement or evapotranspiration. These simultaneously provide a range of benefits in the form of ecosystem services (e.g. greenery helps to retain rainwater while positively influencing the microclimate in its surroundings). Soft measures usually take a systemic form, e.g. strategies, methodologies, or awareness-raising actions (Global Change Research Institute of the Czech Academy of Sciences. 2017). Nature-based solutions are defined as „approaches that use nature and natural processes for delivering infrastructure, services, and integrative solutions to meet the rising challenge of urban resilience" (World Bank 2021). A framework from Raymond et al. came up with a seven-stage process for assessing and implementing the co-benefits of nature-based solutions in urban areas: „1) identify problem or opportunity; 2) select and assess NBS
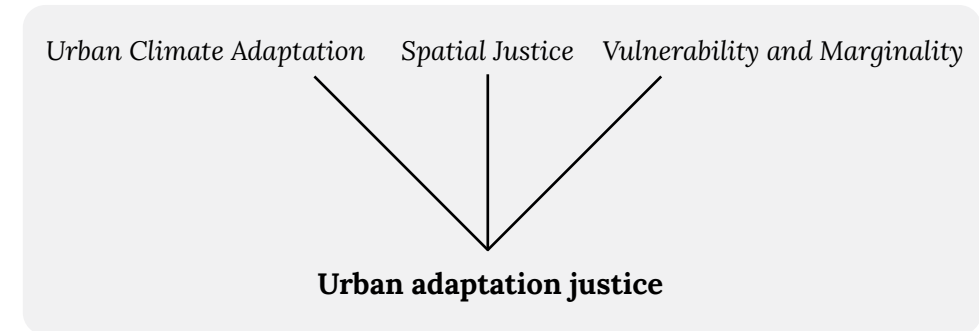

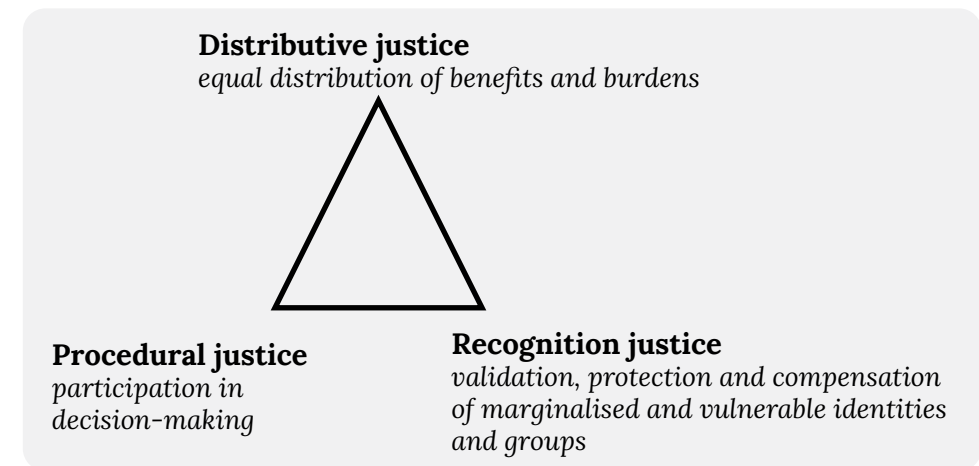Fig. 18 *Urban adaptation justice, source: Author*

Fig. 19 *Spatial justice dimensions, source: Author, based on IPCC (2022)*

and related actions; 3) design NBS implementation processes; 4) implement NBS; 5) frequently engage stakeholders and communicate co-benefits; 6) transfer and upscale NBS; and 7) monitor and evaluate co-benefits across all stages" (Raymond et al. 2017).

The problem with nature-based solutions is that benefits of projects are rarely evenly distributed, as political processes often fail to

consider spatial injustices. Just NBS must consider intersections between urban ecological design, planning, management, and socio-demographic factors such as race and poverty (Long and Rice 2019). The uneven distribution of the impacts of air pollution, noise and extreme temperatures on the health of Europeans closely reflects the socio-demographic differences within our society (European Environment Agency. and European

Topic Centre for Air Pollution and Climate Change Mitigation. 2018). A review of climate change adaptation interventions reveals that, contrary to common rhetoric, adaptation does not necessarily reduce vulnerability. In particular, three features emerge. First, some interventions reinforce existing vulnerability; second, others simply redistribute vulnerability; and third, some measures introduce new sources of vulnerability (Eriksen et al. 2021). Also, conflicts may not necessarily emerge as a direct result of climate change, but instead as a consequence of climate change interventions. Four key mechanisms are stated by Erisken et al.: (i) insufficient understanding of contextual vulnerability by interventions planners and implementers, including socio-political relations of gender, race, age (dis)ability and class; (ii) inequitable participation by vulnerable and affected groups in planning and implementation, leading to top-down processes and poor representation of marginalised groups' perspectives; (iii) retrofitting adaptation into existing development ideas, projects, and forms of assistance; and (iv) insufficient engagement with what 'adaptation success' constitutes, dominant development discourses implicitly defining such success

2.2 Participation

The evolution of climate change vulnerability assessments shows a trend from assessments that consider the multiple effects of climate change on a particular system shifting to assessments that recommend policy options for minimizing the risks associated with multiple stresses. This

(Eriksen et al. 2021).
In order to offer a just alternative, adaptation options must adhere to the three components of justice, (a) distributional justice, referring to spatial and temporal distribution of burdens and benefits amongst individuals, communities and nations, (b) procedural justice, implying the need for a democratization of climate-related decision-making and policy planning processes, and (c) recognition, emphasizing basic respect and fair engagement and consideration of a multitude of cultures and viewpoints (IPCC 2022). The first criterion of urban adaptation justice in Shi et al.'s (2016) framing is meaningful participation. Those affected by climate change risk are best placed to develop appropriate responses. The integration of local subaltern knowledge into decision-making has been identified as a key component to boost urban adaptation globally (Williams et al. 2022; Shi et al. 2016). However, there is no silver-bullet to effectively integrate local knowledge into adaptation planning and decision-making processes as adaptation requires the combination of multiple potentially conflicting knowledge systems (Williams et al. 2022).

evolution is characterized by the progressive inclusion of non-climatic determinants of vulnerability to climate change, including adaptive capacity, and the shift from estimating expected damages to attempting to reduce them (Füssel and Klein 2006).

Three broad conceptual perspectives of vulnerability can be drawn from literature: biophysical, social and integrated perspectives. The integrated perspective attempts to combine the two former perspectives. The key determinants of vulnerability include exposure, sensitivity, and adaptive capacity (Bruno Soares, S. Gagnon, and M. Doherty 2012). According to IPCC, exposure is „the presence of people; livelihoods; species or ecosystems; environmental functions, services and resources; infrastructure; or economic, social or cultural assets in places and settings that could be adversely affected" (IPCC 2022). The definition of sensitivity is defined as „the degree to which a system or species is affected, either adversely or beneficially, by climate variability or change" (IPCC 2022). And finally, the adaptive capacity is: „the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences" (Hassan, Ash, and Scholes 2005).

Apart from the great uncertainty and long planning horizons involved in climate adaptation, managing climate vulnerability is similar to managing economic growth in that, as a dynamic issue, it entails ongoing revision to avoid maladaptation (Jonsson et al. 2012). Top down approaches are often criticised for leaving humans out of the loop, or overlooking the citizens' concerns and aspirations. Democracy, because of its concern with the inclusion of the people within political decision-making processes, is one of the key sites of the articulation of the concept of

participation. There is a difference between executing participation and having the real power and agency needed to influence the outcome of the project. Much of what is presented as participatory is closer to educating and informing people and securing their support for plans rather than giving them a genuine voice to change things. Pre-existing power relations have a tendency to persist in participation despite the claims that they promote bottom-up decision-making. That is why power is of fundamental importance and has to be very explicitly taken into account when considering the objective of participation (Few, Brown, and Tompkins 2007). It cannot be so, if the most essential decisions have already been made prior to the participation. Instead, the purpose, limits and expected outcomes of participation need to be carefully outlined, and the value of the process underlined by assurances that it will have a real impact on the formulation of policy (Spash 2001).

Few, Brown, and Tompkings also argue, that one of the crucial aspects in meaningful participation is involving appropriate people from the start. Participatory processes can gain legitimacy only if effort is invested in finding out who is the relevant stakeholder, meaning both who is most influential and who is most likely to be. As said before, sensitivity to inequalities of social power is significant, in order to avoid domination of dialogue by those with greater resources in terms of communication, social/political networking, and experience in decision-making processes. Different social contexts may require different approaches, especially in order to

attract and sustain dialogue with 'hard to reach' stakeholders who may be reluctant to contribute their time or knowledge to the process (Few, Brown, and Tompkins 2007).

A community-based research done by Le Dantec and Fox emphasises that the choices researchers make when interacting with a research site are integral to the method and its outcomes. Exposing these

process consists of four phases. It is based on the principle that a designer steps into the life of the user, wanders around for a while and then steps out of the life of the user with a deeper understanding of this user. These phases are (1) discovery, (2) immersion, (3) connection and (4) detachment. In each phase the relation of the designer with the user changes (Kouprie and Visser 2009).

> *The framework presented in this study gives insight into three key elements of empathy in design. (1) Motivation is crucial for an effective process. When designers do not see the advantages of empathy in design, the results can be unsatisfying. (2) Being aware that the process involves a combination of affective resonance and cognitive reasoning regarding the user's life can enhance empathy. Experiencing and reflecting can alternate the designer stepping into and stepping out of the user's life. Flexibility in this stepping in and out may be a key element of training designers at designing with empathy. (3) A process of empathy in design practice requires a structured investment of time. Not having or taking time is often the first barrier for an empathic process. Insights into the process of empathy can help designers to decide to use their time effectively according to the framework. For example, if designers follow an elderly person for a day, they have mainly invested their time in the first two phases of the process of empathy in design practice. If designers spend a few hours of observation and use their time, during and right after the observation, to go through all four phases explicitly, they can enhance their empathy. (Kouprie and Visser 2009)*

elements positions the researcher within the social hierarchy of the context, providing a better understanding of the site and the researcher's influence over the events that comprise the report. Doing so also contributes to a shared understanding of how the research developed over time and contextualizes the establishment or deterioration of relationships between researcher and subject (Le Dantec and Fox 2015). Kouprie and Visser created a framework for empathy in design, showing a

Citizen Sensing' came up with a six-stage conceptual model that builds on Participatory Action Research with the aim of outlining the processes and mechanisms for ensuring sensing technologies are codesigned by citizens to address their concerns. The six stages included: (i) Identification of matters of concern that citizens care about and are prepared to give their time and energy to address, (ii) Framing how technology and data can be utilised to help tackle it, (iii) Design the tools and interactions that are

needed to tackle the issue at stake, (iv) Deployment of technologies to be tested, iterated and improved, (v) Orchestration, sustaining the engagement of the contributing community as well as scaling it up to engage a broader group of people, and (vi) Outcome, reflecting on the intervention and assessing if and how the goals were achieved

(Balestrini et al. 2017). Generally, active participation and deliberation is best supported through working with relatively small groups and using a range of participative tools (Few, Brown, and Tompkins 2007).

2.3 Public space

In his famous publication Life between buildings, Jan Gehl categorizes outdoor activities in public spaces into three groups: necessary activities, such as going to work or school, optional activities, like taking a walk or sitting, and social activities, describing communal activities, children at play or passive contacts. Gehl states that opportunities related to merely being able to meet, see, and hear others offer a stimulating experience and a possibility for starting and maintaining human contacts (Gehl 2011).

of the same coin: those who argue that public space is over-managed, and those who argue that it is under-managed (Carmona 2010a). For the first group, good design is a means to reverse the problems of a threatening and uncared for public realm. Carmona writes that for Francis Tibbalds "after-care mattered every bit as much as getting the design right in the first place" (Carmona 2010a). Other authors, such as Roger Trancik, were writing about the need to redesign lost spaces, or antispaces, that make no positive contribution to the

> *Contacts that develop spontaneously in connection with merely being where there are others are usually very fleeting – a short exchange of words, a brief discussion with the next man on the bench, chatting with a child in a bus, watching somebody working and asking a few questions, and so forth. From this simple level, contacts can grow to other levels, as the participants wish. Meeting, being present in the same space, is in each of these circumstances the prime prerequisite. (Gehl 2011)*

Contrary to spaces for creating new contacts, many authors criticized the contemporary public space situation, as Matthew Carmona described in his two-part Contemporary public space: Critique and Classification. In the first part, Carmona reveals that these critiques of public space could broadly be placed into two sides

surrounds or users. However, not all authors were critical of neglected spaces, as they saw the new public domain in the unusual in-between spaces. For Maarten Hajer and Arnold Reijndorp, those liminal spaces and border crossings can constitute a place to bring together different activities, occupiers and

characters (Carmona 2010a). The majority benefits from situations that are primarily accessible and easier to use for everyone. One of the barriers can be fear of crime and a concern that the streets are unsafe. The fragmentation and social segregation in terms of class, ethnicity, race, age, occupation or sexual orientation lead to the arguments that public space can be made safer through various combinations of defensive design, surveillance or control. For Carmona, those approaches at their most extreme lead to over-management practices (Carmona 2010a). Anastasia Loukaitou-Sideris and Tridib Banerjee argue that contemporary design eliminates unwanted and feared political, social and cultural intrusions: "Space is cut off, separated, enclosed, so that it can be easily controlled and 'protected'. This treatment succeeds in screening the unpleasant realities of everyday life: the poor, the homeless, the mentally ill, and the landscapes of fear, neglect, and deterioration" (Loukaitou-Sideris, Banerjee 1998). Some authors, like Anna Minton, say that it is the fear of crime rather than the actual levels of crime that are the driver of privatization of the public realm. She argues that while the bad reputation of neighbourhoods created by the media has undoubtedly driven a lot of the fear, processes of polarization of communities also cause fear of strangers (Milton 2006; Carmona 2010a).

The second part of the Contemporary public space by Matthew Carmona results in the final section suggesting a new typology of public space based on how public space is managed. The twenty categories divided into the positive spaces, negative spaces, ambiguous spaces, and private spaces demonstrate "both the wide range of space types that a typical urban area would possess, but also how many of these are in one sense or another ambiguous in that their ownership and the extent to which they are 'public', or not, is unclear. Some of these have always been so, for example, privately owned shops that are nevertheless publicly accessible. Others, for example forms of internalized 'public' space, are relatively recent phenomena, or are simply becoming more dominant in urban areas" (Carmona 2010b).

Similarly, René Boer in his book Smooth City: Against Urban Perfection, Towards Collective Alternatives comments on a concept of development happening in cities globally, an ongoing push for perfection, optimization, control, and comfort that is increasingly dominating urban landscapes worldwide, excluding certain groups of people. In the book, Boer argues that this new perfect and smooth urban landscapes are creating a kind of city that is maybe no longer a city. As a way out of this global phenomenon, Boer does not advocate for the opposite of smoothness, but instead wants to overcome the binary between smooth and unsmooth and move to a porous public spaces. Porosity in his view is a way of connecting across, or making punctures in the flat surface of the smooth city. This new porous space is then mantained, shaped, and organised collectivelly, including people in the long term (Boer 2023).

Urban adaptation justice

Climate change is a critical global issue in the 21st century, causing widespread damage and pushing natural and human systems beyond their adaptive capacities. Adaptation is essential to reduce exposure and vulnerability to climate change, with the IPCC defining it as adjustments to moderate harm or leverage beneficial opportunities. Nature-based solutions (NBS) offer diverse benefits but often face issues of uneven benefit distribution and socio-demographic inequities.

Adaptation can sometimes reinforce or redistribute vulnerabilities, introducing new risks. Justice in adaptation requires equitable distribution of benefits and burdens, democratized decision-making, and respect for diverse cultures. Meaningful participation of affected communities and integration of local knowledge are crucial but challenging, as they require balancing multiple, sometimes conflicting, knowledge systems.

Participation

The evolution of climate change vulnerability assessments has shifted from focusing on the effects of climate change on specific systems to recommending policy options to minimize risks. This evolution includes the consideration of non-climatic factors and aims to reduce expected damages rather than just estimate them.

Managing climate vulnerability, similar to managing economic growth, involves ongoing revision to avoid maladaptation. Effective participation is crucial in adaptation efforts but often lacks real influence. Genuine participation requires clear objectives, involvement of appropriate stakeholders from the start, and sensitivity to social power inequalities to ensure that all voices are heard. Community-based research and design frameworks emphasize the importance of empathy and understanding the social context. Active participation is best supported through small groups and various participative tools.

Public space

Jan Gehl emphasizes that merely being able to see and interact with others in public spaces stimulates human contact. Matthew Carmona critiques contemporary public spaces, categorizing critiques into two main viewpoints: those who believe public spaces are over-managed and those who think they are under-managed. Both eventually lead to privatisation of public space and exclusion of people. René Boer discusses the global trend towards overly controlled and optimized urban environments, which often exclude certain groups. Boer advocates for "porous" public spaces, which connect and include diverse groups, fostering collective management and long-term engagement.

ZDE NESTOUPAT

03 **Methodology**

„ *Climate change is ... not something you can remove from the complexities of human society.*

Those complexities may alter the nature and the extent of catastrophe. All of which means that the consequences of the heating climate are extremely difficult to predict. Pessimism may be warranted; fatalism is not. The future is not written."

Meehan Crist in "Is it OK to Have a Child?"

3.1 Research methods and timeline

To help answer the research and design questions, a number of methods is used. Mainly, three processes (theory, participation and design) are set up as lines starting separetely, but ultimately merging over the duration of the process. Begining of the research is initiated with literature review and analysis of participation methods and local stakeholders, as well as landscape architecture analysis and field work in the area. Reading the literature provides a theoretical basis for the other two lines, that is participation and design. These two lines have their own separate analysis and design, which are closely linked, but have their own timelines. Interviews help bring pracitacl knowledge to the process. Once participation process is designed, first participation events start happening with assessing risks of climate change impacts in the neighbourhood with local residents and vulnerable citizens. Both processes shift into co-design after that, connecting and influencing each other. This results into contextualised participatory design. Participation is noted and reported, and then also translated into location design. There, the two processes merge completely. The whole process and outcome is noted and evaluated to serve as an answer to the research and design questions. The whole timeline is ended with presentation of the results.

Literature review
A theoretical background to provide understanding of concepts, terms and processes.

Interviews
Multiple meetings with various stakeholders, experts and involved actors.

Field work
Visiting the neighbourhood multiple times to better understand the spatial, cultural, ecological, and social relations and to experience the real situation, using observation, dialogues, photography and sketches.

Participation design and execution
Analysis of local stakeholders, connection with two NGOs, design of participation process and then realisation of the events to influence the landscape architecture outcome and test out research questions. Participation methods: streetwork risk assessment, youth design workshop, community evaluation

Landscape architecture analysis and design
Analysis of the site and then design of landscape architectural project, with emphasis on just adaptation to climate change using nature-based solutions. The design is influenced and co-design with participants.
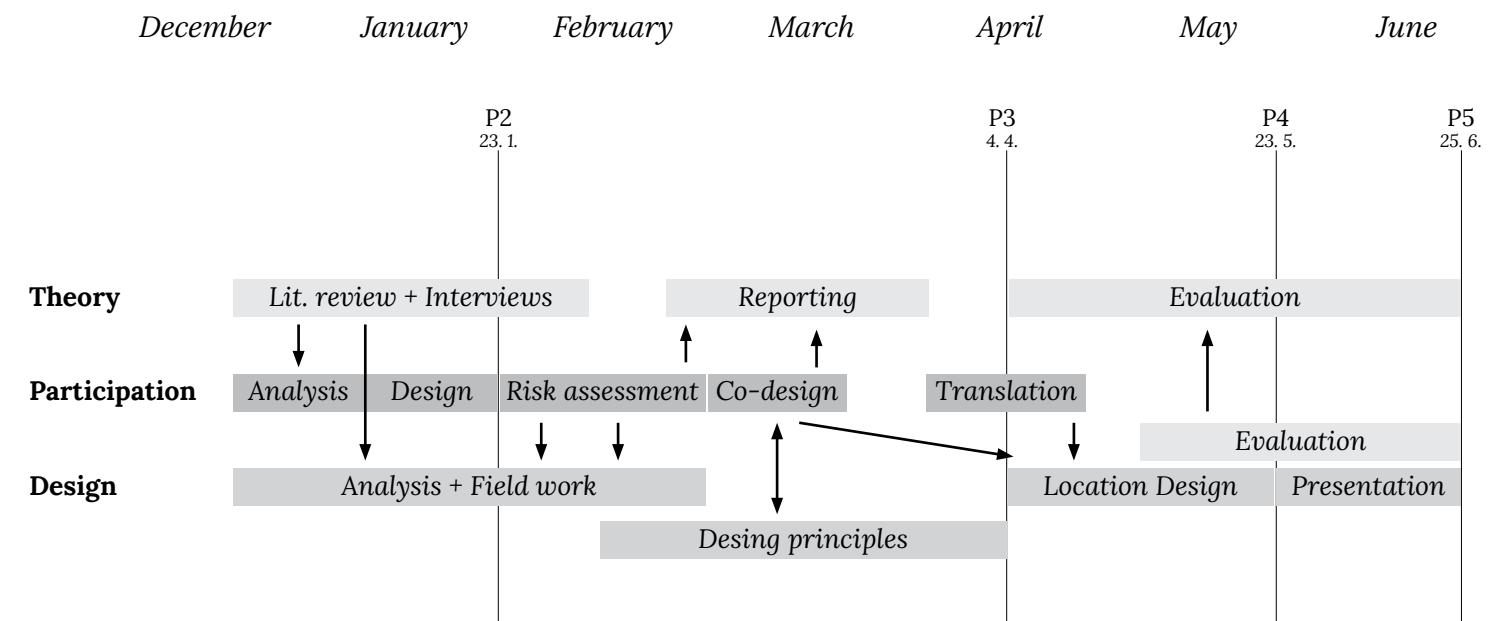
Fig. 22 Timeline, source: Author

3.2 Conceptual framework

Conceptually, Climate change impacts the public space in our cities, threatening mostly vulnerable citizens. These citizens should have a voice and impact on the decision-making of the government through participation. To react on the needs of the residents, government commisions landscape architects (and other necessary fields) to design appropriate changes to the public space, adapting it to the needs of the most vulnerable, therefore protecting those who are less vulnerable as well.

The multiple processes of landscape architecture designing and participation tie together in my project as described in the graph on the next page. First, theory, exploring three main concepts based on literature and interviews. Second, analysis, consisting of field work and site analysis, Spatial justice analysis, Public space categorisation, existing Nature-based solutions and Urban fabrics analysis of the location. Third, Participation, going through two separate vulnerability assessment events and one co-designing event. Fourth, Neighbourhood design principles, combining the previous analysis and participation for the scale of the whole neighbourhood. Five, Landscape design, a specific small-scale design of one part of the neighbourhood.
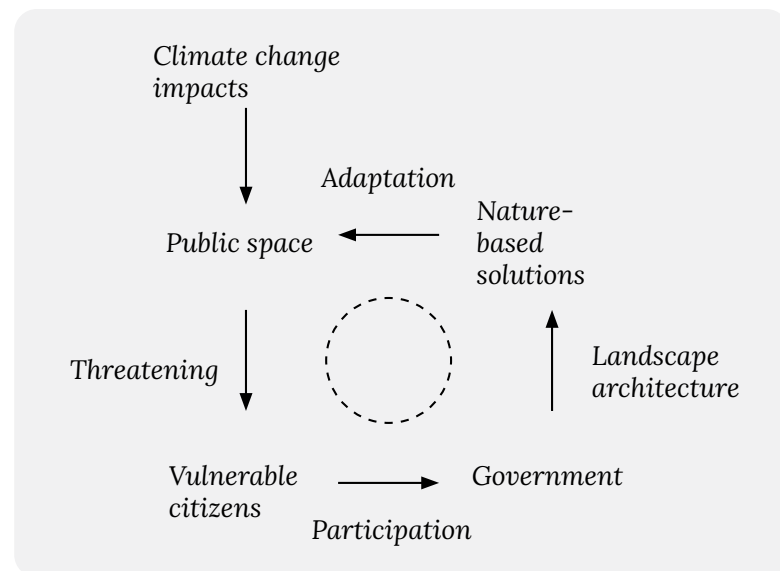
Fig. 23 *Conceptual framework, source: Author*
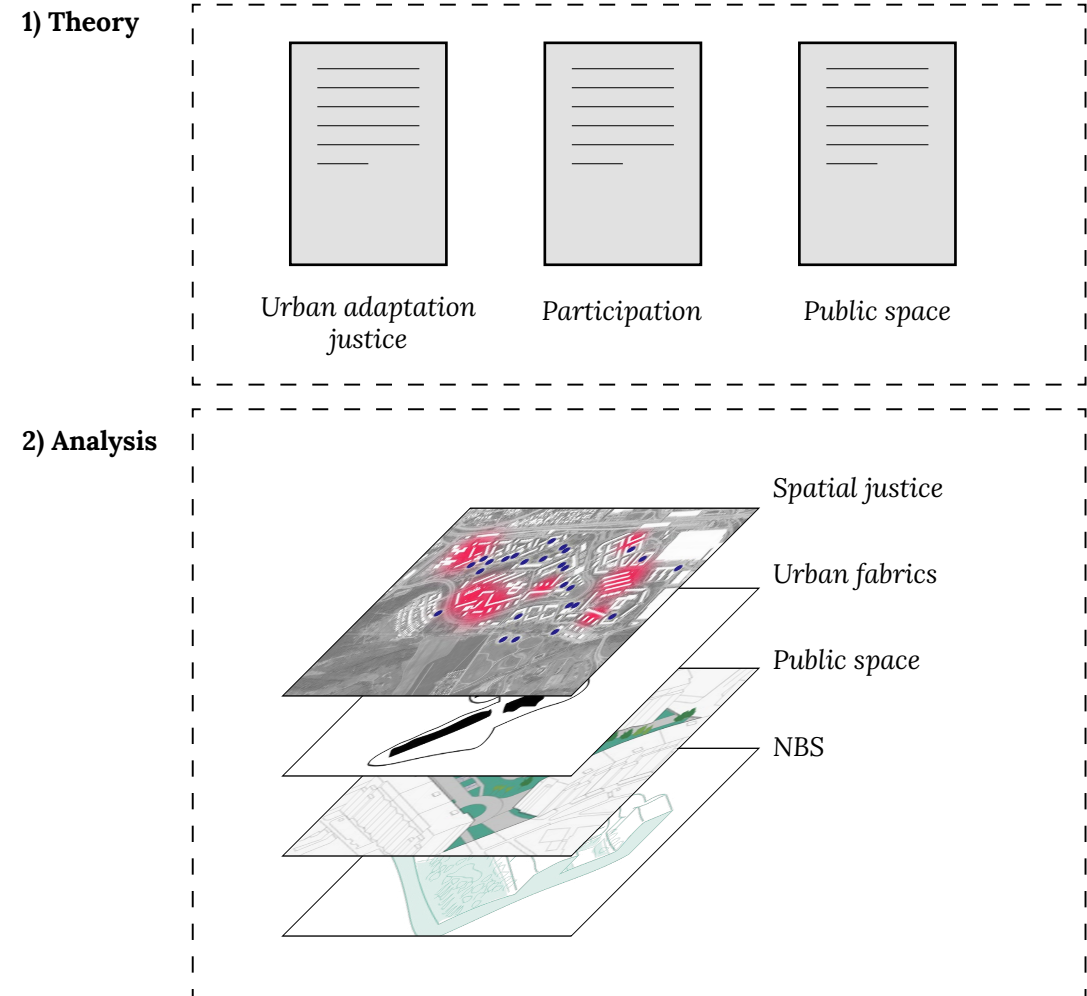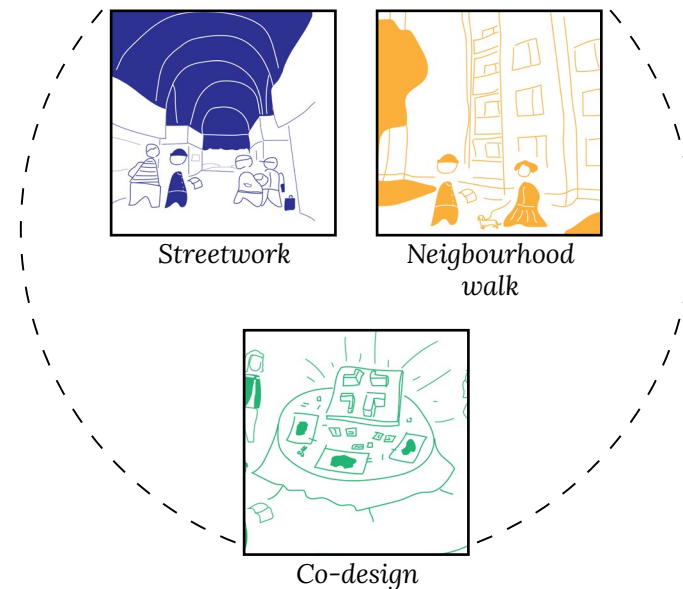
Fig. 24 *Conceptual framework, source: Author*

Fig. 26 Drawing, source: Author

04 **Location analysis**
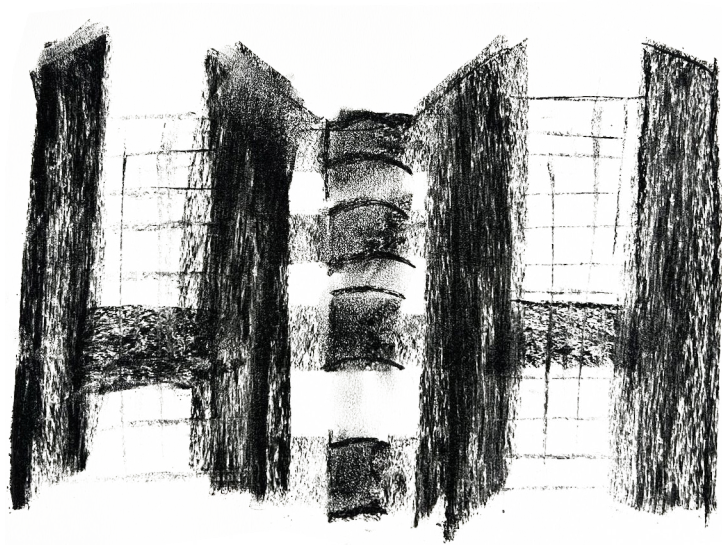
"The urban field is no longer the domain of a civic openness, as the traditional city was, but the territory of a middle-class culture, characterized by increasing mobility, mass consumption and mass recreation"
(Hajer & Reijndorp, 2001).

4.1 Introduction

During the thesis, several different analytical processes were conducted, ranging from soil, water, vegetation, surfaces, historical analyses, to social profile analysis, public transport or pedestrian movement calculations. In the following section, only the most important combinations of conclusions are presented. Urban fabrics analysis is a look into the history, development and spatial organisation of different parts of the neighbourhood. Spatial justice analysis investigates the distribution, recognition and procedures of the built environment in the neighbourhood. Nature-based solutions present contemporary approaches to climate adaptation in urban areas. Finally, Public space categorization organizes the neighbourhood's outdoor spaces into several categories based on literature, management, range of publicness and accessibility, and outlines the main ecological and social problems and opportunities.

Urban fabrics

Spatial justice
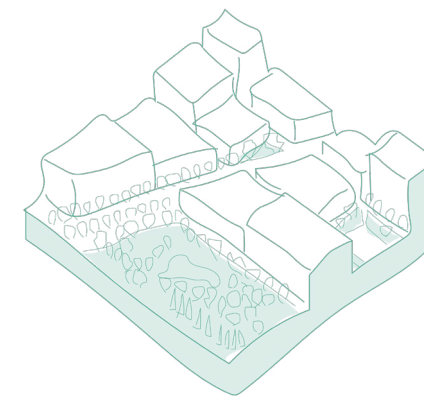
Nature-based solutions

Public space categorization

4.2 Urban fabrics
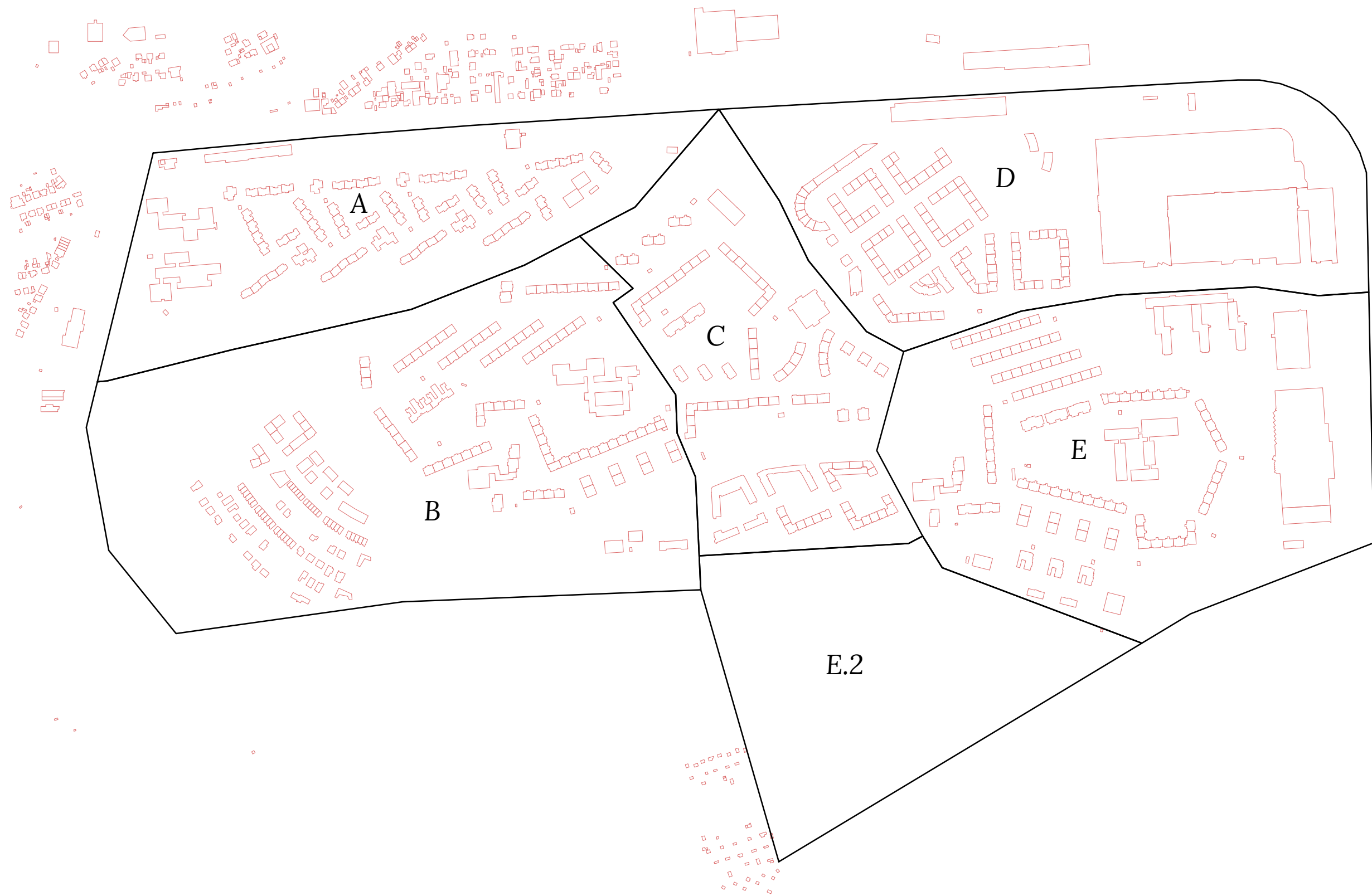
Fig. 27 Urban fabrics, source: Author

Location A

The oldest part of the neighbourhood has a clear hierarchy and structure. Individual houses form a porous block with a courtyard unpaved area and a road going around the block. Part of the block is also a building with a social programme, such as an elderly house or kindergarden. North of the location is a metro station, to the south is a park with a pond. This area is full of greenery and tall trees but is largely missing places for socialising and for activities outside. It is also blocked by shrubs, which makes the area a bit unclear and unsafe. A lot of the public space is defined by cars.

Porous structure

Courtyard in the middle

No commerce

Building with social programme

Park to the south
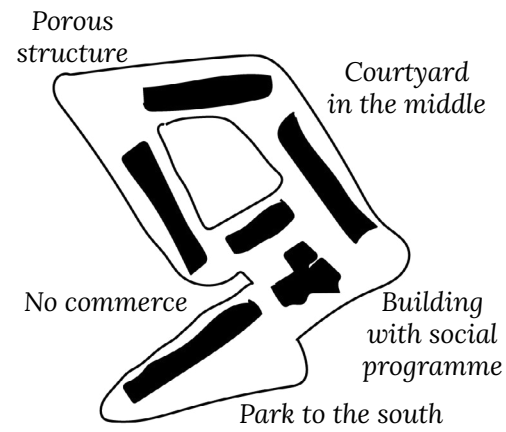
Fig. 28   Location A scheme, source: Author

Fig. 29   Map location A, source: Author
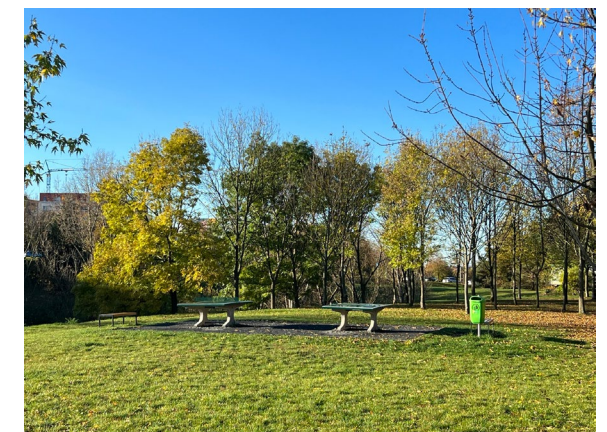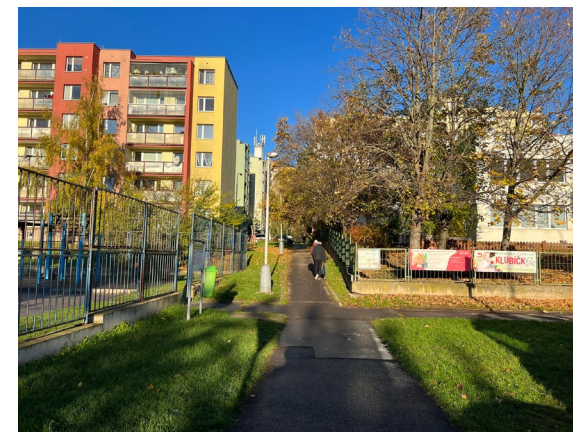
Fig. 30-37   Photos, source: Author

Location B

Contrary to the first location, part of this one is the newest area in the neighbourhood. Unlike the rest of the neighbourhood, it is made up of individual houses and gardens with tall fences and poorly designed public space. Across the main road is older prefabricated housing. The structure has a school in the middle and various scales and types of public space and public greenery. It is missing tall trees and proper biodiverse vegetation, as well as outdoor playgrounds and community places.
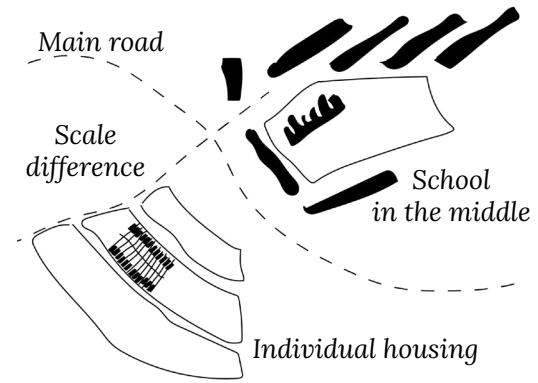
Fig. 38 Location B scheme, source: Author

Fig. 39 Map location B, source: Author

Fig. 40-47   Photos, source: Author

Location C

Continuation of the previous location is still following the structure of housing blocks shielding a public building in the middle. Here, the interaction with the main road is increased because of bridges connecting public spaces. Houses with shopping areas and restaurants are present in the area, unlike the rest of the neighbourhood. The streets are ruled by cars and large green areas consist only of short-cut grass. The post-modern buildings offer interesting connections.

Various types of public spaces

School in the middle

Bridges as public space

Main road
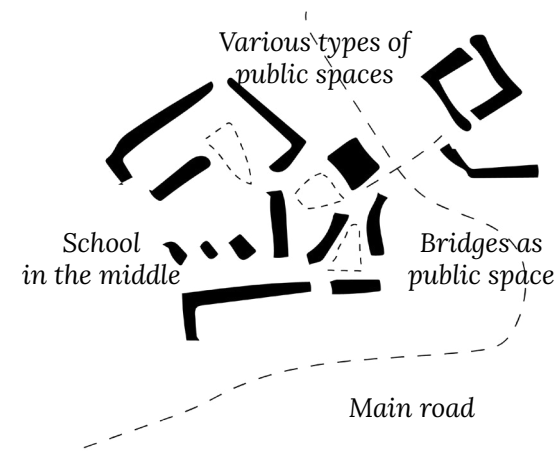
Fig. 48   Location C scheme, source: Author

Fig. 49   Map location C, source: Author

Fig. 50-57   Photos, source: Author

Location D

The housing in this location has most city-like public spaces and structure. Buildings are forming clear blocks with courtyards; the buildings are close to each other and are forming clear streets. The middle of the four blocks is pedestrian-only, offering a great potential for urban square. The proximity of the metro station as well as the central bus station and the big shopping mall makes the streets full of people and life. Sadly, there is not much to do outdoors as all the streets are full of parking. The potential of the courtyards is not utilized.
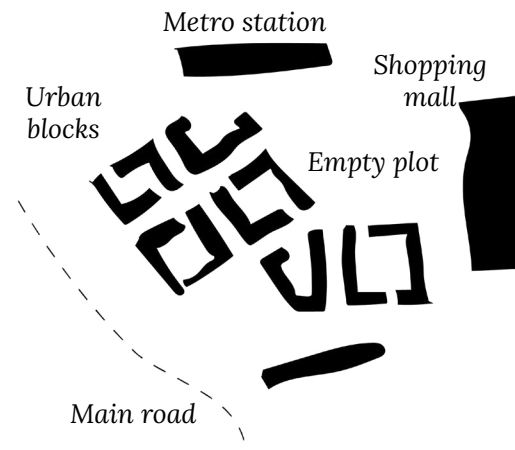
Fig. 58   Location D scheme, source: Author

Fig. 59   Map location D, source: Author

Fig. 60-67   Photos, source: Author

Location E

South east of the area is on the border with a big park. The middle of the area has a high school with sporting grounds. Houses here have a big difference in quality and public space is often reflecting this inequality. Different shops and centers are making the streets feel more alive.

Surrounded by buildings

High school in the middle

Park to the south

Malls to the east
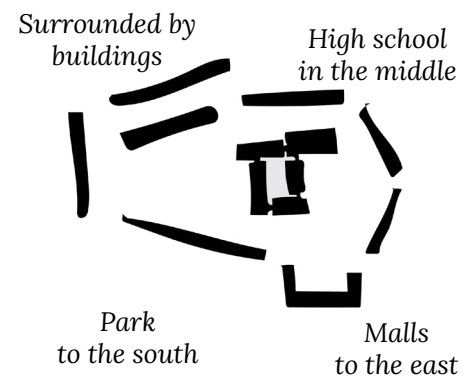
Fig. 68 Location E scheme, source: Author

Fig. 69 Map location E, source: Author

Fig. 70-77   Photos, source: Author

Location E.2

The park is an extention of the previous location, connecting Černý Most with different districts to the south. Lake and hills offer big ecological potential and are crucial for climate change adaptation. Nowadays, the park offers very little activities and is not using the biodiverse opportunity. The neighbouring skatepark is a big part of the culture and identity on Černý Most.
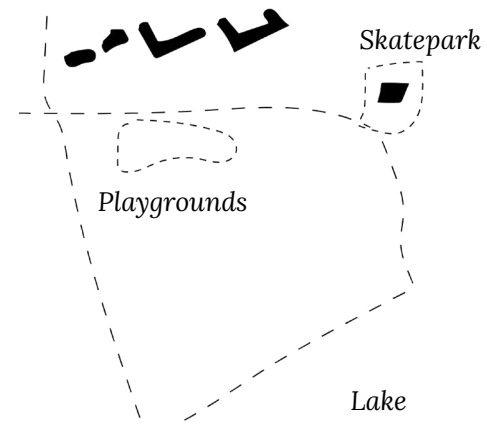
Fig. 78   Location E.2 scheme, source: Author

Fig. 79   Map location E.2, source: Author

Fig. 80-87   Photos, source: Author

4.3 Spatial justice analysis

In order to offer a just alternative, adaptation options must adhere to the three components of climate justice, (a) distributional justice, referring to spatial and temporal distribution of burdens and benefits amongst individuals, communities and nations, (b) procedural justice, implying the need for a democratization of climate-related decision-making and policy planning processes, and (c) recognition, emphasizing basic respect and fair engagement and consideration of a multitude of cultures and viewpoints (IPCC, 2022).

Distributive justice

equal distribution of
benefits and burdens

Procedural justice

participation in
decision-making

Recognition justice

validation, protection
and compensation
of marginalised and
vulnerable identities
and groups
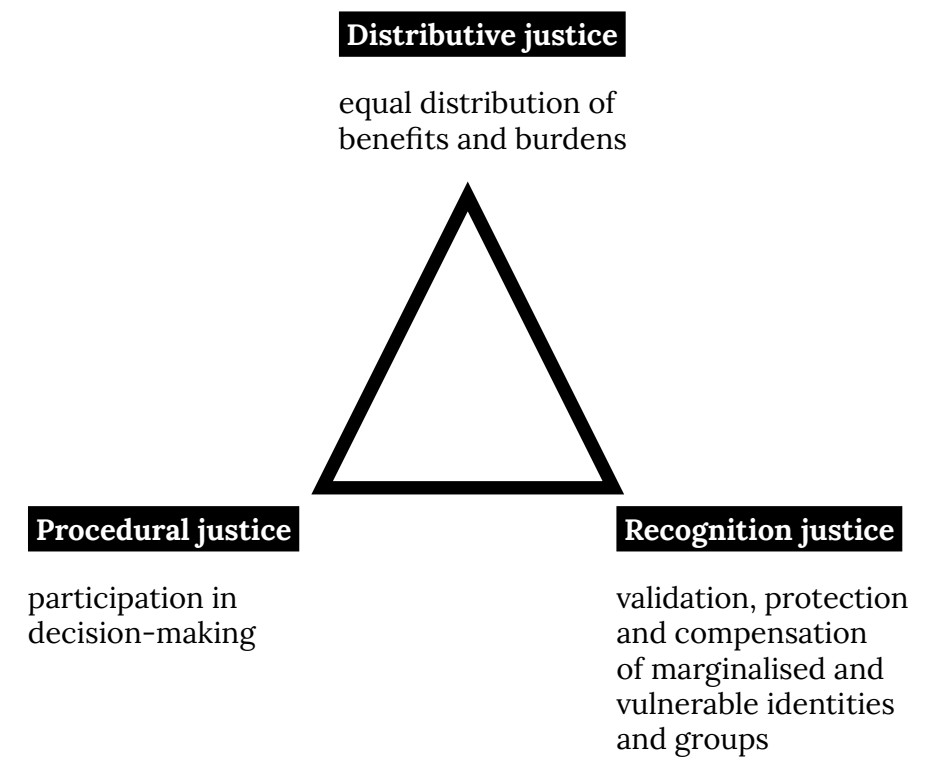
Fig. 88 Three dimensions of Spatial Justice, source: Author, based on IPCC (2022)

Recognition Spatial justice
validation, protection and compensation of marginalised and vulnerable identities and groups

The municipality recognises different groups and citizens and actively works with marginalised and vulnerable people. After the escalation of the war in Ukraine 2022, the neighbourhood became even more diverse while integrating ukrainian refugees. The population of the neighbourhood includes Vietnamese community, Roma community and also a small Russian community. The municipality employs workers dedicated to working with people of different ethnicities and nationalities. A lot of the work is done by NGOs and social organisations working in the area. Černý Most also has multiple organisations working with people living with disabilities and socioeconomically vulnerable citizens. This is also included in good accessibility of the neighbourhood. City hall offers maps for accessibility. Municipality housing is often offered to marginalised and vulnerable individuals and families. There is an asylum home for women and families.

Distributive Spatial justice
equal distribution of benefits and burdens as evaluated from previous analysis

During analysis, a clear spatial border crossing the middle of the neighbourhood emerged. The north-east side of the border bears multiple risks connected to climate change. A lot of paved areas, waste heat from cars, noise and emissions from the city car ring and small trees that have not received the care they require to provide necessary

functions for adaptation. This area is also the most used area out of the whole neighbourhood, as it spans from the metro station and central bus station, to the shopping mall and to the streets of compact post-modern blocks.

Similar exposure to noise and emissions is manifested in the north-east area, but this part of the neighbourhood does not face such high risks to heat and drought, because there is a lot of mature greenery and close proximity to the central park. This area has also badly maintained and lacking common spaces and playgrounds.
Another area that has no public playgrounds and common spaces is the are in the middle of the neighbourhood. The absence of functions is further deepened by the lack of commerce and retail and other services. The south-east of the neighbourhood has some shops and restaurants, but it is still missing outdoor common spaces and accessible playgrounds or fitness ground. Even though it is near the south park, some streets have higher risk to heat, because of paved areas and lack of trees, and to flood, because of elevation and retention areas.

The opposite side of the border is to the south-west, where individual residential housing is. The public space is minimised for the purpose of maximalisation of profits and land is mostly private and gated. This area, compared to the rest of the neighbourhood, lacks any public service or space. It is also one of the only areas with no municipality housing. It is protected from the main road and it benefits from the close proximity to the ecocorridor.

*Environmental distribution
(Greenery, noise, air quality, paving)*

*Social distribution
(Unemplyoment, playgrounds)*

Fig. 89 *Environmental distribution, source: Author*
Fig. 90 *Social distribution, source: Author*

Procedural Spatial justice
participation in decision-making as evaluated from the interviews with city hall representatives

Prague 14 has a strategical department with a participation coordinator. This coordinator plans and organises public meetings, discussions and participation connected to the development and future of the neighbourhood. Multiple participatory meetings were planned this year for gathering inputs for the preparation of the new strategical plan 2025+. Meetings were held across Prague 14 and two meetings were planned directly at Černý Most. During the meetings, public discussion about the central park was held as well. Local politicians and different stakeholders were present during those meetings. During my meeting with the participation coordinator, I discovered, that other meetings are planned with different target groups. There were meetings with the local elderly club and also an event with children from elementary school. No meeting was being planned for socialy or economically vulnerable citizens.

Fig. 91-95   *Municipality participation, source: Prague 14*

4.4 Nature-based solutions

The urban landscape is an interconnected system. The built environment functions as a system that modifies the local hydrology and climate, and hence, influences the frequency and intensity of hydrometeorological natural hazards. At the same time, the built environment can often hinder large-scale NBS because of space constraints. Critical considerations can be defined that enable the integration of NBS in the urban landscape (World Bank 2021).

With the alarming levels of biodiversity loss, cities also have a responsibility to contribute to global efforts to restore, strengthen, and enhance biodiversity. In practice, this involves ensuring that critical biodiversity areas are protected and effectively managed, and that ecological networks are enhanced to promote the movement of wildlife that is necessary for dispersing, foraging, and maintaining genetic diversity. Planning of ecological

networks is therefore critical in cities where NBS can be used to provide supplementary habitat. Optimizing these benefits does, however, require an understanding of the local ecology including temperature, rainfall, soils, and the selection of naturally occurring plant species for their use in NBS projects (World Bank 2021).

This chapter uses framework and categorization from A Catalogue of Nature-based Solutions for Urban Resilience developed by World Bank. Nature-based solutions that geographically suit the Černý Most location were selected.

Urban forests

River and stream renaturation

Building solutions

Green corridors

Urban farming

Bioretention areas

Open green spaces
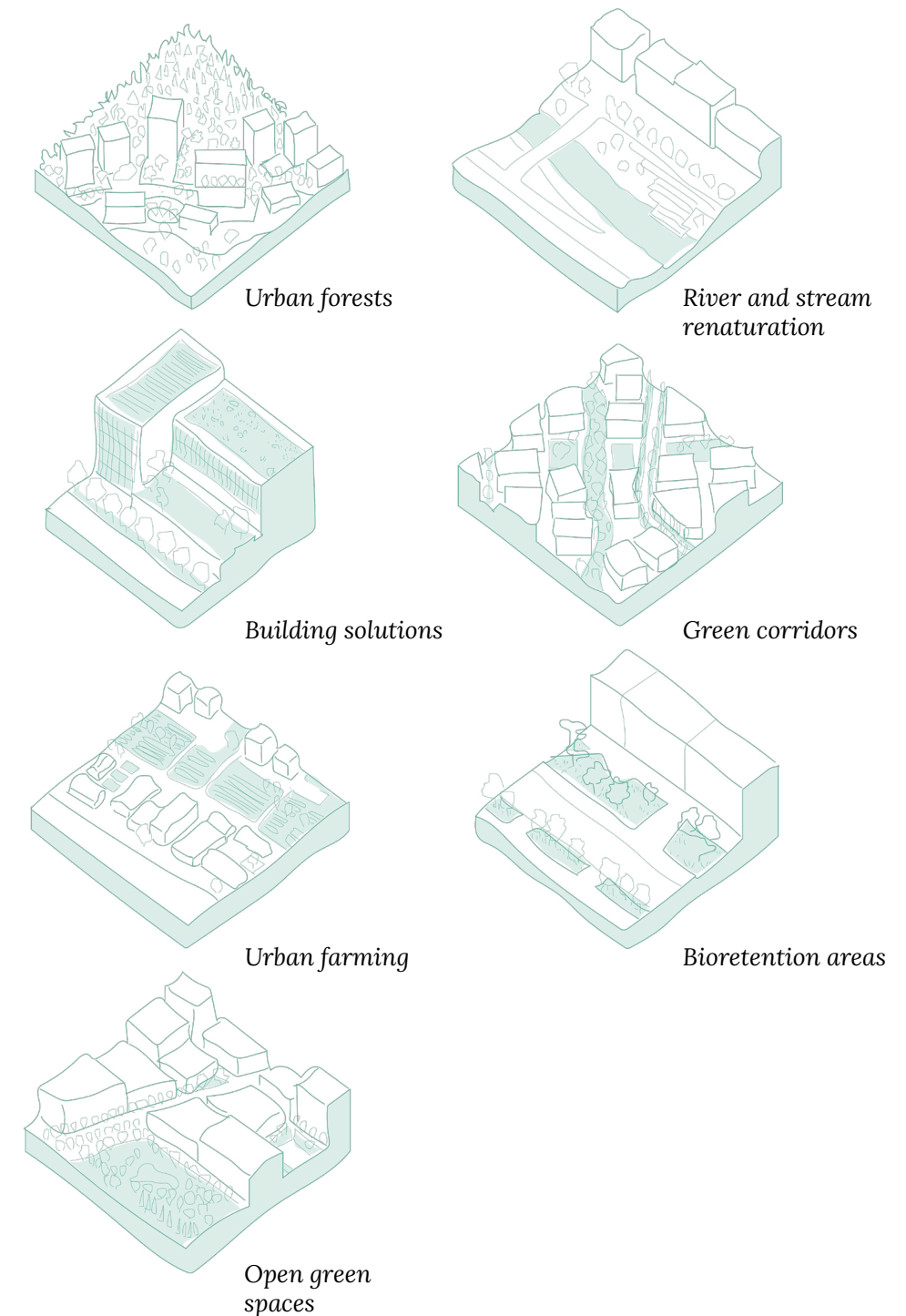
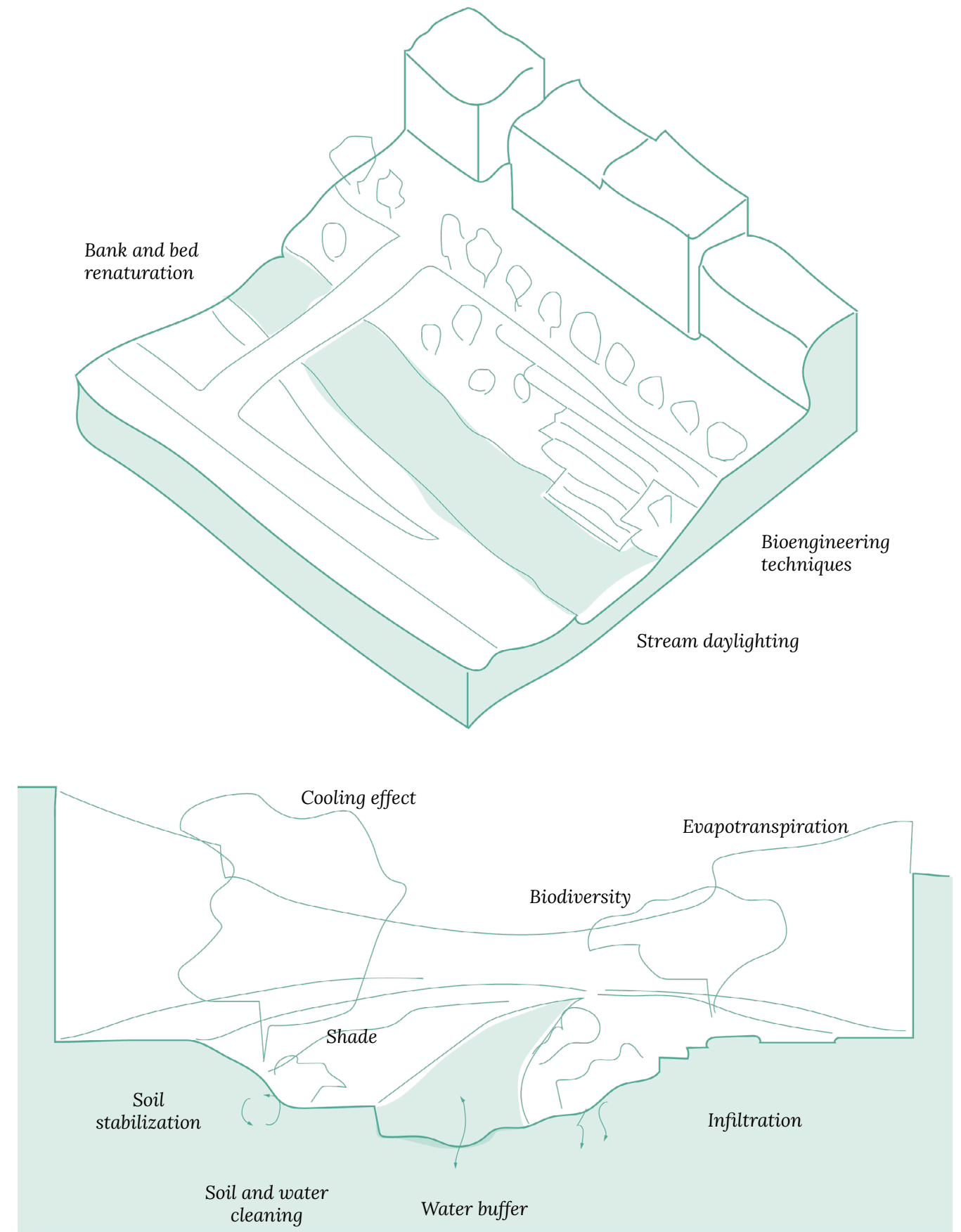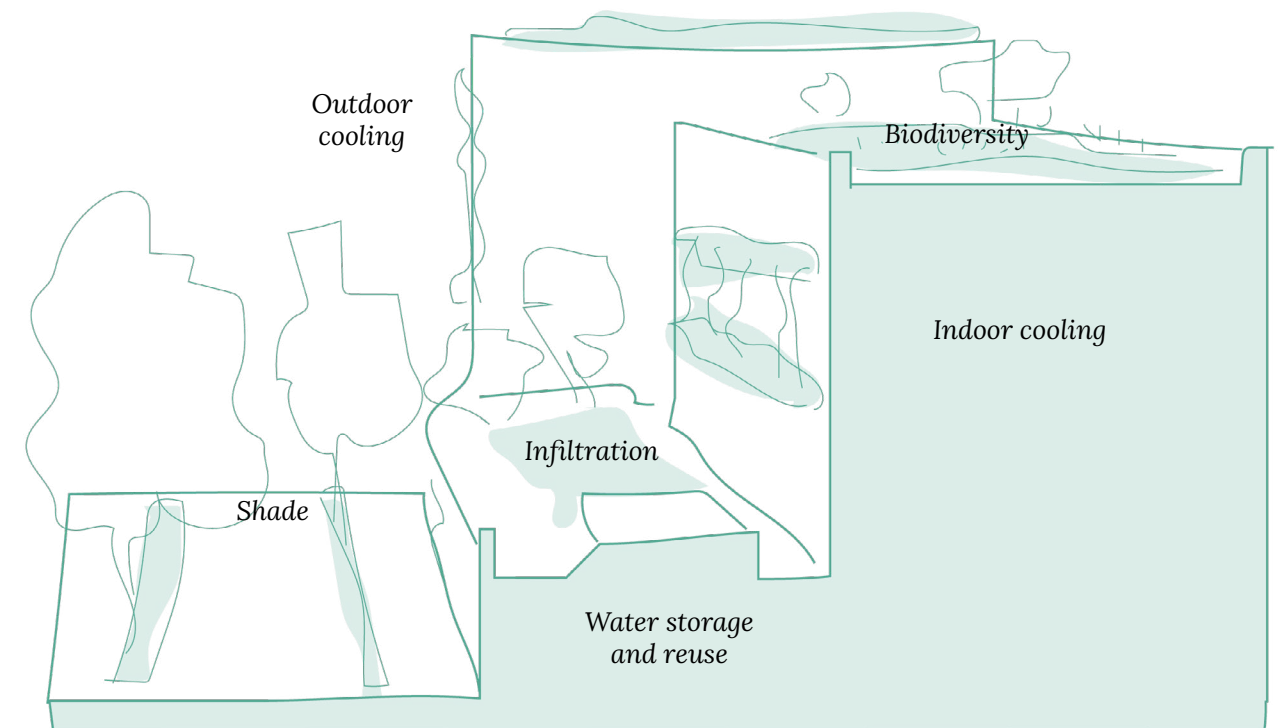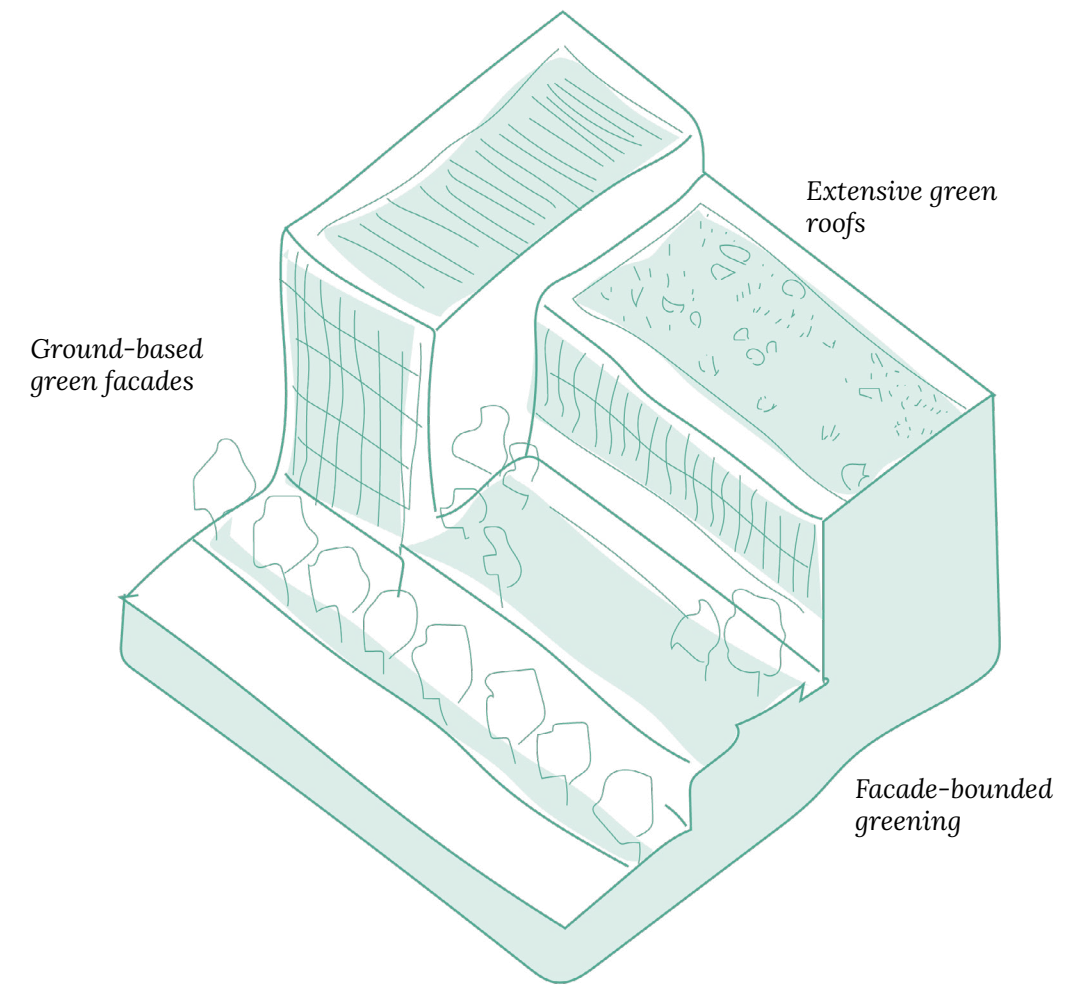*Fig. 96-102   Selected nature-based solution, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).*

River and stream renaturation

„River renaturation establishes a meaningful relationship between the city and its river. The new public space provides recreational and cultural benefits, contributing to the city's identity. Stream renaturation returns streams to communities. It makes water a visible, valuable, and enjoyable part of daily life; an asset that protects and invigorates. People experience the river and its riparian corridor as one landscape, full of opportunities, recreation, and education, a year-round source of discovery" (World Bank, 2021).

Bank and bed renaturation

Bioengineering techniques

Stream daylighting

Cooling effect

Evapotranspiration

Biodiversity

Shade

Soil stabilization

Infiltration

Soil and water cleaning

Water buffer

Fig. 103-104   River and stream renaturation, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).

Open green spaces

„Open green spaces provide refugia for wildlife, recreational and cultural programs, and amenities for urban communities. In tropical and subtropical regions, green spaces offer areas for cooling, making it safer and more pleasant to spend time outdoors. Accessible green spaces of all scales close to residential and commercial areas are highly valuable to quality of life and public health benefits" (World Bank, 2021).

Climate-proof residential gardens

Pocket parks

Natural playgrounds

Evapotranspiration

Carbon sequestration

Cooling effect

Biodiversity

Shade

Infiltration

Water storage
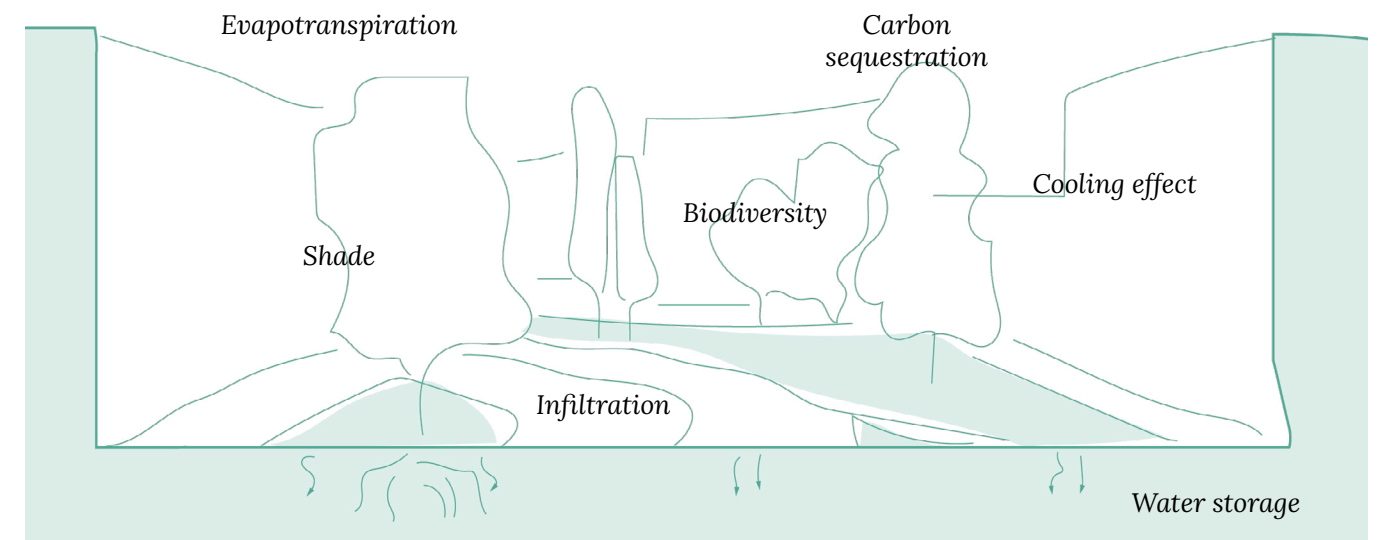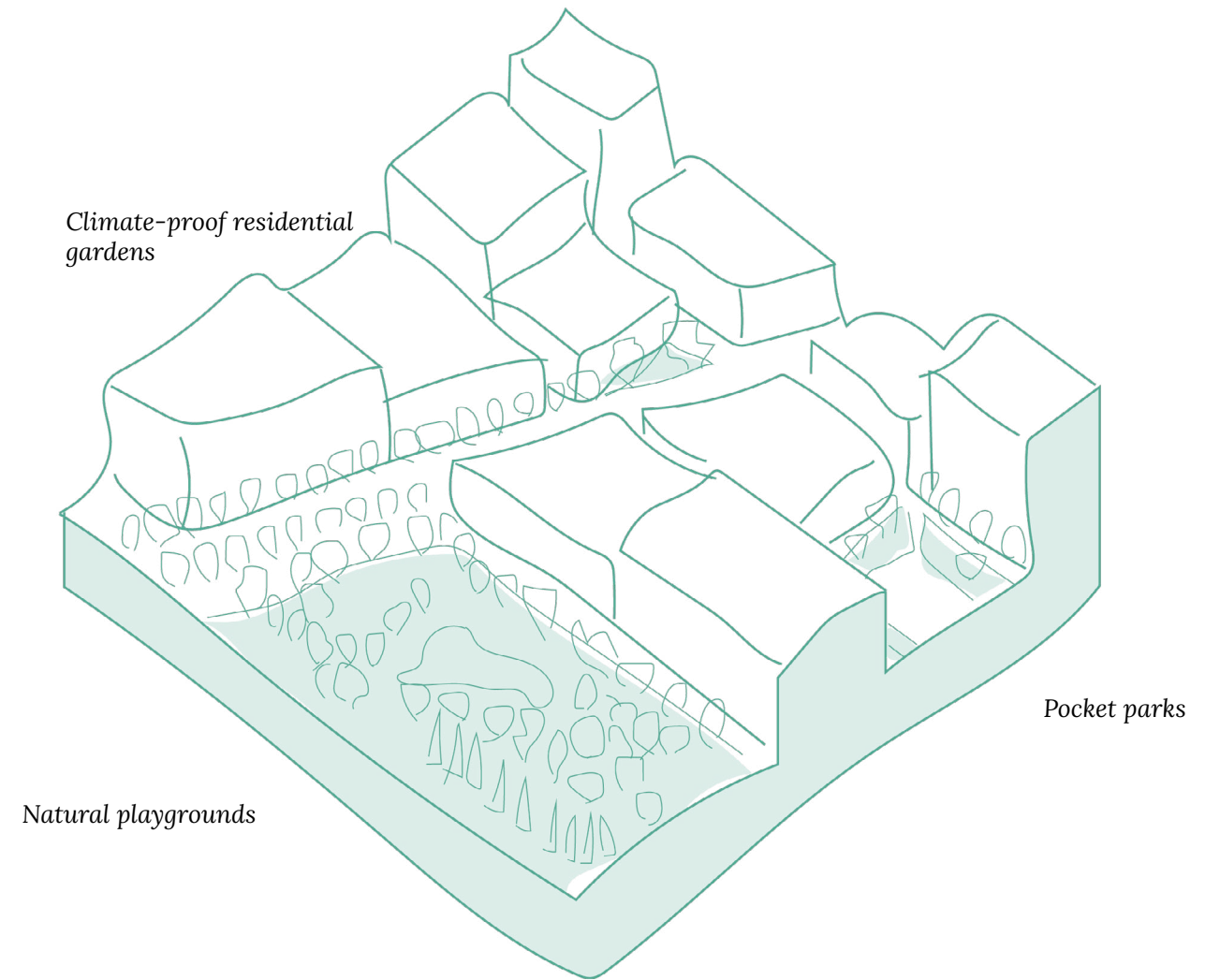
Fig. 105-106   Open green spaces, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).

Building solutions

„Application of nature-based solutions at the scale of buildings signals the urgency of urban adaptation to climate change and enhances the built identity. A green roof serves as communal space that brings neighbors and coworkers together, enriches social interaction, and increases community trust. Rooftop gardens offer additional usable space in dense urban environments; provide opportunities to grow flowers and vegetables, exercise, work, and rest" (World Bank, 2021).

Extensive green roofs

Ground-based green facades

Facade-bounded greening

Outdoor cooling

Biodiversity

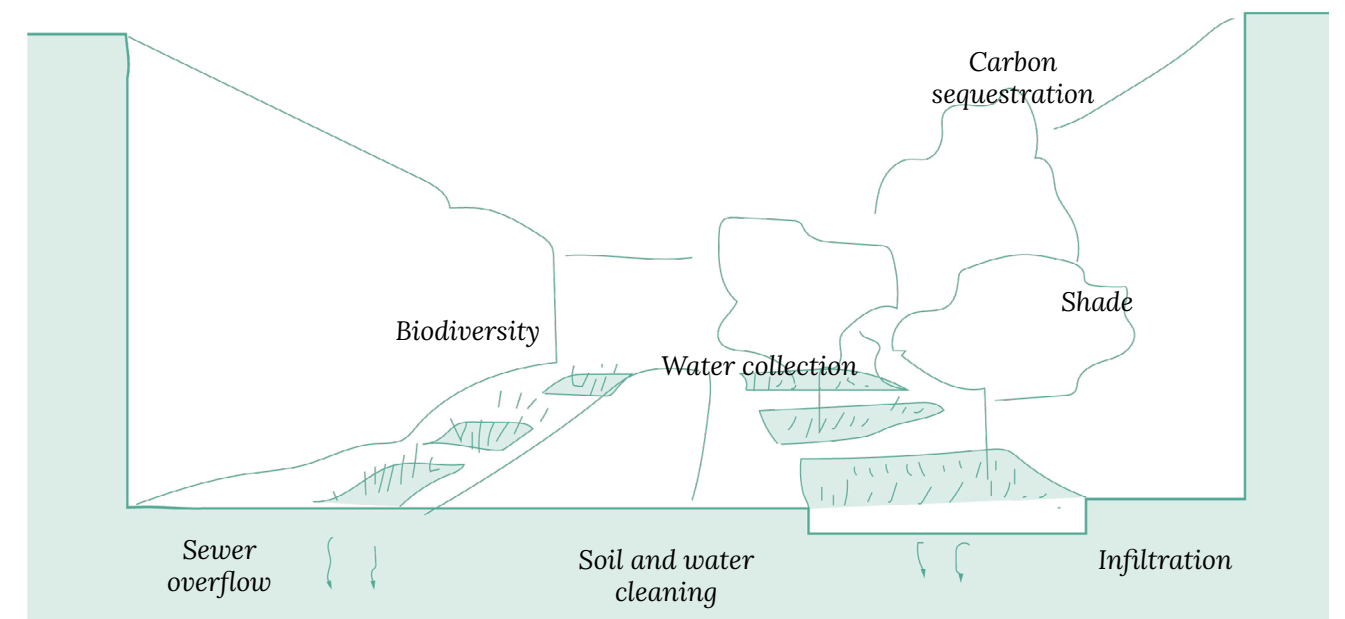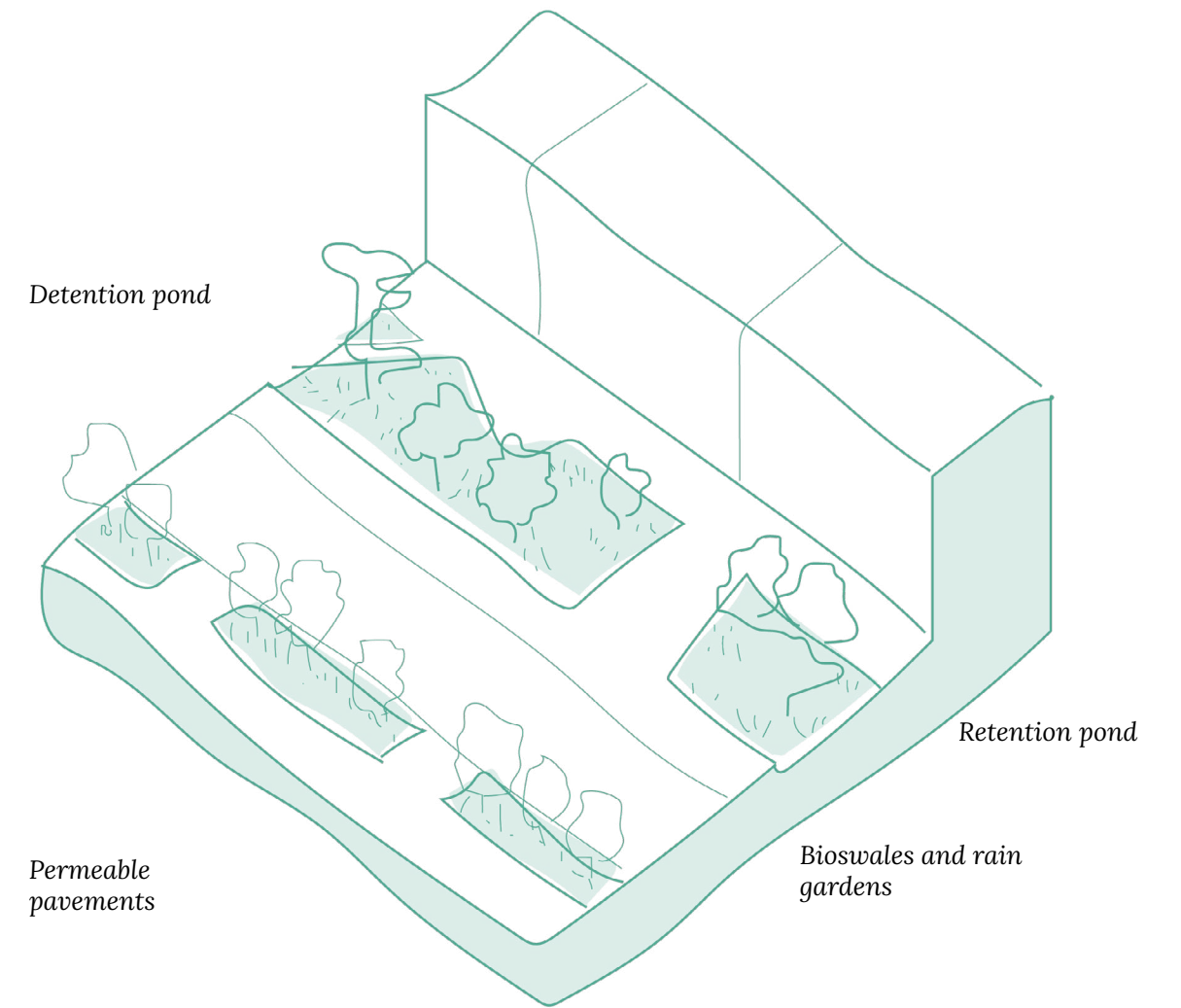*Indoor cooling*

Infiltration

Shade

Water storage and reuse

Fig. 107-108   Building solutions, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).

Green corridors

„Maintaining buffers along drainage lines improves water quality and provides critical habitat linkages for wildlife. Steppingstones for biodiversity are provided when the design of parks and gardens seek to complement existing corridors. Maintaining green verges and establishing trees alongside roadways enhance aesthetics, reduces heat, and provides shade for pedestrians" (World Bank, 2021).

Urban green corridors

Green avenues

Street tree canopies

Carbon sequestration

Air cleaning

Evapotranspiration

Cooling effect

Shade

Biodiversity

Infiltration
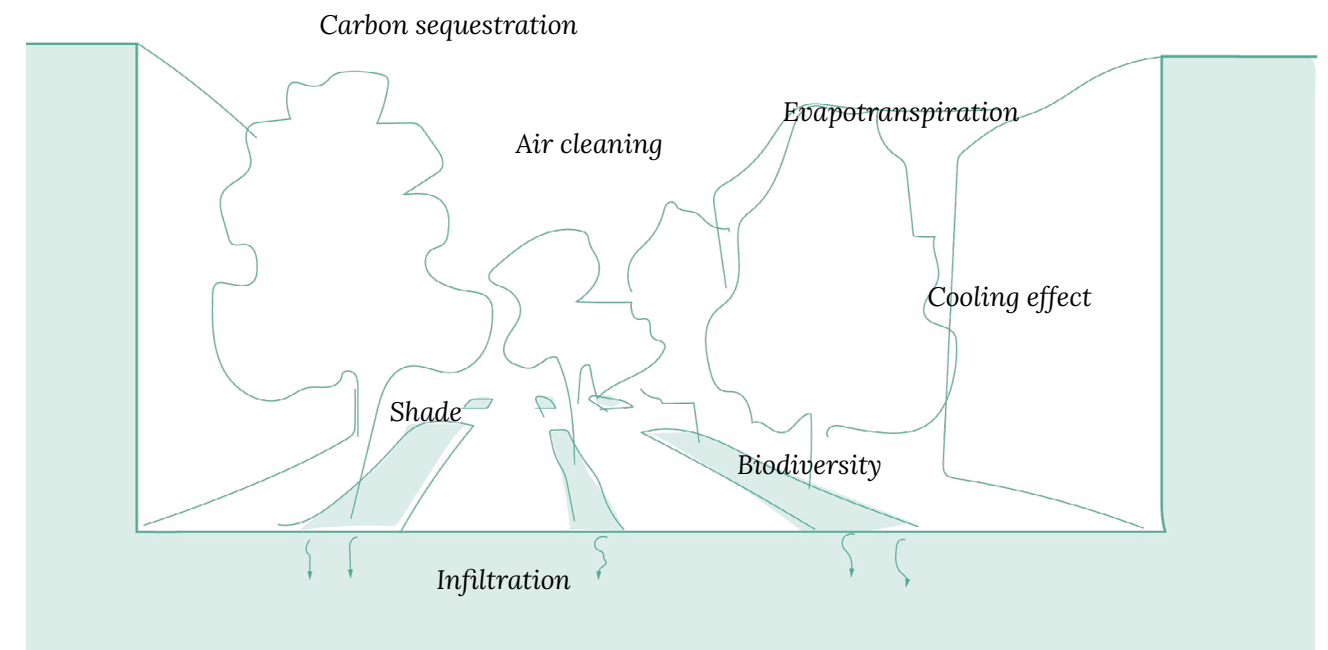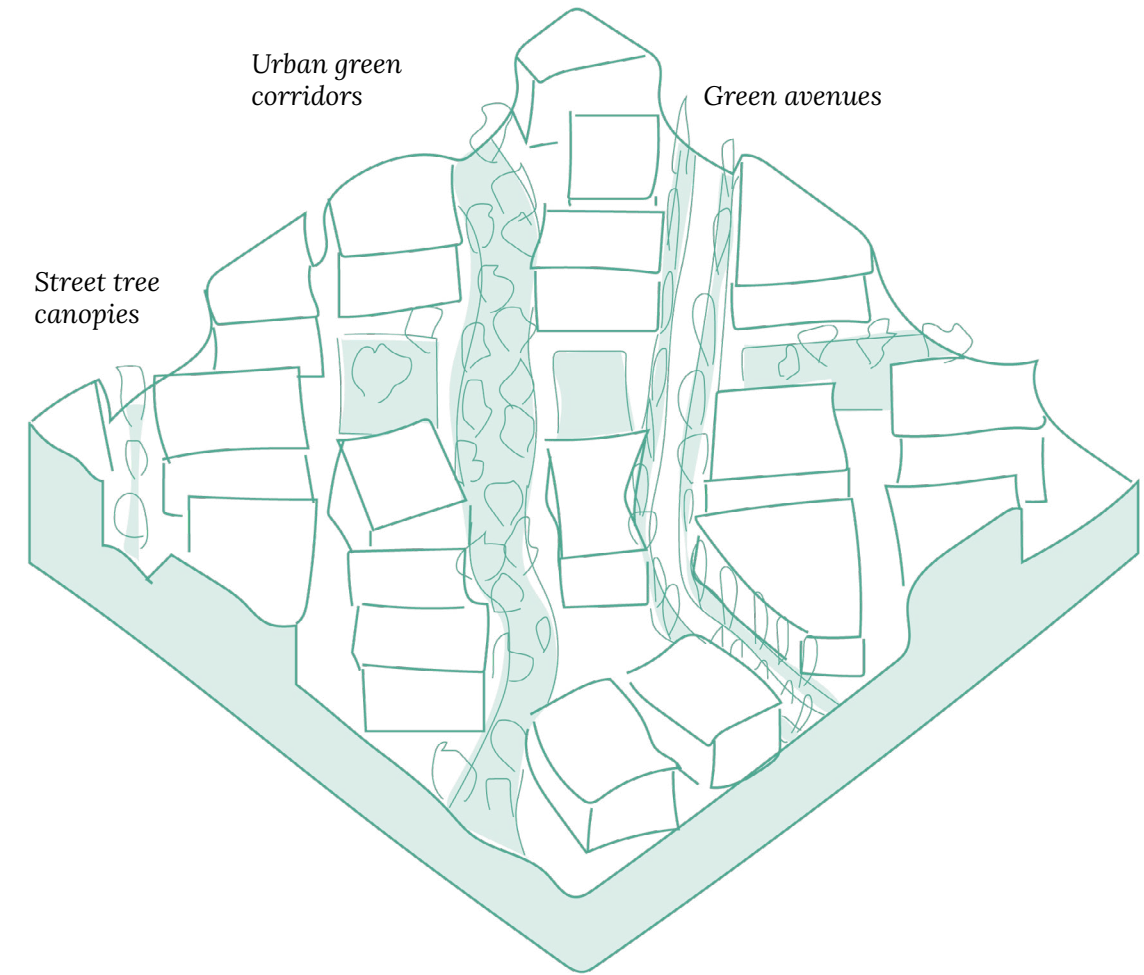
Fig. 109-110   Green corridors, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).

Urban farming

„Outdoor urban farming can produce local food; reduce urban waste stream by absorbing compost; and reduce stormwater runoff by infiltrating and storing water. Farming creates strong urban identity and prevents soil erosion, mudslides, and other hazardous effects of loose soils in areas with complex terrains, while increasing social cohesion. Farming can take place in vacant lots, on rooftops, and high potential agricultural land. It delivers multiple ecosystem service benefits, creates local employment and a beneficial sense of community belonging" (World Bank, 2021).

Raised beds

Amphibious farming

Floating farming

Biodiversity

Carbon sequestration

Water storage and reuse

Evapotranspiration

Infiltration

Soil and water cleaning
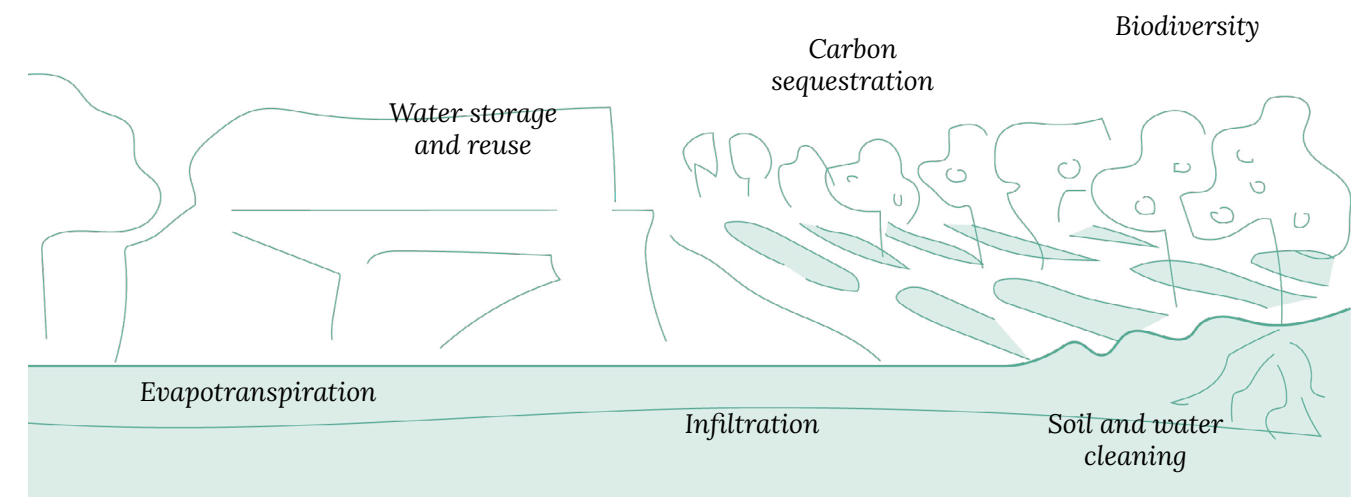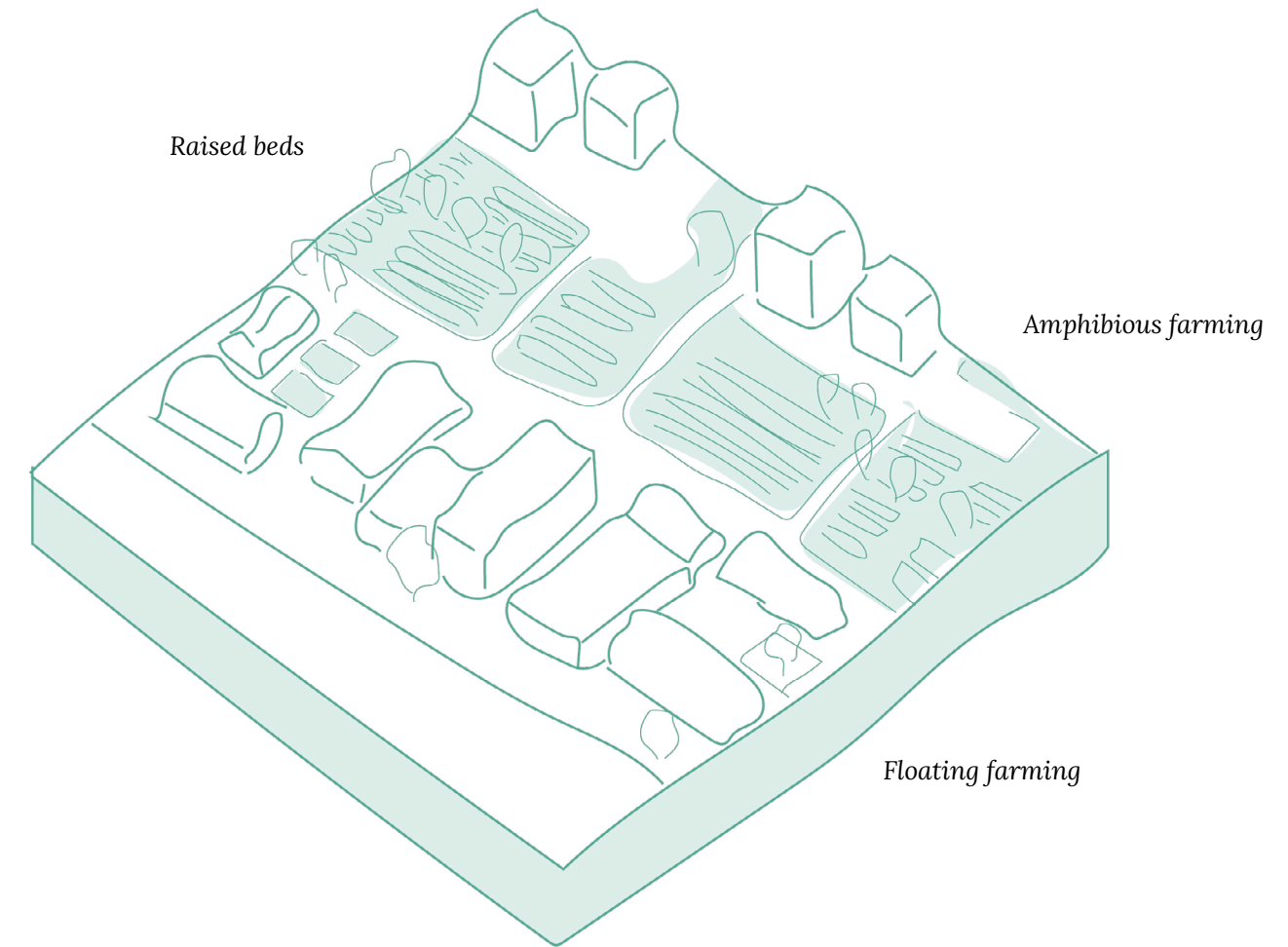
Fig. 111-112   Urban farming, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).

Bioretention areas

„Bioretention areas create natural and ecological spaces for local residents to recreate. Introduction of bioretention areas into streetscape reduces the dominance of cars and gray infrastructure, bringing nature into public spaces. Linear bioretention areas improve the transition between public and private spaces in cities" (World Bank, 2021).

Detention pond

Retention pond

Permeable pavements

Bioswales and rain gardens

Carbon sequestration

Shade

Biodiversity

Water collection

Sewer overflow

Soil and water cleaning

Infiltration

Fig. 113-114 Bioretention areas, source: Author, based on A Catalogue of Nature-Based Solutions for Urban Resilience (World Bank, 2021).

4.5 Public space categorization

Apart from different locations, another possibility for understanding and categorizing the area is through analysis of the public space. Each location, no matter the development history, shares similar types of public space. They range from completely public to completely private. Sometimes it is not easy or possible to find a clear definition between certain public spaces, as space is a spectrum. This analysis does not intend to find definite borders, but to understand and capture the essence and uniqueness of every space. Next to it, analysis of opportunities and risks is conducted to be worked with.

Public   Private

Landscape   Small public   Public   Main road   Periphery   Buildings   Private
and parks   spaces   courtyards   and parter   areas
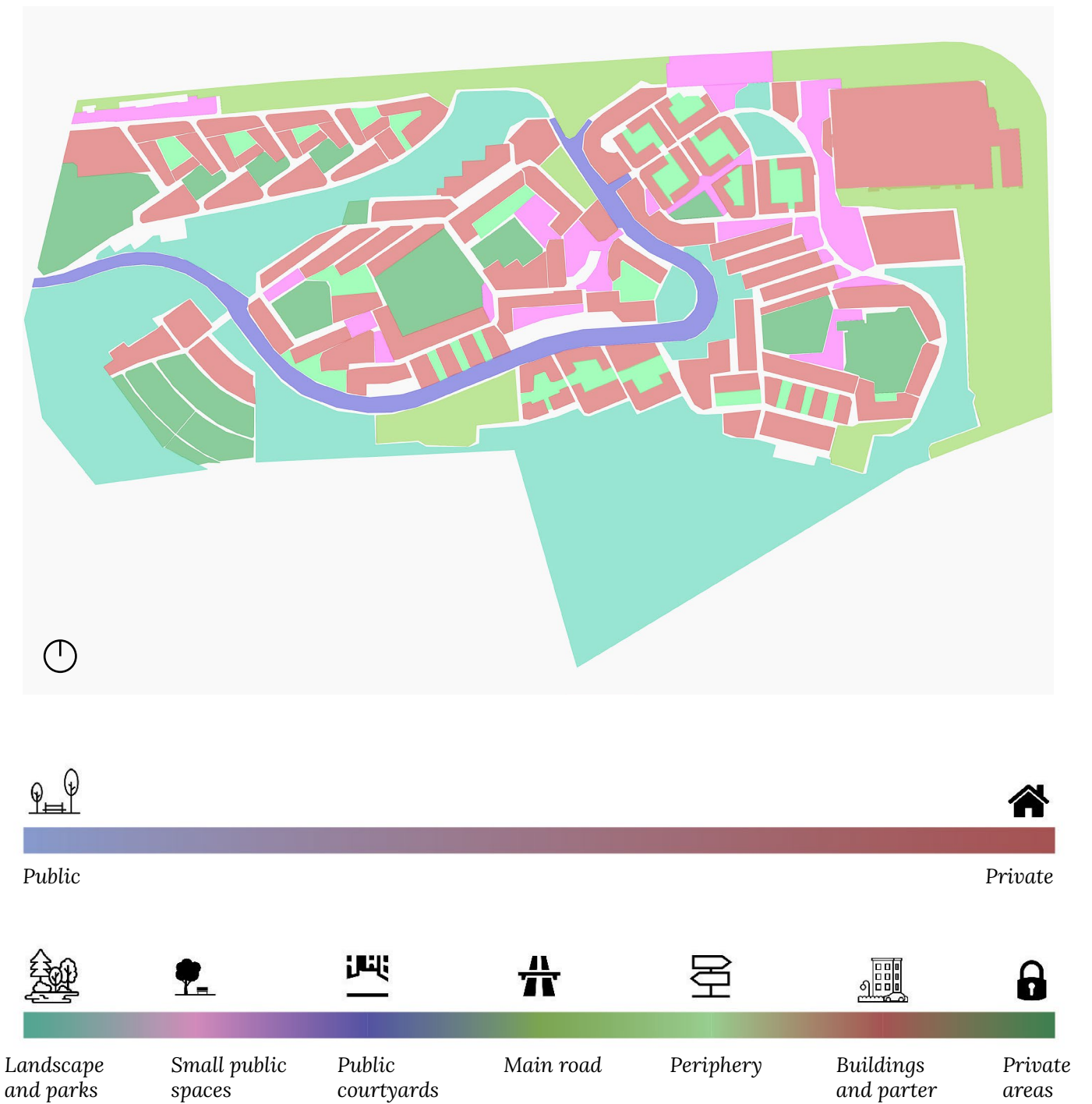
Fig. 115 Public space categorization by publicness, source: Author

Buildings and parter

Buildings and their immediate surroundings form most of the daily experience of local citizens. The sidewalk and entrances to the houses represent a big potential in making everyday life better. Nowadays, this space is unused and monotone, posing a risk in terms of cooling down the streets and interiors. In the future, they could offer more social infrastructure.

Fig. 116 *Drawing, source: Author*
Fig. 117 *Photo, source Author*
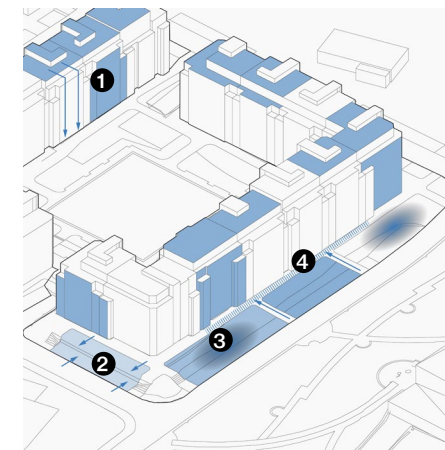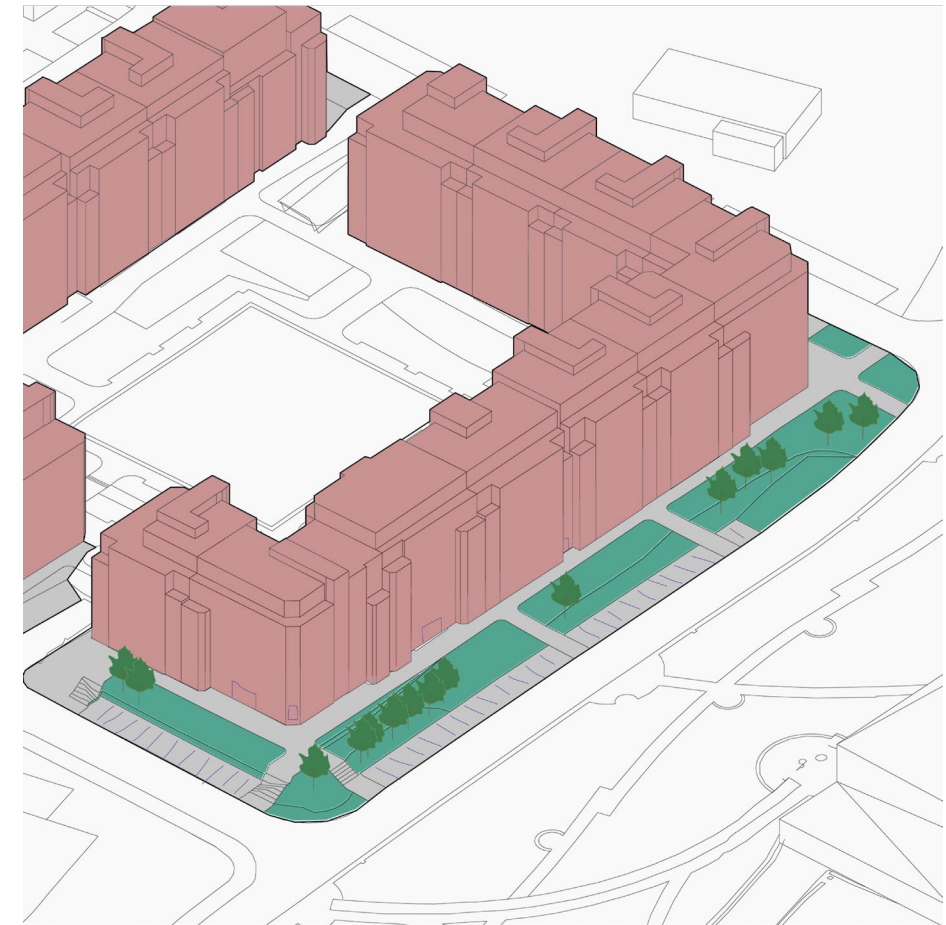
Opportunities
1. Roofs and facades
2. Water retention from streets and pavements
3. Parter, bikes, community, benches, shadow, gardens
4. Interior and exterior contact
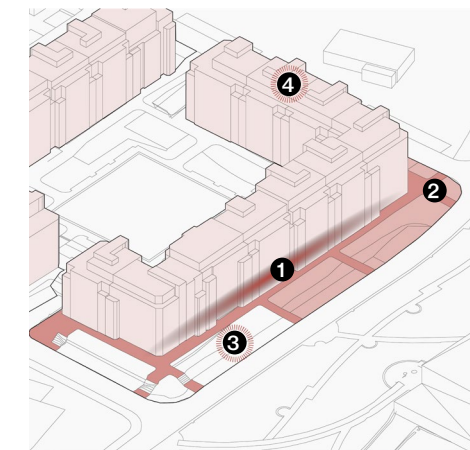
Risks
1. Heat
2. Not permeable paving
3. Water running off
4. Lack of shading

Fig. 118-120   *Drawing Buildings and parter, opportunities and risks, source: Author*

Vague terrains and peripheries

The area is cut off in the north-east with city ring and a highway, which poses a big risk but opportunity as well. They are a source of noise and emissions and form a literal wall for people and animals alike. At the same time, vague spaces offer a big biodiversity and also identity for residents, breaking up the smoothness of usual comercial polished public space.

Fig. 121 Drawing, source: Author
Fig. 122 Photo, source Author
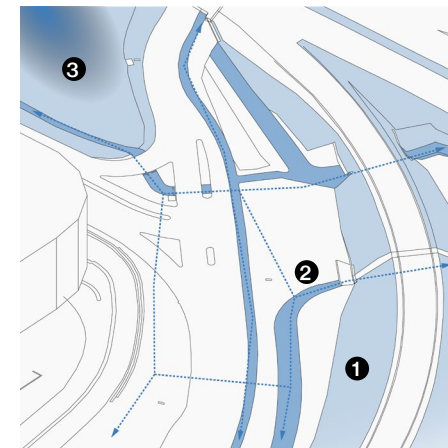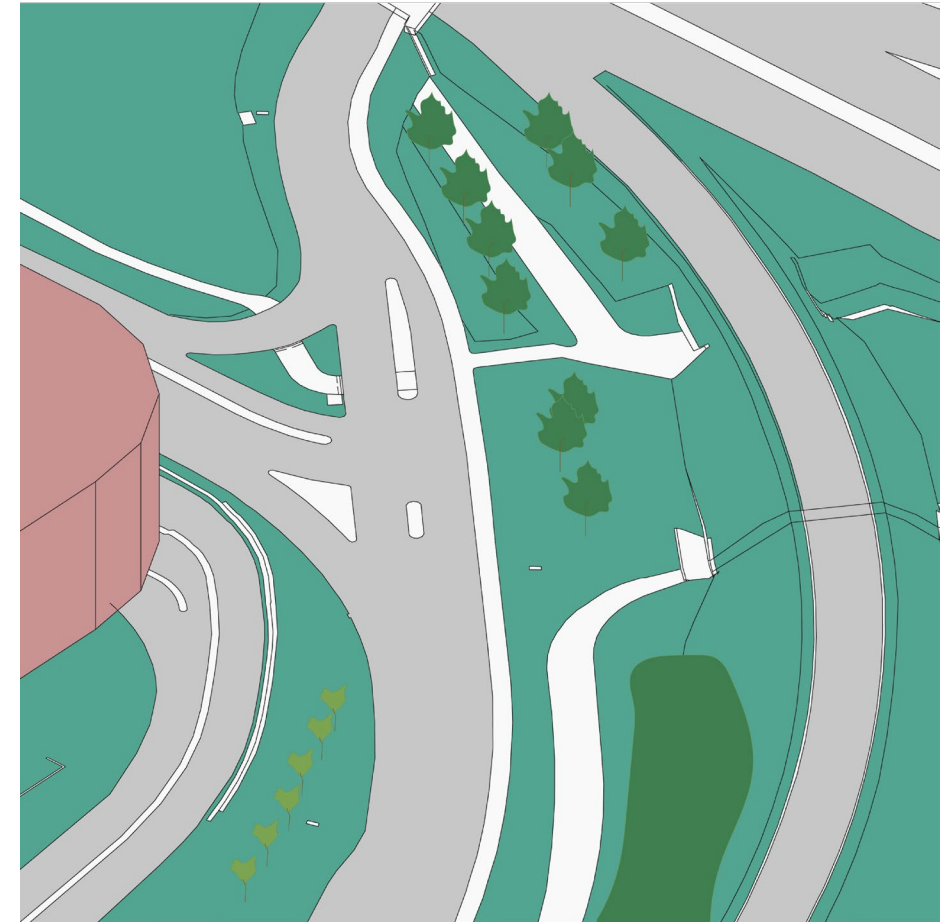
Opportunities
1. Corridors absorbing emissions
2. Connectivity, safety and clearness
3. Biodiversity
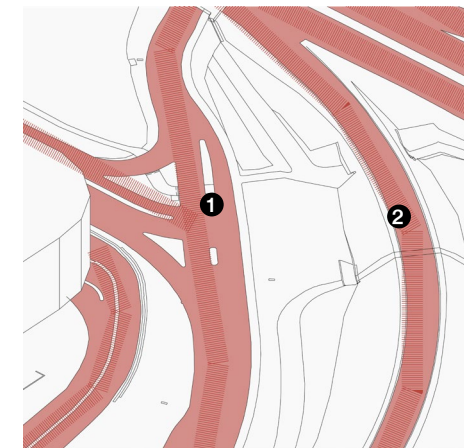
Risks
1. Cars, noise and emissions
2. Breaking connections and networks

Fig. 123-125   Drawing vague terrains, opportunities and risks, source: Author

Main road

The main road street Ocelkova is meandering through the middle of the neighbourhood and while it is now used mostly by cars, in the future, it could be a vital biocorridor and transportational line for bikes and pedestrians. The road has almost a river-like influence on the neighbourhood, with the bridges over it and its presence throughout the neighbourhood.

Fig. 126 Drawing, source: Author
Fig. 127 Photo, source Author
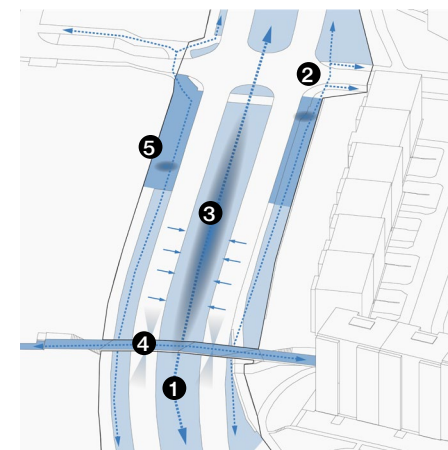
Opportunities
1. Biocorridor
2. Protected bikelanes
3. Biodiversity, water retention
4. Bridges, overview
5. Shaded bus stops
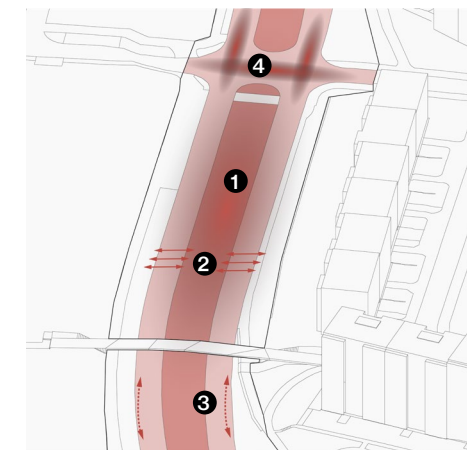
Risks
1. Unused space
2. Car dominance
3. Unprotected bikelanes
4. Overheating, noise

Fig. 128-130   *Drawing main road, opportunities and risks, source: Author*

Public courtyards

The neighbourhood offers a lot of publicly accessible courtyards, offering shorter walking distances and interesting form of public space, which could be used for strenghtening community in the residential areas. They could be used for gardening, collecting water and cooling down the neighbourhood, having health benefits for the residents next to it. Sadly, today its mostly short cut grass and not-functional playgrounds.

Fig. 131 Drawing, source: Author
Fig. 132 Photo, source Author
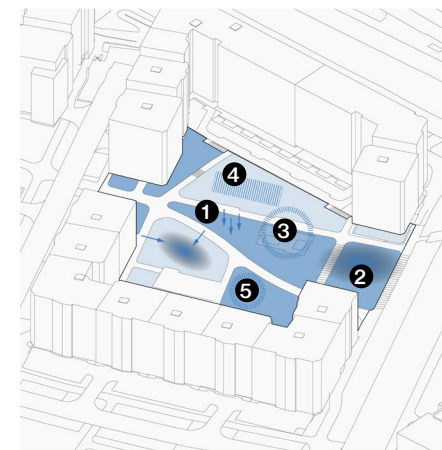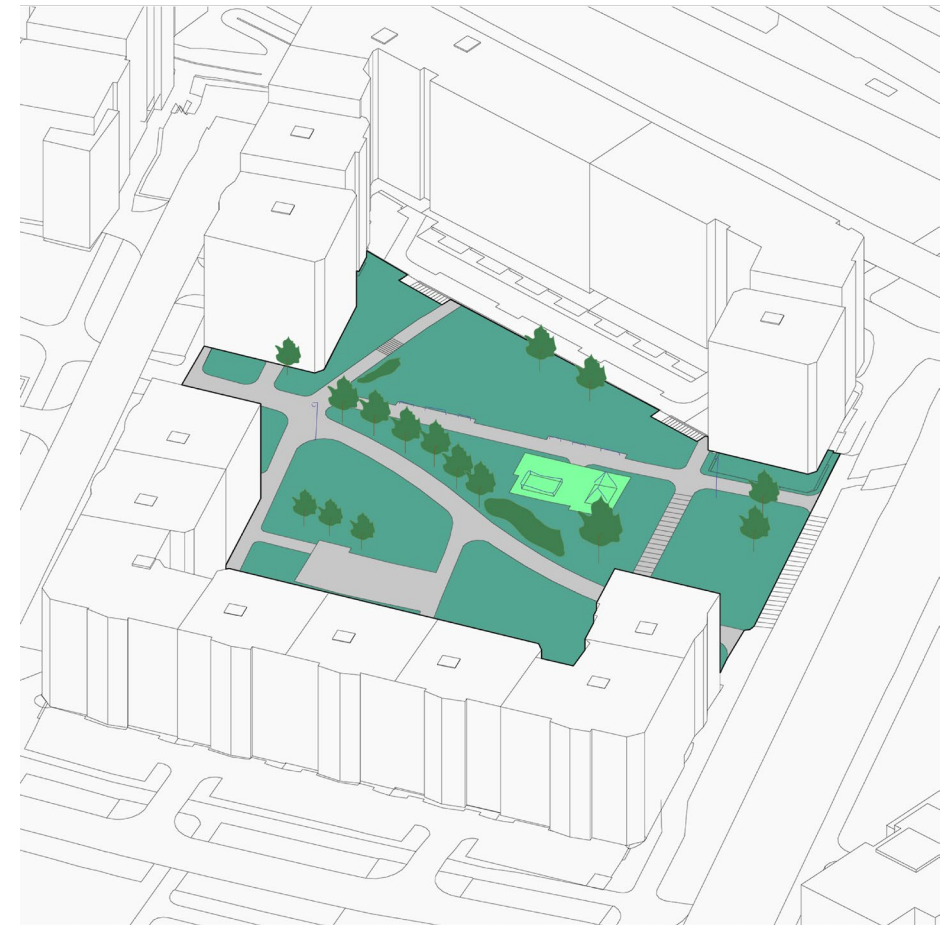
Opportunities
1. Water retention, rain gardens
2. Shade, cooling
3. Places for meeting and spending time, communal garden
4. Natural playgrounds
5. Food and farming
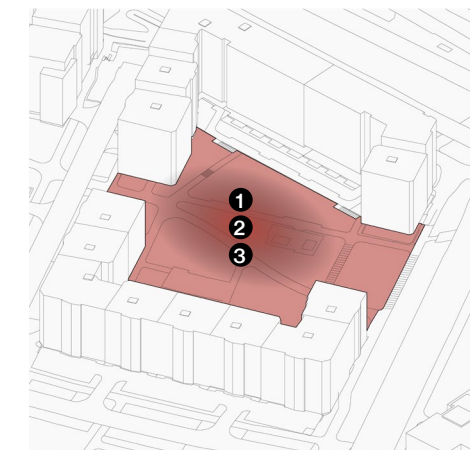
Risks
1. Unused space with no programme
2. Heat vulnerable, paved areas, lack of shading
3. Bad safety and clearness

Fig. 133-135   *Drawing public courtyards, opportunities and risks, source: Author*

Small public spaces

Small public spaces scattered throughout neighbourhood are mostly covered with paved areas and lack of shading. They have a big potential to form a recognizable identity of the neighbourhood and are a space for public life.
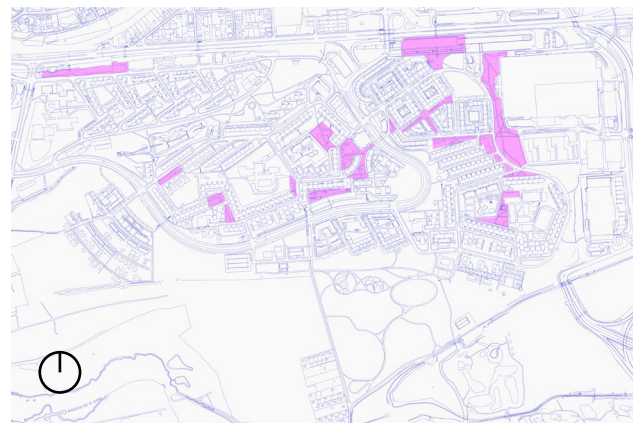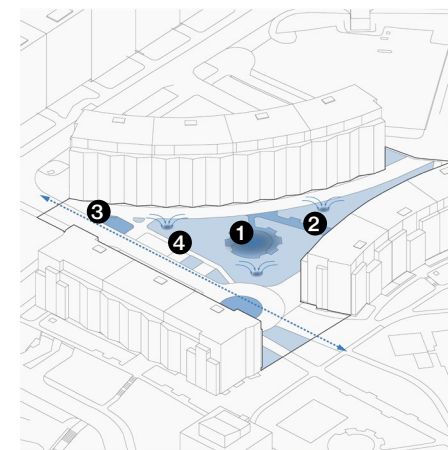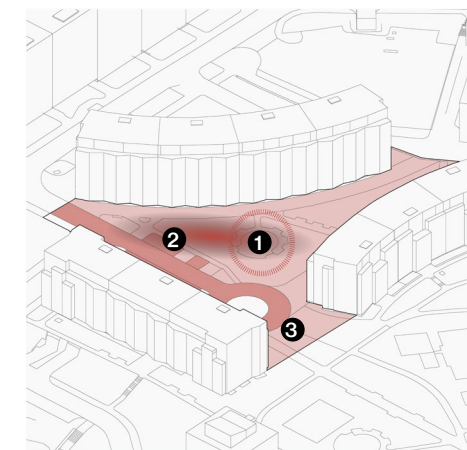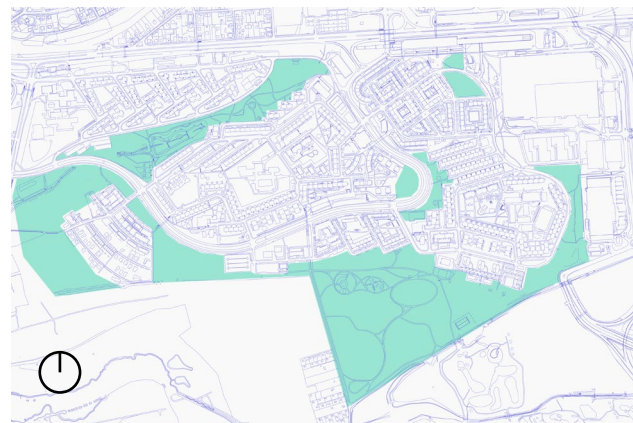

Fig. 136 Drawing, source: Author
Fig. 137 Photo, source Author

Opportunities
1. Place for meeting
2. Pocket park, urban farming
3. Corridors
4. Bioretention

Risks
1. Missing communal spaces
2. Homogeneous
3. Dominated by cars

Fig. 138-140   Drawing small public spaces, opportunities and risks, source: Author

Landscapes, parks and river

The neighbourhood already has
a large amount of parks, open
landscapes and water bodies,
but it doesnt offer much in its
current state. They are a crucial
infrastructure for adapting the
neighbourhood to climate change,
but they need significant remaking to
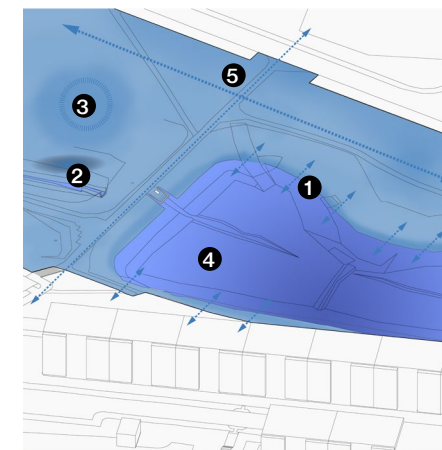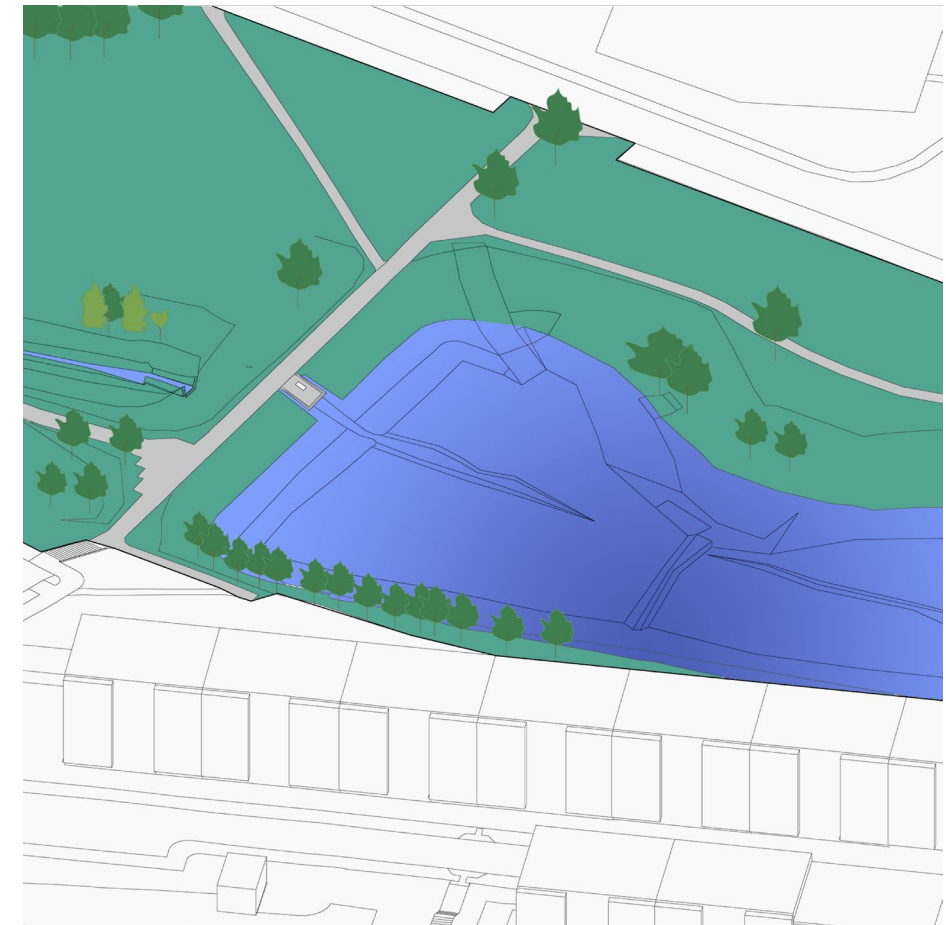offer more shading, biodiversity and
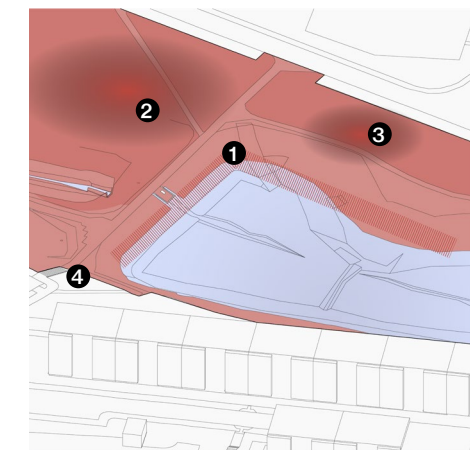space for social life.

Fig. 141 *Drawing, source: Author*
Fig. 142 *Photo, source Author*

Opportunities
1. *Access to water*
2. *Shade*
3. *Recreation, activities*
4. *Evaporation*
5. *Ecological corridor, biodiversity*

Risks
1. *Water shore*
2. *Large homogenous areas*
with low biodiversity
3. *Missing activities and programme*
4. *Bad foot connections*

Fig. 143-145   *Drawing landscapes, parks and river, opportunities and risks, source: Author*

4.6   Conclusions

Černý Most is a diverse broad area with a specific identity, set of challenges and possibilities to grow in the future. Even though the neighbourhood is relatively young, it has a variety of urban fabrics, reflecting different periods and their economic directions. These fabrics organize for different types of public spaces offering various public functions. Their main characteristics can be summarized as a lack of diversity and under-utilized potential, both in terms of ecological and social aspects. These ecological and social aspects vary throughout the neighbourhood. The neighbourhood faces uneven distribution in terms of climate change risks, as some parts are especially vulnerable while other parts are relatively safe. The distributional mismatch is also visible in outdoor social spaces, such as benches, playgrounds and other activities. The parts of the neighbourhood with the higher quantity of unemployment or other social problems correlate to the lower number of social spaces. To combat the risks, existing nature-based solutions exist, as listed in the chapter.

Urban fabrics

If you walk through the neighbourhood you will notice that some buildings and streets look different than others. This is because the neighbourhood was growing and developing in different times and economical periods. Understanding and reflecting these differences can help us reinforce identity of the neighbourhood and sense of belonging.

Spatial justice

Social sustainability is a key component in adaptation. If benefits and burdens are not shared equally, the risk of conflicts and polarisation increases. This equality is not distributed in the neighbourhood in ecological and social aspects. Some parts of the neighbourhood have a lack of social spaces and some parts have to deal with much higher noise, pollution, and less greenery. Also, some inhabitants are excluded from participation and decision-making.

Nature-based solutions

Every space has a potential to increase the benefits of green and blue infrastructure in the city. Spatial solutions that use nature-based systems already exist. Choosing the right ones for specific climate and location is crucial, same as understanding their potentials and problems.

Public space categorization

Different public spaces in the city were created to reflect different needs and facilitate different activities of everyday life. These public spaces can be categorised differently in the historical center and in the modernistic and post-modernistic neighbourhoods, such as Černý Most. The main challenges include short-cut vegetation and lack of diversity, as well as inpervious surfaces that do not hold water. Utilising the potential to transform the public space into more ecological and social space is a goal.

Fig. 146 Photo, source: Author
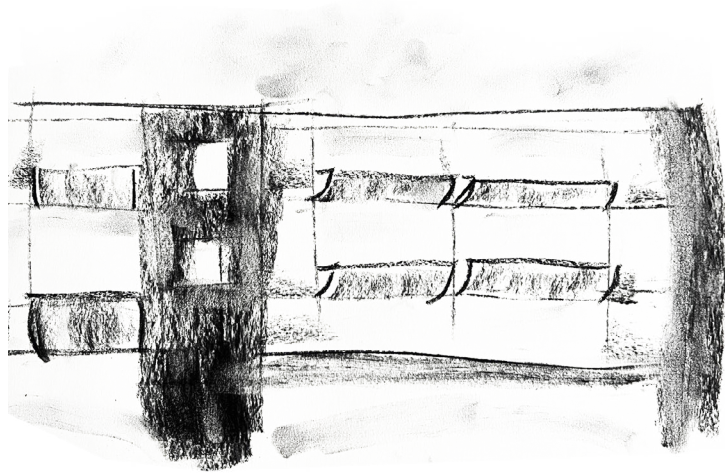
In the book Re-Act. Tools for Urban Re-Activation, participation is defined as *"a slippery tool that evades definition: [...] neither easy, nor immediate, nor always successful, [...] perhaps the instrument most open and unpredictable"*.

05 Participation

5.1   Providers of care analysis, target groups

Prague 14 has a lot of organisations and social workers working with vulnerable citizens. Based on the vulnerability framework of Bruno Soares, S. Gagnon, and M. Doherty (2012) I identified the relevant ones and reached out to them.

An example of an email sent to the organisations

Hello,
My name is Filip Chládek, I am studying Landscape Architecture at the Technical University of Delft in the Netherlands and my thesis is about the public spaces of the Černý Most neighbourhood. I am also interested in the topic of participation with more vulnerable/overlooked groups of citizens and therefore I am reaching out to non-profit organizations working in Prague 14 and directly in Černý Most.
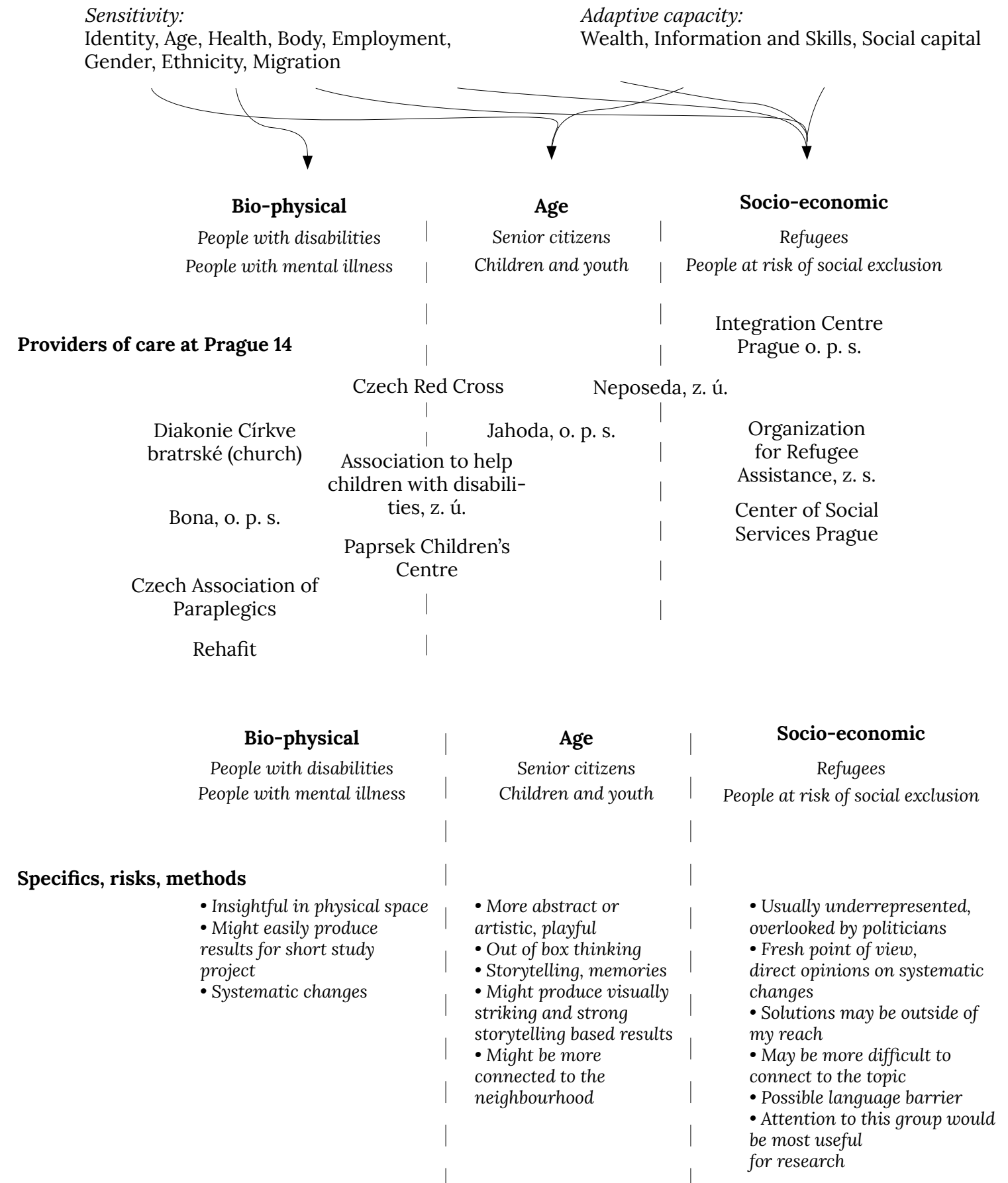
I would like to ask you if there would be an opportunity to work with your organization (and your clients) as part of my thesis. I would be interested to know how the people you help perceive the public space of the neighbourhood in terms of opportunities, safety, leisure, accessibility, as well as the changes and extreme weather events in recent years.

Quite specifically and ideally I would like to join your outreach programme once or twice between late January and March and meet the people you work with. I could prepare some customized activities to help introduce and direct my questions and better simulate real participation in spatial design. All on a voluntary basis and by agreement and consent, of course. Alternatively, I would be happy to adapt to other options that would be more suitable.

In return for your time, I will be happy to donate my time, for volunteering, helping out or other work. It's no problem to possibly call and introduce everything a little closer.
Thank you very much and have a great start to the year.

Vulnerability to Climate Change

Sensitivity:
Identity, Age, Health, Body, Employment, Gender, Ethnicity, Migration

Adaptive capacity:
Wealth, Information and Skills, Social capital

Bio-physical
People with disabilities
People with mental illness

Age
Senior citizens
Children and youth

Socio-economic
Refugees
People at risk of social exclusion

Providers of care at Prague 14

Integration Centre Prague o. p. s.

Czech Red Cross

Neposeda, z. ú.

Diakonie Církve bratrské (church)

Jahoda, o. p. s.

Organization for Refugee Assistance, z. s.

Association to help children with disabilities, z. ú.

Bona, o. p. s.

Center of Social Services Prague

Paprsek Children's Centre

Czech Association of Paraplegics

Rehafit

Bio-physical
People with disabilities
People with mental illness

Age
Senior citizens
Children and youth

Socio-economic
Refugees
People at risk of social exclusion

Specifics, risks, methods

- *Insightful in physical space*
- *Might easily produce results for short study project*
- *Systematic changes*

- *More abstract or artistic, playful*
- *Out of box thinking*
- *Storytelling, memories*
- *Might produce visually striking and strong storytelling based results*
- *Might be more connected to the neighbourhood*

- *Usually underrepresented, overlooked by politicians*
- *Fresh point of view, direct opinions on systematic changes*
- *Solutions may be outside of my reach*
- *May be more difficult to connect to the topic*
- *Possible language barrier*
- *Attention to this group would be most useful for research*

5.2 Selected organisations

The first organisation to confirm was Neposeda, second one Jahoda. They both gave me warm feedback and decided to help me.

Neposeda z.ú.
Streetwork Crossroad

About and target group
A community-based social prevention service for homeless people, seniors, families and vulnerable individuals in the streets.

Type of work
Around 4 hour walk around the neighbourhood searching for mostly people without housing. Possible to join multiple of these walks and work with the clients there.

Advantages and disadvantages
+ Direct, location-based, social vulnerability, different point of view on the topic, insights by the social workers.
- Not a single calm place to meet, less time and focus with the people, there are some risks and needs with the target group.

Participation
More conversation and observation based, I could also come multiple times and prepare/adjust the activity to suit the time and place.

Jahoda z.ú.
Low-threshold club

About and target group
Two low-threshold clubs for children and youth (aged 6-14 and 13-26) providing activities, counselling and prevention for adolescents at risk of social exclusion.

Type of work
Meetings Monday to Thursday, open club to join for anyone, different topics and activities.

Advantages and disadvantages
+ Reserved time and place to meet, social vulnerability, interesting target group.
- Activity must be planned well to suit the age of the target group.

Participation
Co-design possibility, meeting multiple times. The event must be open to allow jumping in and out at any point.

5.3 Timeline

An overview of planned events and stages as discussed with organisations.
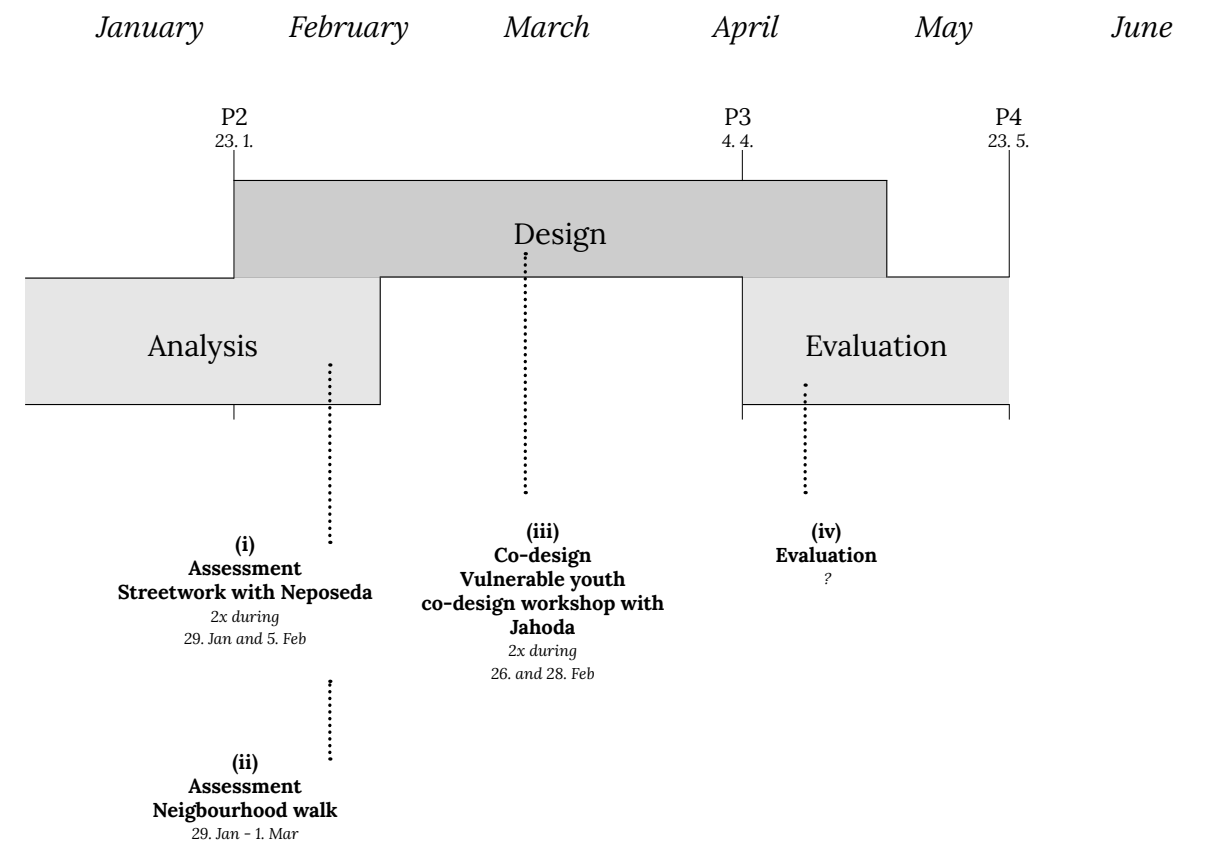
Fig. 148 Timeline participation, source: Author

5.4 Interviews

Viktória Mravčáková a Kristina Roman, Spolka

Spolka is a collective of architects, sociologists and researchers that focuses on involving the public in innovative urban development to form sustainable cities for all. They educate about the city by ways of discussion, own research, artistic and architectural interventions and by education of stakeholders, organizations, city officials, common people or urban souls. Spolka is based in Košice, Bratislava and Berlin.

Viktória Mravčáková and Kristina Roman were kind enough to meet me on 25th of October 2023 in an online call. I asked them about their experience with participatory planning, involving citizens in their projects, locating and inviting vulnerable or marginalised citizens. Main takeaways from the meeting included recommendations to always look behind the scenes and search for politics and giving back to the people who participate in my events for it not to be a one way learning. They talked about their collective and subjective mapping or different neighbourhood walks. Other recommendation was to focus only on one small segment of vulnerable groups of citizens, those who are ignored from the point of view of local politics. We talked about methods such as walks, photos and following discussions and including models in participation. Important takeaway was to explain clearly to the participants, that adaptation

to climate change has potential to enhance their quality of life. A clear thread.

Andrea Midlochová, IPR
Participation office, Institute of Planning and Development (IPR), Prague

Participation office of Prague Institute of Planning and Development is looking for ways to make the dialogue between citizens and city administrations as clear, transparent and meaningful as possible. That's why they established the Participatory Planning Coordinators programme for Prague's urban districts and the BaseCamp section, where they publish practical guides on how to prepare a tailor-made participatory process.

Andrea Midlochová met with me on 30th of October 2023 in an online call. She introduced me to the agenda that participation office of the IPR has, including online resources and materials and relevant projects to my research abroad. After the meeting, she also sent me valuable materials. Andrea showed me their local participation coordinators project and told me, that my area of focus also has this coordinator. We talked about different participation methods that they use, about their usual target group and what groups the institute would like to work with in the future.

Renata Srbová, Praha 14
Participation and Participatory Budget Coordinator, Department of Strategic planning, Prague 14

Mrs. Srbová met with me in her office on 7th of November 2023. We had an interesting talk about the range of participation events their department produces, their upcoming plans and and usual groups they work with. I learned about participation meetings called Local forum they were preparing in preparation of materials for the new Strategic plan 2025 - 2035. This strategy is based on the city-scale one and includes some form of adaptation measures to climate change impacts. Two meetings with citizens were planned on Černý Most for January. They also do participation with elderly people and with younger generations. I learned about an app they have to announce every meeting and inform citizens about changes. I also learned about their participatory budget.

5.5 Event 01: Streetwork with Neposeda

About the organisation

Neposeda is a non-governmental, non-profit organisation operating in the eastern part of Prague and a registered social service provider. Among other things, Neposeda specializes in a community-based social prevention service for unhoused people, seniors, families and vulnerable individuals in the streets.

The mission of field social work is to find, motivate, help and support individuals in a difficult life (social) situation that excludes them from society. The service is provided to people who do not have the skills and means to help themselves. It is aimed at helping them to identify a difficult life situation, to find a solution, to be able to solve it on their own and to better navigate their rights and responsibilities.

I contacted Neposeda and they kindly replied with an offer to join two field walks with their employees. A walk usually takes around 5 hours, and the usual clients are unhoused people, or individuals at risk of social exclusion. I could prepare questions or any participation tools for the walks and the social workers would help me to reach out and talk to their clients. This organisation was perfect for connecting me to the vulnerable citizens in the public space daily. They are users of the public space and they often know it better than most other inhabitants, yet they have little-to-no say in how the public space is supposed to look like.

Purpose

My aim was to understand contextualised vulnerability in the public space of Černý Most, the sources of vulnerability and the needs of the unhoused people that I could use in the following stages of the design. Their personal views on safety and quality of public space could help me with analysing the neighbourhood and optimise for a better design of public spaces. They also have first-hand contact with extreme weather, seasonality and climate change.

Limits

This participation event was defined by the nature of the field social work and the vulnerability of the clients. Working outside in the streets is not a calm environment and often the occasion and the time available didn't offer an opportunity for a structured conversation. The weather could influence the outcome, there would be no option to sit down and calmly follow a series of questions, like in a regular interview, as we often did not have time or a place to do this. Often clients would like to talk to the social workers about what they need and they would have time and focus only on one or two questions.

Another limit was a simple fact that the main source of their vulnerability was not in the design of public spaces and that the solutions or needs often lay outside of the reach of a designing architect.

Fig. 149 Event 01, source: Author

Lastly, there are specific threats in working with socially vulnerable people. I decided not to include any personal information to minimise the risks of reidentification. I curated my questions and topics with the NGO to make sure that my questions are not hurtful, naïve or assuming. I also tried to understand the power relation between me, as a researcher, and them, as an NGO clients and people with some vulnerabilities. That is because power is of fundamental importance and has to be very explicitly taken into account, as a common tendency for pre-existing power relations persists in participatory fora (Few, Brown, and Tompkins 2007).

Expected outcomes
I knew that this event would not produce any physical maps or detailed interviews, but that my role would mostly be an observer and my tools would be a simple conversation, dialogue and talks to the clients, as well as the social workers. Different social contexts may require different approaches, especially in order to attract and sustain dialogue with 'hard to reach' stakeholders who may be reluctant to contribute their time or knowledge to the process (Few, Brown, and Tompkins 2007). I knew that I had two walks, so I was planning to adjust and prepare better questions and topics in between the field visits. I was expecting to (i) better understand the vulnerability of the NGO clients, (ii) better analyse and risk assess the neighbourhood and (iii) plan and experience the

participation process to better analyse it. I was expecting a form of notes from dialogues. This event was planned as an analysis and risk assessment tool and therefore the activity was prepared as collecting inputs from socially vulnerable groups of citizen.

Walk 01
For the first walk with Neposeda, I prepared a series of questions on the topics of public space, safety, seasonality and weather, basic services and participation. I knew that I am not going to be able to ask all of them to every client, so I decided to pick ones that would feel suitable in the moment.

Together with one social worker, we walked mostly on the north-east part of Černý Most, by the metro and bus station, next to the highway and inside the shopping mall. We also visited parts of the town outside of Černý Most. We met and talked to more than 10 people and spent total of 5 hours outside.

the social worker, as they was an important guide who could introduce me to the clients and help me get my questions and topics across. The social worker was also a valued source of information and opinions. We talked with the social worker about the stigma and bad reputation that the clients and also the neighbourhood face. I learned a lot about how the usual field social work looks like and I discovered that it

changes during different seasons in a similar way the landscape changes. We talked about different housing policies and cooperation between NGOs and municipality and also how the work has changed during Covid pandemic.

The stories of the clients varied. Although they shared similar problems and needs, each one of

Which places on the Black Bridge are safe for you and which places do you avoid? Are there any areas that you consider favourable or problematic? What role does the availability of basic services play in your daily life and sense of security? What do you miss in the Black Bridge? Do you have any personal stories or experiences related to certain places on the Black Bridge that have been particularly problematic or supportive for you? How do you think cities should work with unhoused people to design and adapt public spaces? How does the weather affect you, and what difficulties or safety considerations does living outdoors entail in different seasons? Are there any places on the Black Bridge where extreme weather (rain, heat) is worse? What areas or places help you overcome extreme weather? How do any changes to public spaces affect you, and how might these changes affect your daily life? Do you have any suggestions for changes in the city that would improve life not just for you, but for everyone?

them had a very different character and individuality. Some of them expressed a fear of clashing with other unhoused people, especially with those of different ethnics or country of origin. Although they generally felt safe in the neighbourhood, they mentioned that sometimes some form of conflicts is present. During winter, this results in destruction of shelters. Winter are especially dangerous, not only

because of low temperatures, but also because of unintentional fires of the shelters, problems with addictions and increased alcohol consumption. To my surprise, the local shopping mall is an important place, as it offers warmth, seating areas and charging stations. The clients often expressed that to them, the inside of the shopping mall is considered as public space. Some

of them also reported that they are missing some form of a square, as a social, more focused space with benches. One person directly said, that next to the metro station is a vast unused area that could be transformed into a park. I discovered, that the benches in the area are dissapearing or that the municipality is adopting some hostile features to public space to prevent unhoused people to sit and reside in the public

areas. The same person expressed worry that this not only hursts them, but also elderly residents or people that need to sit down.

In the summer, the clients like to spend time by the near fountain and sometimes they like to swim in it. This is again because it is an area of concentrated flow of people and because it cools the area down. They did not feel like climate change is a big threat to the neighbourhood, although water is an important basic service. Almost everyone we talked to had a strong sense of ownership and belongingness to the neighbourhood. They wanted to stay there because they already know it very well or because they lived there before they lost housing. One person resided near the busy highway. The noise from the cars is something that the person got used to, but they said that they are more concerned about the noise from other people residing nearby. They said that a freedom to choose the time and amount of social interactions is very important to them. Another thing that was very important to many of the respondants was a proximity to nature, green areas, calmness and animals. They often had dogs and cats as pets and this form of social interactions was meaningful to them.

Walk 02
I joined another walk a week after that. For this one, I adjusted the topics and questions based on my experience from the last walk. I decided to focus more on personal experiences and opinions on the

neighbourhood, on emotions and feelings connected to it (positive or negative) while using simpler words and sentences.

Can you remember a happy day here in the neighborhood? What did it look like? Where is your favorite place to be out? Why? How would you describe this neighborhood to someone who has never been here? If this neighborhood disappeared, what would you miss most about it? In contrast, what would you wish wasn't here?

I also felt more confident and understanding during our second walk. I met with the same social worker again, but this time we were joined by one other which also influenced the dynamic of the conversations. We started in the same place as last time, but decided to move to another area by the second metro station soon. After that we went to a different neighbourhood. We spent a total of 5 hours outside and talked to more than 5 people.

The second social worker had other interesting opinions and suggestions. I learned about a mobile laundry run by a group of activists joined by unhoused women that used to exist in the neighbourhood. The role and accessibility of basic services, such as the laundry, is very important, while it also provided with basic human interactions and an opportunity to meet others in the same situation.

Fig. 150 Photo, source: Author

Fig. 151 Photo, source: Author

This time I was more relaxed and was able to have a normal conversation easily. Respondents mentioned they like to stay in the neighbourhood because it feels more secure than the center of the city. For a lot oh them, it also felt like a home, as they grew up or used to be housed in the same neighbourhood. For them, not having a material posession was not a reason to not feel like at home there. The winter condition was a source of vulnerability for a lot of them, as they were forced to drink cheap alcohol which results in worse living conditions and health problems. A lot of the vulnerability was also connected to theft and their rights not being protected or enforced. Trusting others often means losing your personal documents. Police isnt always taking their problems seriously enough. Navigating the legal system is difficult. NGOs are a big help with all of these problems.

Takeaways: Process

Collaboration with the NGO: Having someone who knows the community well is important not only for letting me in, but also for facilitating conversations and as a source of information and context.

Reaching out: Approaching the community (instead of waiting for them to come to you) is vital, it is also important to do this at their own pace and in their own environment.

Frequency: Coming multiple times and having some time to think and rest in between the sessions is good.

Questions: Vague and open questions result in vague and open answers. It is good to have reasonably suggestive questions addressing the topics I am interested in, but not to be manipulative. To not look for conclusions I want to see.

Improvisation: Preparation is key, but being sociable, interested, listening and intuitive is important to deal with situations you cannot prepare for.

Individuality: Group of people is made up of individuals. It is crucial to recognise individuality, listen to people and not assume their stories and opinions based on social characteristics.

Collaboration: Involving people, initiatives, NGOs, municipality and other stakeholders contributes to the aim. Searching for and recognising groups that can help is beneficial.

Takeaways: Analysis

Periphery: There is a big difference between the center of the city and the post-war neighbourhoods (peripheries). The center of the city feels less safe for some unhoused people, while the post-war neighbourhoods offer more space and freedom.

Place ownership: Home is home, connection to a place is not defined by owning land or property. A lot of the respondents felt attached to the neighbourhood for different reasons and they did not want to get used to a different place. They also generally overlooked and took care of their surroundings.

Void space: There were some remarks about unused space and the potential for a park near the metro station. Missing and dissapearing benches as a measure „against homelessness" is in the end hurting everyone.

Seasonality: Summer by the fountain and in the shadow, winter under public roofed areas, like the bus terminal or commercial shopping mall with the electricity plugs and heated space.

Public and private: The shopping mall is generally considered as a public space, even though it is a controlled and private area with different sets of rules and boundaries.

Noise: Areas near busy roads offer a shelter from unwanted social interactions. For one participant it is possible to get used to the car noise, being able to choose when and how they socialise is more important.

Pets: The role of dogs and cats was unmissable as they provide important social contact.

Nature: Respondents often expressed their need for calmness, greenery, nature and wild animals.

Squares: Respondents said on multiple occasions that there is a lack of social spaces, like squares or public parks. The social worker then explained to me that they often like to spend their time at places with higher concentration of people.

Engagement: Having a community, a space for activities and to contribute and collaborate on different activities gives a meaningful opportunity for unhoused people and can have good impact on mental health and social wellbeing.

Conflict: Overlooked issues and unresolved conflicts lead to problems. There are clashes over safety and territoriality.

Periphery is good

Affachment to the neighbourhood

Dissapearing benches and void spaces

Seasonality

Public and private

Noise and socializing

Pets and nature

Spending time at busy places

Engagement and community
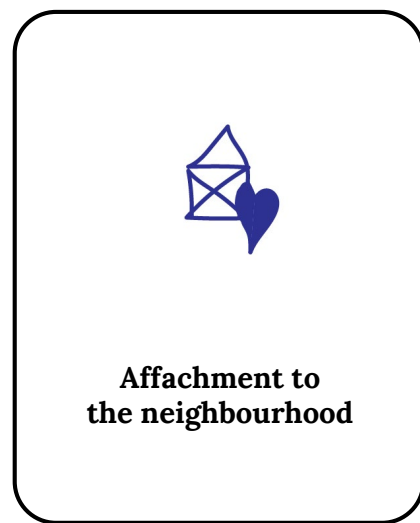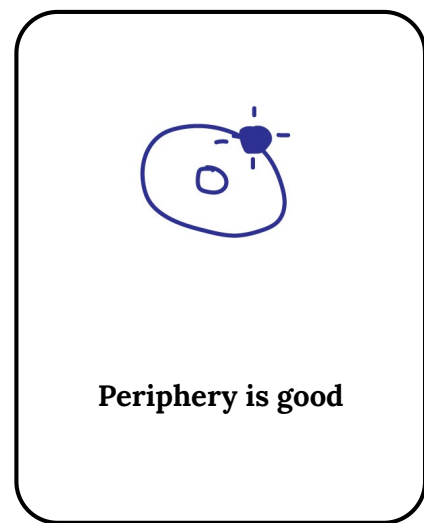
Conflict and territoriality
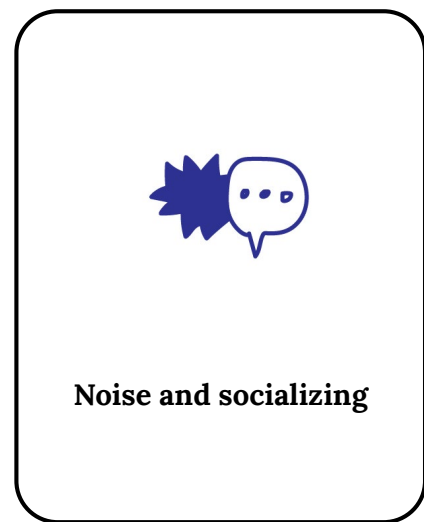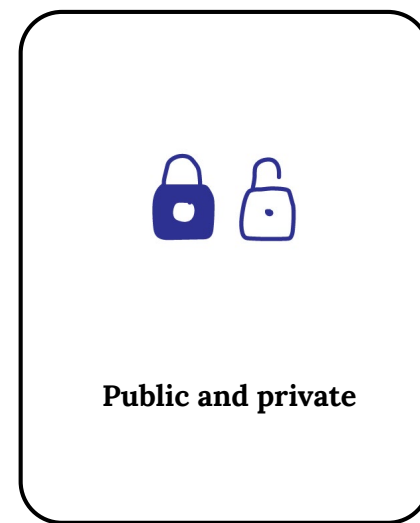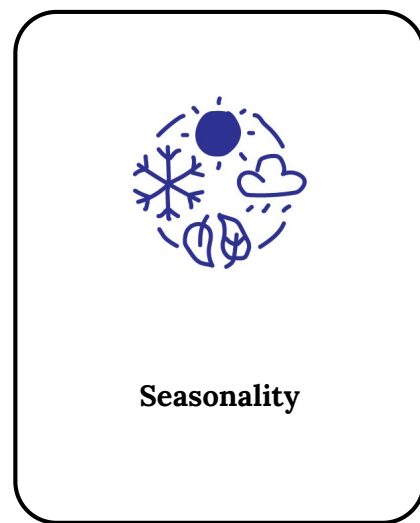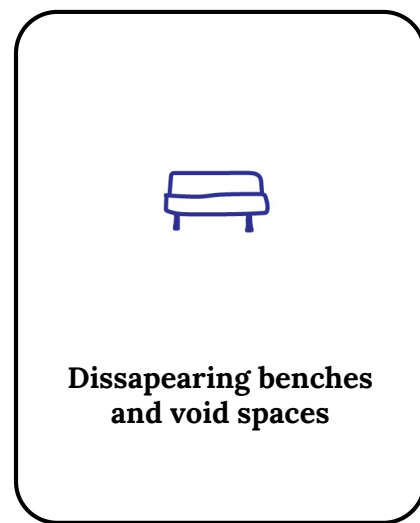
Fig. 152 Outcomes Event 01, source: Author

5.6 Event 02: Neighbourhood walks

About

This stage of participation is self-organised and realised in the public space of the neighbourhood without cooperation with local actors. Through real time conversation with residents, I can assess the state of the public space in the specific locations of the neighbourhood. I can also talk to them about climate change, possible adaptations or risks. Because it is a relatively easy event to organise and facilitate, it can be repeated or adjusted practically anytime. I was advertising about the neighbourhood walks week prior through posters in the public space and through social media posts in local facebook group.

Purpose

The goal is to approach people and gather their stories from the neighbourhood, forming a neighbourhood identity, and gathering their ideas based on looking at pictures of climate change impacts and nature-based solutions. I am interested in local personal experience with climate change, weather, barriers preventing adapting, identity of the neighbourhood, transformations, personal views on specified nature-based solutions and social cohesion in the neighbourhood. This stage involves residents living in the houses in the neighbourhood or nearby.

Limits

The simplicity of the activity poses a number of risks. First, I have little-to-no control over who the target group is, as only people who have time and resources to respond to my call will respond. I also approach people on the street and for that, the time and place decides on the groups of people that will be involved in this activity. That means, that respondents involved in this event are not fully representative of the neighbourhood, nor are they any specific single group of people that I can localise and target, leaving out minorities. Nonetheless, it still has a big potential to help me answer the chosen questions and understand the neighbourhood better, when those risks are voiced and understood. Second, another problem lies in the short-time nature of the activity, as I can spend with each respondent only a limited number of minutes before they have to leave. That poses a risk of not digging deeper and not understanding the context or the answers. Some measures can be adopted to minimise this limit, such as having visual cues and tools to enhance communication and specificity of the questions. Thirdly, the unpredictability of the weather and temperatures is a risk, due to activities taking place in February and March.

Expected outcomes

Using questions, photographies of existing nature-based solutions around the world, and photo-visualisations of possible adjustments to the public space of the neighbourhood,
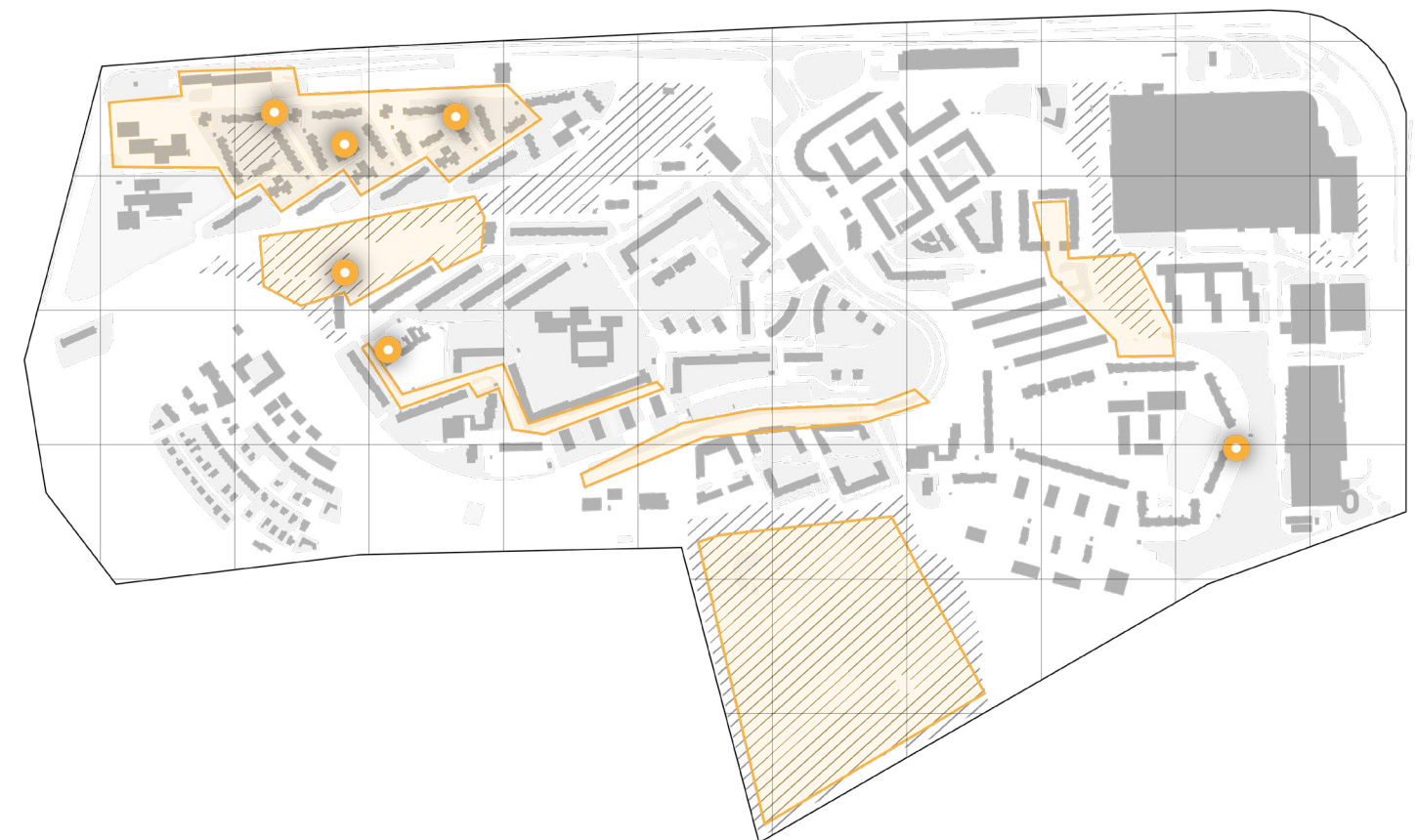
Fig. 153 Event 02, source: Author

I expect to gain deeper understanding of the mindset of people living in the neighbourhood. First topic to explore is view of housed majority on the identity of the neighbourhood and overall sentiment towards Černý Most. Second topic involves the already mentioned nature-based solutions. I would like to get a better understanding of opinions on possible likes and dislikes, or opportunities and risks, of the chosen NBS. Third topic is related to the activity itself, as it happens in real time in the public space of the neighbourhood. I aim to gain better knowledge on the main problems of specific locations and view on possible better adjustments and transformations.

Walks
My initial expectations of spending four day on-site talkting to people were met with rain and stormy weather, which made me change the plans a bit. I had to shorten the amount of days spent at the time and plan another visit few weeks later. I also met with people who responded to my call on social media. Instead of long coordinated walks together, the activity was more like individual conversations with visual material. I had a set of questions and references prepared to have with me:

What does this neighborhood mean to you? How has it changed in recent years? What are the opportunities to make some changes, perhaps here in the immediate area? How do you feel about safety? Where do you like to spend your time outdoors? What do you miss here? Is the neighborhood accessible? Do you feel your voice matters to the municipality? What is your experience with climate change? Where are you feeling its impacts? Do you experience any extreme weather changes during the seasons?

Reference photos of climate change adaptations: Can you imagine any such interventions in Černý Most? Would you welcome it? What do you think about such solutions? Where would they fit?

Before and after visualizations of ideas: Could you rate or say what you think about such interventions in the public space? What feelings does it evoke in you? Would you like to see even bigger changes? What kind of changes?

The majority of people I talked to were older women 60 years and more. One respondent was in her twenties, one was 45 years or older. One older man was also involved. Totally, I visited the location for this activity 3 times, only one of them was without rain. The reactions towards the neighbourhood were overall positive, especially the vegetation areas around the neighbourhood were viewed as a plus. Contrary to that, smaller green public spaces inside the neighbourhood were said to be lacking. The bigger parks were viewed as undermaintained and dissapointing.
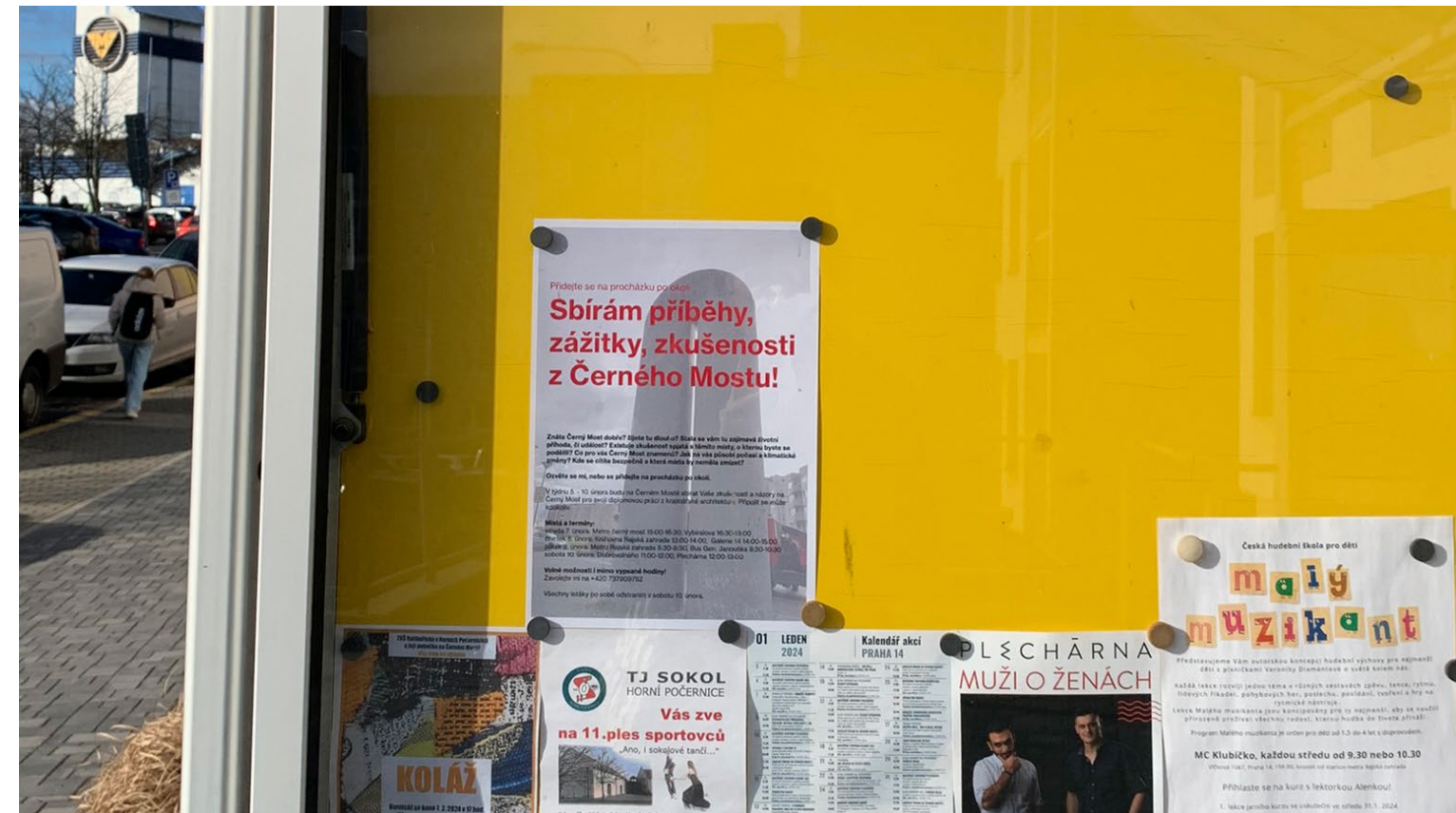
Fig. 154 Photo, source: Author

Fig. 155 Photo, source: Author

One respondent mentioned wrong species of trees being used and big heatwaves in summer. Other people mentioned large amount of paved surfaces and risks of summer heats related to climate change. Respondents couldn't really comprehend some of the NBS, such as urban forests, as they seemed too abstract for them to imagine in the neighbourhood. Urban farming or smaller patches of diverse vegetation near the entrances of the houses were not viewed very positively, but urban eco-corridors, water retentions and small green spaces were viewed well. Some respondents were critical of the amount of cars, while other respondents felt like there is not enough parking spaces, even though the number of cars in the streets is rising and is already quite high. Surprisingly, the main road going through the neighbourhood wasn't viewed as negatively as I expected, as it is shielded and used only for transportation. One respondent mentioned that lakes or water areas could be optimised for human experience, as he would like to use it for swimming or sitting nearby.

The social cohesion was much broader and complicated issue. Number of respondents mentioned that the neighbourhood used to have almost a village-like atmosphere of people knowing each other and helping each other out. Some people mentioned that they feel threatened by the growing diversity of the neighbourhood, although they

have not experienced any crime themselves. Polarisation by media was mentioned on several occasions, as this neighbourhood appears in the news only because of crime incidents. Number of respondents were afraid of adding any new social spaces, such as benches, because they feared that it would lead to increase in noise and groups of people getting drunk outside. This fear of drugs, noise, and decay was present in each conversation, only one respondent said that the situation is not bad, just other people are scared of conflicts. The few remaining benches being overused and littered was an evidence of this „bad situation" going on. Different lifestyles of different groups was met with a misunderstanding. The lack of culture, cafes and shops was mentioned multiple times, as the big mall is a threating competition to any small services.
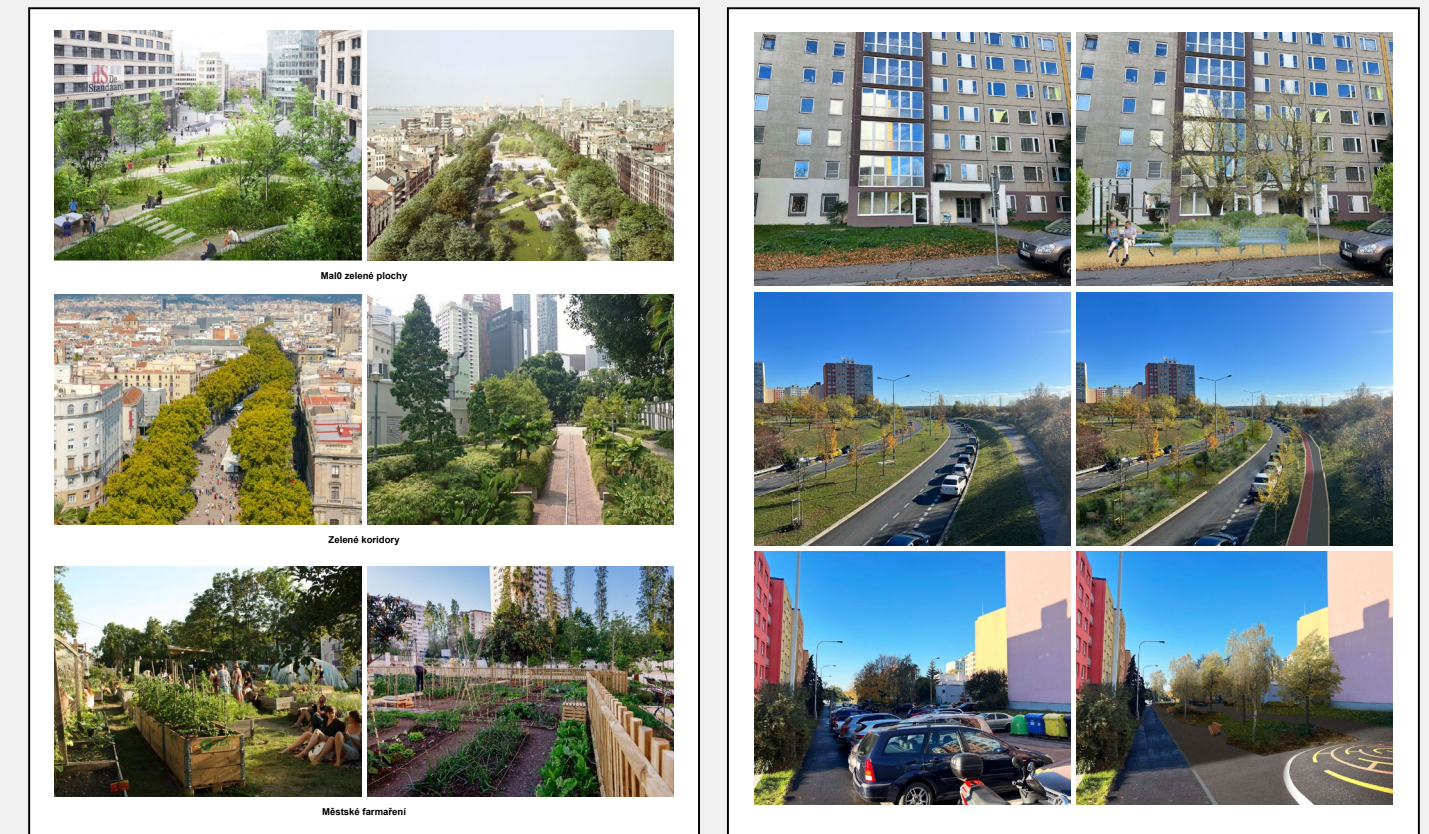
Fig. 156 Materials for Event 02, source: Author

Takeaways: Process

Target group: Choosing people is a crucial moment. It is important to think of times and locations and actively search for opportunities to approach various groups of people, to get various perspectives.

Weather: Unpredictable events, such as weather, can have a great impact on the process and outcomes. It is important to be prepared for that and have some time reserve or plan B.

Advertisement: Different media gets to different people, searching for ways to spread the call is crucial. Asking municipality or local organisations to share would be a good benefit to the project.

Visual material: Using visual clues like photos or perspectives helps to get the questions across. It is also important to think of ways to help find the answer for the respondents.

Questions: In a situation where only a part of the questions can be asked, it is important to think about the right questions beforehand, to be as specific and clear as possible.

Takeaways: Analysis

Relation to the neighbourhood: People like the neighbourhood and view it positively compared to the city center.

Feeling of safety: There are certain areas which feel less safe. Feeling of safety is an issue, recently there have been some medialised crimes happening, which contributes to the feeling of danger. Social cohesion between different groups is low.

Noise complaints: Often having more social spaces feels like a threat instead of a benefit.

Conflict and stigma of minorities: Majority feels threatened by the minorities and doesn't have a lot of contact with them. This leads to stigma and prejudices and influences the public space as well.

Maintenance is an issue: The whole area is under-managed. As explained in the theory section, this can pose severe threats to public space in the future.

Lot of cars: Auto traffic and parking is a dominant topic.

Greenery: Big parks are overused and underutilised, smaller public spaces are missing. Greenery is viewed as a plus, but the wrong species of trees are used. Mostly, the referenced greenery mentioned by the respondents exists outside the neighbourhood, around it, not inside. Water is also underused.

Join for a walk around:

I am gathering stories, memories, experiences from Černý Most!

Do you know Černý Most well? Have you lived here long? Has an interesting life story or event happened here? Is there an experience related to these places that you would like to share? What does Černý Most mean to you? How does the weather and climate change affect you? Where do you feel safe and which places should not disappear?

Let me know, or join me on a walk around the area.

During the week of February 5 - 10 I will be at Černý Most to collect your experiences and opinions about Černý Most for my thesis in landscape architecture. Anyone is welcome to join.

Locations and dates:
Wednesday, February 7: Metro Black Bridge 15:00-16:30, Vybiralova 16:30-18:00
Thursday, February 8: Library Rajská zahrada 13:00-14:00, Gallery 14 14:00-15:00
Friday, February 9: Metro Rajská zahrada 8:30-9:30, Bus Gen. Janoušek 9:30-10:30
Saturday, February 10: Dobrovolného 11:00-12:00, Plechárna 12:00-13:00

Free options even outside the posted hours!
Call me on +420 737909752

I will remove all flyers on Saturday, February 10th

Fig. 157 Poster, source: Author

Affection to the neighbourhood

Safety, feeling of danger

Conflict and stigma

Maintenance is an issue

Green is great

Noise complaints, fear of new social spaces

Big parks are crowded

Smaller public spaces are missing

Unused water areas

Wrong species of trees are used
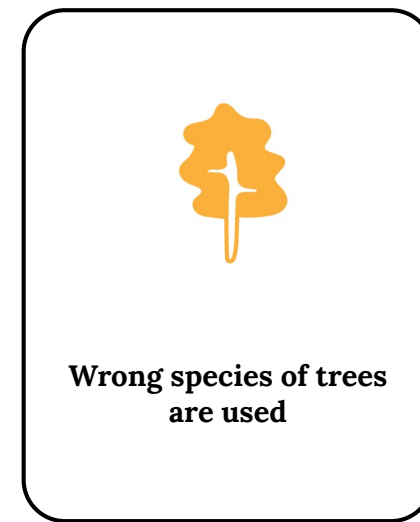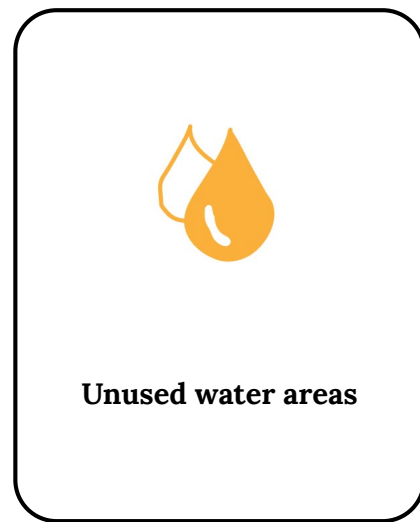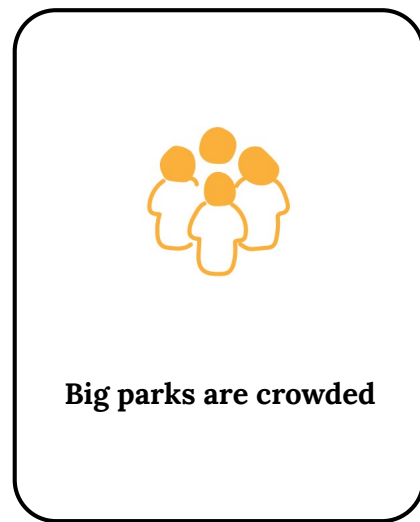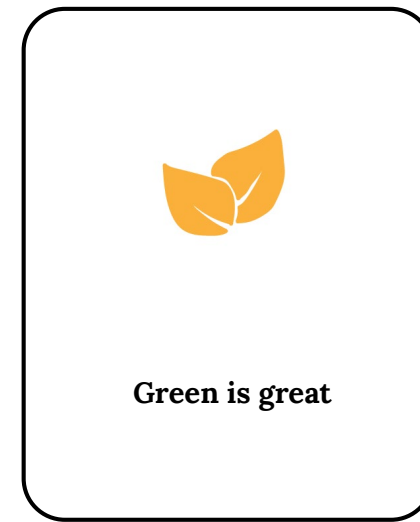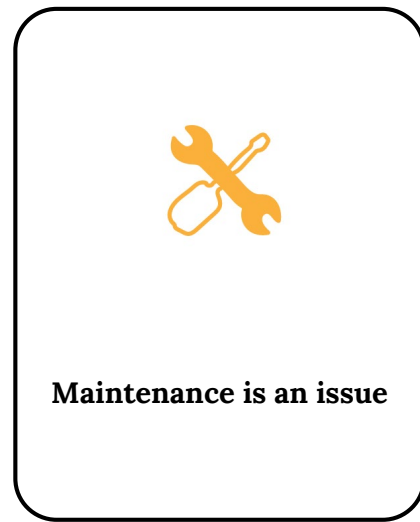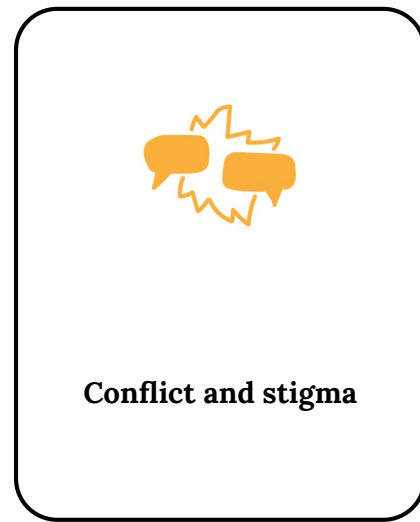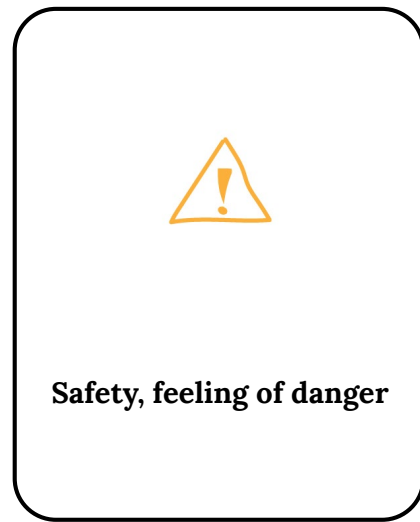
Fig. 158 Outcomes Event 02, source: Author

5.7 Event 03: Co-design workshop with Jahoda

About the organisation

Jahoda is a non-profit organization made up of social service and education professionals. They guide children, young people and their families from early childhood to adulthood. Jahoda runs low-threshold clubs, an outreach program for children and teens, a preschool, playgroups and a community family center. It also organises leisure, educational, cultural and sporting activities.

Adolescents aged 13 to 26 at the Dzagoda Club receive counselling in a variety of areas, especially on the subject of growing up. Young people are concerned about partner relationships, communication in the family, lack of motivation for education and the related drop-out from school. Adolescents are dealing with their first part-time jobs and the need to become independent. Alcohol, experimentation with addictive substances, racism and xenophobia are big issues

Together with Club Dzagoda we decided that I would join two afternoon meetings of the club. Teenagers can freely come to these meetings and discuss whatever they want. I could then talk to them and explain my role and aim and if they agreed to, they could join the co-designing activities I prepared.

Purpose

My aim was to give relevant tools and empowering agency to socially vulnerable teenagers from the neighbourhood and guide and assist them through a simulated planning and designing process. The activities were designed to mimic real stages of architectural work, such as analysis, design and evaluation steps. The participants could then have a say in how the public space in their neighbourhood could look like.

Limits

I was aware that the activities and conversations need to be suiting for the target age group and was afraid that I am going to misscalculate this. The activities needed to be effective for me and understandable for the respondents at the same time. I also felt a risk that the activities are going to be either too serious and not enough fun, or too naïve and childlike. Getting enough engagement and keeping it for the whole duration of the event was important. I also spent a lot of time thinking about how to make the event specific and graspable, without getting too abstract, but also still maintaining enough freedom for creativity and self-empowerement. For this I chose to accompany all the activities with inspirationans and premade examples. The events then would be curated by me, but would leave enough room for experimentation.
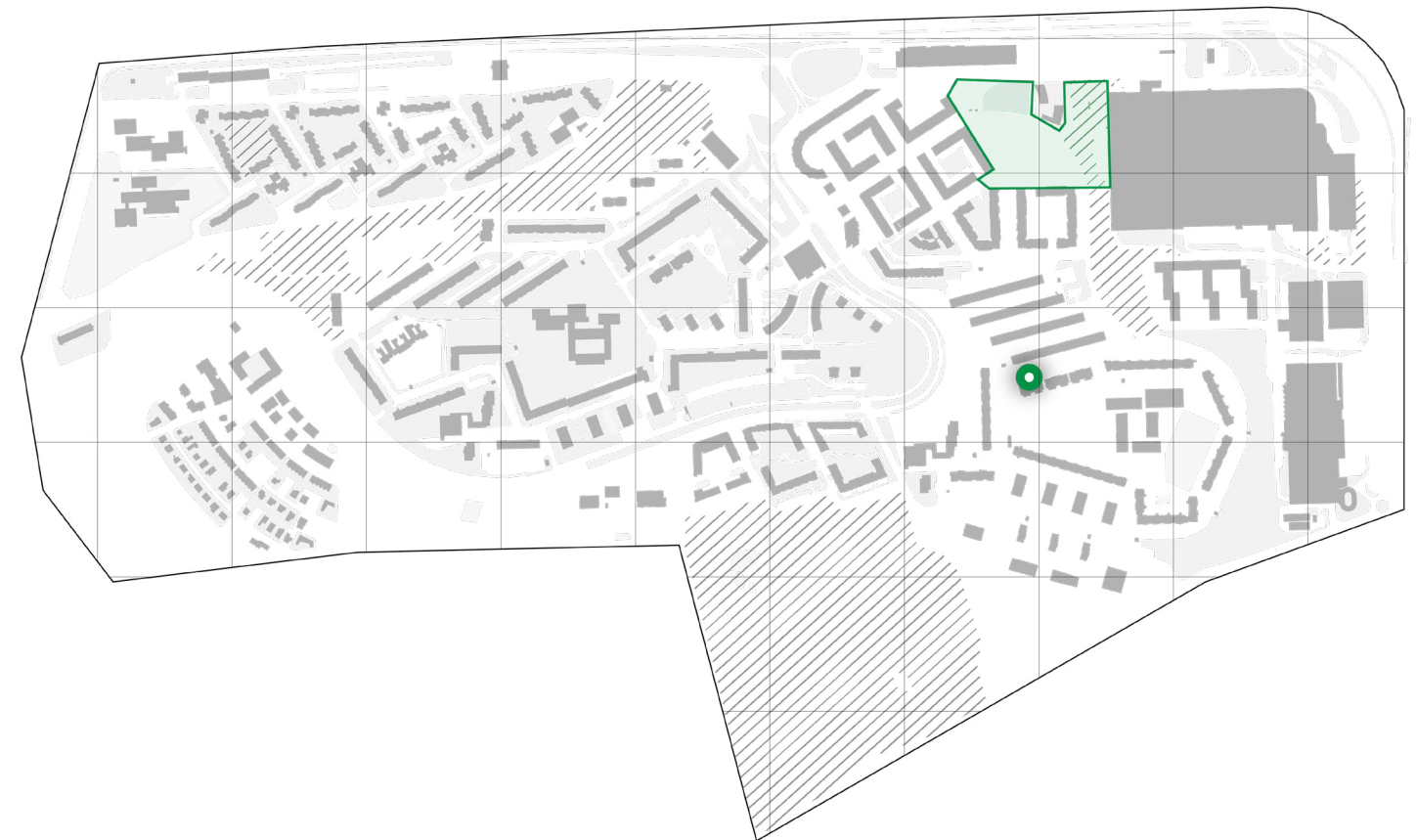
Fig. 159 Event 03, source: Author

Workshop materials
1. Photos of the site – 20 photos
2. Photos of public space and landscape architecture inspirations – 55 photos
3. Blank plans of the site – Middle of the site is blank, photos of front facades and important features are put on their place, cutout line is visualised
4. Cutouts of various activites to be used with the blank plans – Active (Sport, Running, Working out, Cycling, Playground, Rock climbing, Trampoline, Skateboard, Walking, Festival, Farmers markets, Swimming), Passive (Gardening, Sitting, Eating, Water, Picnic, Laying, Fire, Monument, art) and Green (Path, Tree line, Tree group, Water retention, Grass, Shrubs, Flowers, Paving)
5. Physical model of the site with the facades, paved and unpaved surfaces and trees
+ Glues, scissors, pencils, pastels, markers, clay

Workshop schedule
1. Getting to know each other, chitchat
2. Introduction (who I am, what is the assignment and what we do and why we do it, voicing that there are no limits or requirements) – 5 minutes
3. Signing the consent form (explain why it is needed, what it means for them) – 3 minutes
4. Putting the photos of the site on the table next to the physical model, discussion, marking interesting things (talk about the location, what you associate it with, who's there, what kind of places are there and what could be there, what their favourite places look like and how to create one here, voice out an assignment, what we miss and what we don't want there) – 20 minutes
5. Putting the photos of inspirations on the table – 20 minutes

1. Handing out individual blank maps of the site, pencils, clippings, glue sticks, drawing (you are now architects, draw your own designs, add what you want, think about your friends and families) – 1 hour

2. Cutting out the middle of the maps with drawn designs and inserting them into the physical model, discussing together (evaluating how they perceive the process, how they perceive the result, has anything changed) – 15 minutes

3. Conclusion, thanks, pointing out positive things from the process, asking for permission to use everything again, goodbye – 10 minutes

Possible questions
Do you know where it is? Do you know this place? What does it mean to you and why? How does it affect you? What could fit in there? How big is that area? What about the space by the subway? What does it look like? What's missing there that you normally experience? Do you use the route to the mall? How convenient is it? What about the mall, do you ever just hang out there? What do you see people doing there? And why do they only do it here? What about the streets near the houses, do you go that way? The little square, can you imagine anything there? A big open space, an empty area, why is it empty, what would fit in there? What should be there to pass the time? If there was a skate park, a club, a pub, a park, a lake, a garden, benches, would you go there? How could these places serve others? What about for your families? Your friends? What about the children, the elderly, what about the homeless? What do we see in the references? What do you like and what do you dislike? Where would you go from there? What of it would fit on the site? How could it look different to make it fit better on the site?
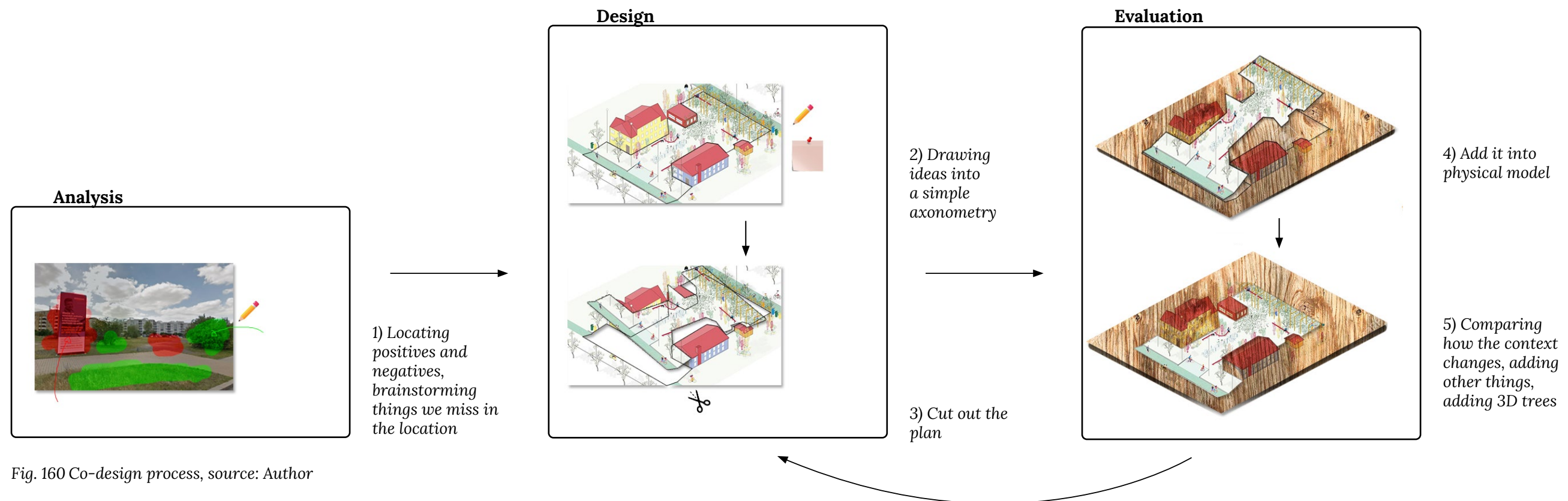
Fig. 160 Co-design process, source: Author

Analysis

1) Locating positives and negatives, brainstorming things we miss in the location

Design

2) Drawing ideas into a simple axonometry

3) Cut out the plan

Evaluation

4) Add it into physical model

5) Comparing how the context changes, adding other things, adding 3D trees

Combination of media that is effective for me and understandable for the people, always followed by discussions and a premade example. Leaves freedom for experimentation and own ideas, but is curated by me.
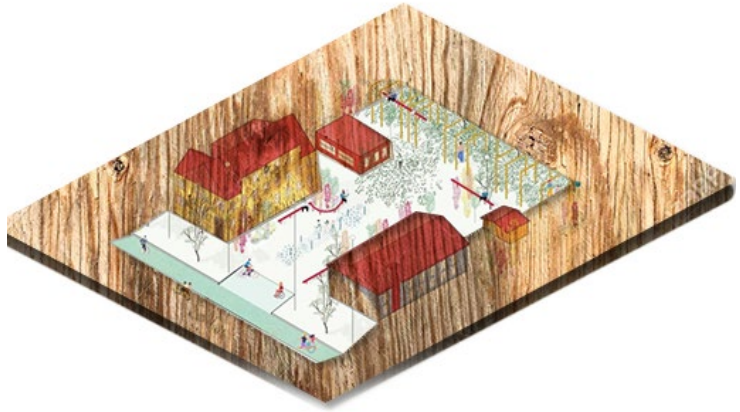
1) Multiple photos of the area, computer with google maps? walk to the area between the sessions?

+ reference pictures for inspiration

2) Simple colourful axonometry focused on recognisable things

+ cuouts of ideas, notes, suggestions

3) 3D physical model with buildings and context

+ other 3D movable objects

Fig. 161 Co-design materials, source: Author

Expected outcomes
This event was probably the most intensive one out of all the planned events. It requires a lot of time, concentration and dedication to finish properly, asi it takes multiple phases to finish. But different steps can have different outcomes, so the potential of this exercise is also to help in multiple stages of the designing process. I was expecting to have some portions of: (i) Analysis of the current space, (ii) Individual design outcomes, (iii) Feedback on referential solutions, (iv) Evaluation of participation activity, and (v) Evaluation of process.

Event 01
All three participants of the first event were a little bit younger than expected, which resulted in a slight difficulties in understanding and going through the whole process. Three people were the limit for me as a facilitator and guide to the activity. If there were more participants, I wouldn't be able to be fully present. The model was a bit abstract for them and hard to spatially orient in, but it was regarded very positively as participants were excited to look at miniature places they know. Photographies and references were much easier to grasp. Also, having the blank map to fill was hard, as there was nothing to grasp on and is something I would definitely consider changing. Time-wise, the activities took around one and a half hour, which was also difficult, as participants were a bit tired towards the end. The evaluation part

with putting the drawn plan into the model wasn't as successful l as I imagined. The role of architects wasn't very clear to them too. I suspect a lot of this was caused by the different age group than what the activites were design for.

That doesn't mean that the event was unsuccessful, as I gained a lot of new perspectives and knowledge about the neighbourhood. The children assessed the location as empty with no reason to visit. They highlighted the lack of greenery and activities and imagined that the space could be fitted with a space for meeting around a campfire in the middle of a small forest. Spaces for relaxation and hanging out were the primary interest of the participants. They were also drawn to the idea of including water into the public space, both as water surfaces and water fountains to drink. They imagined they would spend their time there with their friends, for example during birthdays. They communicated these wishes mostly through conversation and choosing of the collages and reference pictures, which they were glueing onto the blank plan. After that, the participants were connecting these spaces with paths. I noticed, they were instinctively creating a round track around the location.

Event 02
Second event was attented by different three children, who were older than the first one and thus in the age group that I designed

the activities for. It was clear from the first moment, that it was easier for them to understand the assignment and go through the process, which I assume confirms that the activity was designed correctly. They understood the model and felt encouraged to draw their own desings, instead of choosing from collages. Interesting knowledge was that they recognise very broad scale of actors in the public space, ranging from animals, plants to people using drugs or unhoused people. Compared to the respondents of the neighbourhood walks, they had less prejudices towards the latter group and were effectively considering them in their designs and involving their presence in the public space. One of this example was designing public bathrooms, with emphasis on maintenance, so that they would stay clean and safe. Another one was designing for the presence of the NGO in the area. They felt like there is noting directly aimer at them in the neighbourhood compared to the city center, where they feel more included. The reference of certain location in the city center was important to them when thinking about the designed area. Other references through pictures were also good. Participants felt a need to create a space where they would feel safe, although they chose to demonstrate this through designing a barrier to keep unwanted influences outside of the fence. I could also note that the presence of the social workers is helping to start

the debate, as they know what to ask or say to keep the conversation going, but at some points they were dominating the debate when I wanted the children to speak a bit more. That means for me to plan for this in the future and have a talk about the roles of each participant. The children from the second event shared some things with the children from the first event. The blank plan was hard to grasp, there is a lack of diverse greenery, lack of activites, places for relaxation or for meetings, lack of nature and water. On the other hand, there was a lot of things that were different compared to the first group. The evaluation worked perfectly, as everyone showed their design, presented it and then everyone said something back and supported each other, which created positive athmosphere and rewarding feeling at the end.

Apart from the different layers of greenery, the participants imagined more tables to sit next to, possibly with chargers, they thought about specific materials such as wood, colours and art pieces. They were designing places to have dates at, but they also considered different animals that could share the space with them. They imagined pavings and buildings could have more colours, as the site seemed lacking energy and optimism to them. The presence of water and fire in form of a BBQ was also important to them.

Takeaways: Process

Age: Activity needs to be specifically designed for a target group.

Number of participants: Different numbers of participants will change the dynamic, level of attention and the whole process, so it needs to be accounted for.

Methods: Blank plan doesn't really work, references help, eye level perspectives and photos are good too. Different tools to choose from can help find suitable and comfortable ways of communicating.

Time: Thinking about the duration of the activity is necessary. The possibility of skipping or extending the activity during the process can help.

Collaboration with NGO: Having someone who knows the community well is important not only for letting me in, but also for facilitating conversations and as a source of information and context. Communication and setting roles is important.

Takeaways: Analysis

Nothing to do: The location isn't accommodating of teenagers and doesn't consider them as part of the public space.

Various levels of greenery: There is a need for specific and thoughtful consideration of vegetation, that

consists of different levels, such as grasses, flowers, shrubs, trees, climbers etc.

Water presence: In both form of a surface and a drinking fountain.

Fire: A fireplace or a BBQ place surrounded by trees as a heart of a project.

Places: Places for relaxation and for meeting others, activities for different groups of people.

Round track: A path that leads in circles to create an „infinite" road.

Public bathrooms: Free, accessible and maintained public bathrooms.

Picnic tables: Spaces for sitting with a table, to have a lunch, work, study, or do anything else outside.

Materials: Presence of natural materials, such as wood, colours in the paving and art in the neighbourhood.

Recognition of actors: Recognition of broad scope of actors in the public space, ranging from animals, plants to people using drugs or unhoused people. Not excluding, but accommodating.

Fig. 162 Photo, source: Author

Fig. 163 Photos, source: Author
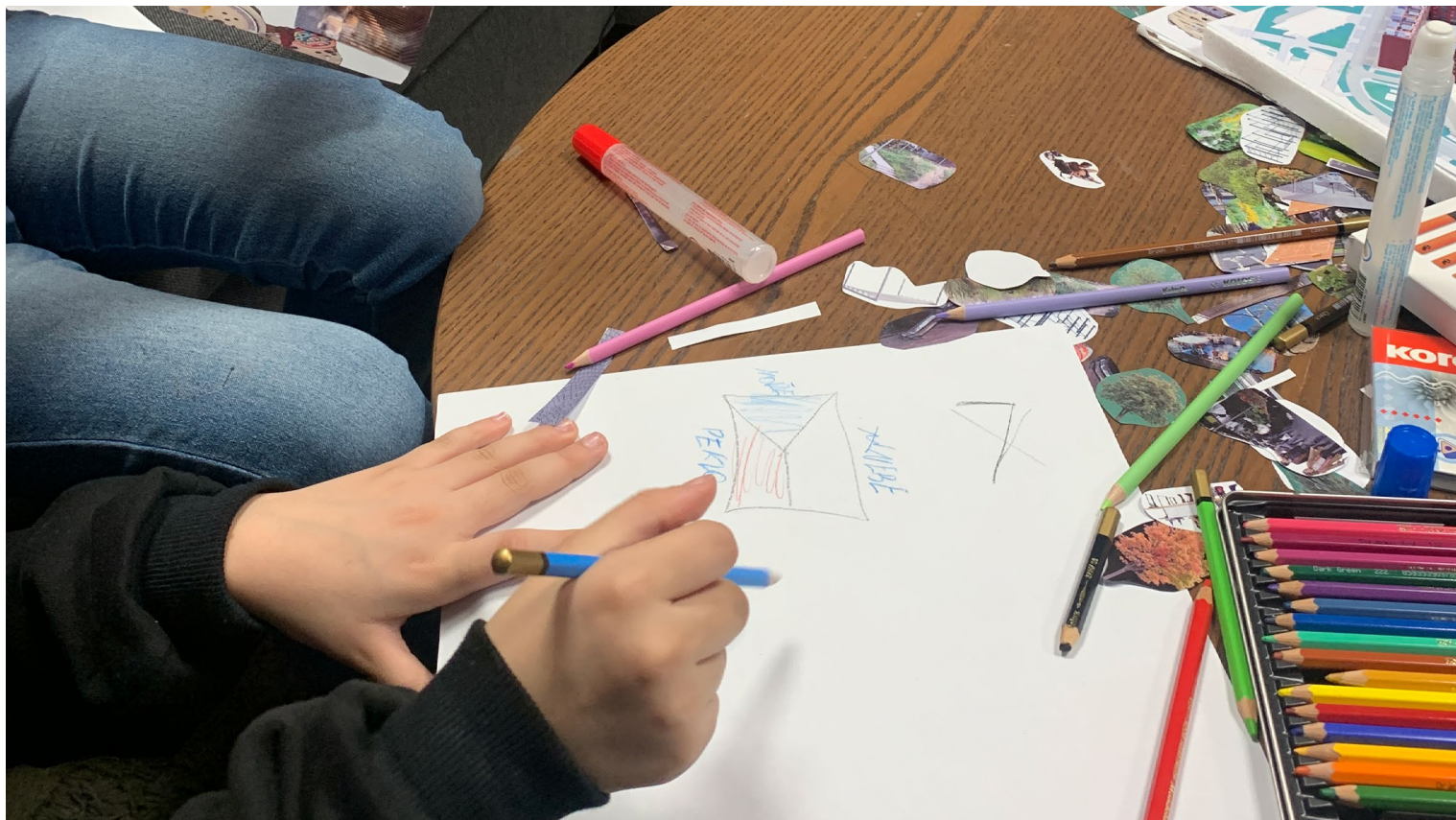
Fig. 164 Photo, source: Author
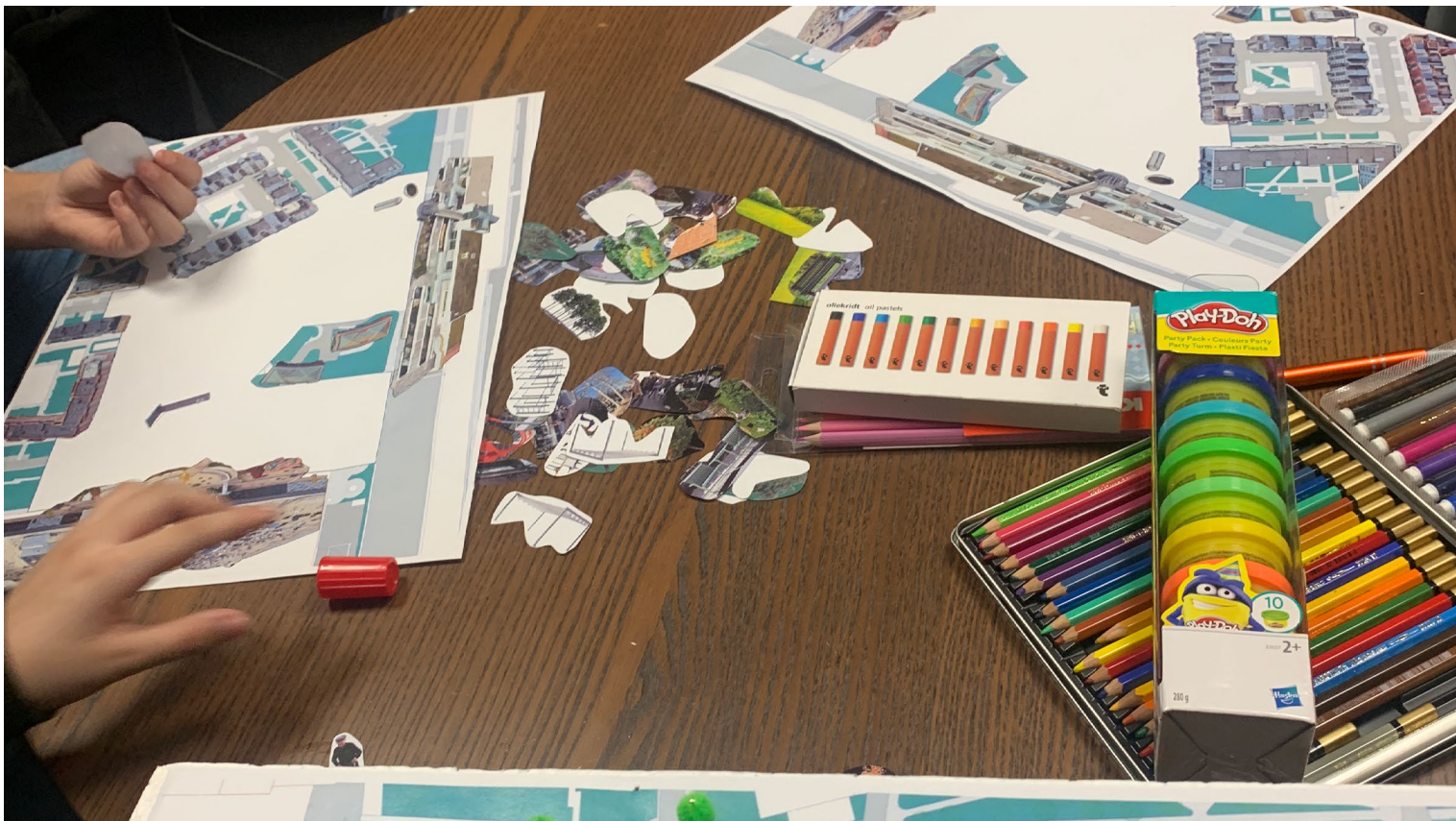
Fig. 166 Photo, source: Author

Fig. 165 Photo, source: Author

Fig. 167 Photo, source: Author

Fig. 168 Participant drawing, source: Author

Fig. 170 Participant drawing, source: Author

Fig. 169 Participant drawing, source: Author

The most important thing is adding trees, various types of greenery and shade.

One of the first reaction was bringing water, biotopes, fountains and drinking fountains to the area.

There is very little to do. Places for culture, for dates, BBQ, picnics, Cafés, seating, gyms...

Perception of a wide range of actors, such as animals and unhoused people. Recognition of conflict. The need for safety. Public toilets, maintenance, drugs.

The whole site has no energy and happiness. It is grey and is missing colours and optimism. Opportunity.

Fig. 171 Outcomes Event 03, source: Author

5.8 Event 04: Evaluation and feedback

The forth participation event was supposed to be final evaluation of the design with the residents and incorporating their feedback. I intended to bring it to participants of both of the organisations, as well as posting it online and gathering inputs from social media community groups. This could help identify blank points of the desing, but also potential conflict zones. Unfortunately, I ran out of time and was not able to complete this final event, as I was focusing on finalising the design and the report. This could have been a point in which I bring different groups of citizens together, mixing my two roles as a designer, explaining my design, and a participation facilitator, mediating between the groups.

5.9 Process outcomes

1. Interpretation.
2. The process is important because it changes me.
3. Collaboration with NGOs.
4. A method to communicate, it's not a checkbox.
5. Reaching out to the people, not waiting for them.
6. Plan a tailored activity, inspire but not control.
7. Listen and improvise.
8. Frequency and repetition.

Interpretation.

The process is important.

Collaboration.

It is a method, a tool, an instrument, not a checkbox.

Reaching out to people.

Planing a tailored activity, inspire, but not control.

Listen and improvise.

Frequency and repetition.
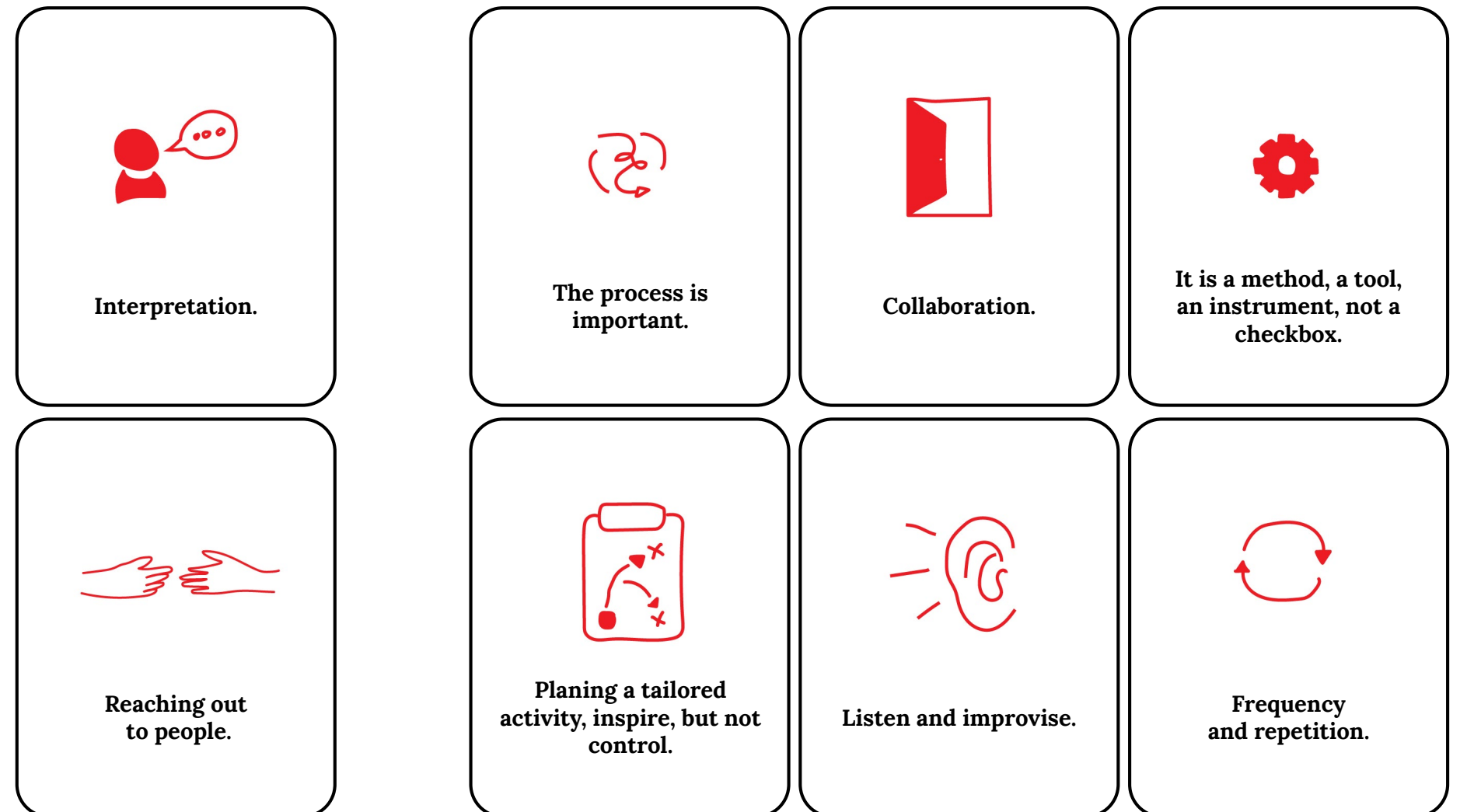
Fig. 172 Outcomes process, source: Author

5.10 Conclusions: Conflict in the neighbourhood

This is a story of exclusion, a battle over public space. As I experienced during the participation events, there is an on-going conflict in the neighbourhood between the majority and the minority. People of different backgrounds, ethnicities, employment status, age, homelessness, and others are being excluded from the public space. They need to use the public space in a different way, than the housed Czech majority. One solution would be to exclude, to control, to smoothen the public space to solve this conflict. As Jess Myers said in her podcast Here There Be Dragons: „Perhaps true safety has very little to do with discrimination and isolation." I think the co-designing workshop with the children should be an example in this, as they instinctively envisioned a future, in which public space is an extension of everyone's body. This connects to the previously mentioned concepts in the Theory section, where the risks of under-maintenance combined with mass-media polarization, not enough of contact between diverse groups of citizen and fast changes lead to a conflict. Currently, the neighbourhood is vulnerable to commercialization and commodification of the public space, as well as a reaction to control and smoothen the public space. I think this is a starting point for my design, a clear assignment, to create a space that can mitigate and mediate these contacts, so that people can deal with these dissimilarities. Sometimes, this

cannot occur without friction, but space designed with these thoughts in mind can create an environment, in which the exposure of this conflict can be reduced, public space can have enough places and activities for everyone and fulfil everyone's basic needs. At the same time, this is an opportunity to shield everyone from the effects of the climate change and extreme weather events.

Conclusion from this section is the vulnerabilities, basic needs, and experienced weather events by the unhoused citizens. Another conclusions are a lack of small green spaces in the neighbourhood, opimization of water for recreation, calm areas next to the houses, places for controled contact, and lack of culture and services. From the third event I take away the fireplace in the middle of a forest, need for relaxation and activities, water surfaces, round track, public bathrooms, presence of the NGO, different layers of greenery, picnic tables, wood, coulours in paving and spatial designs. Together, this all creates and important knowledge and guidelines for me as a designer and definitely helps me to create a better and more impactful design.

Lack of social spaces and big demand leads to the feeling of occupation of benches by certain social groups.

Housed residents feel threathened by the noise and litter and they are afraid to add any new social spaces.
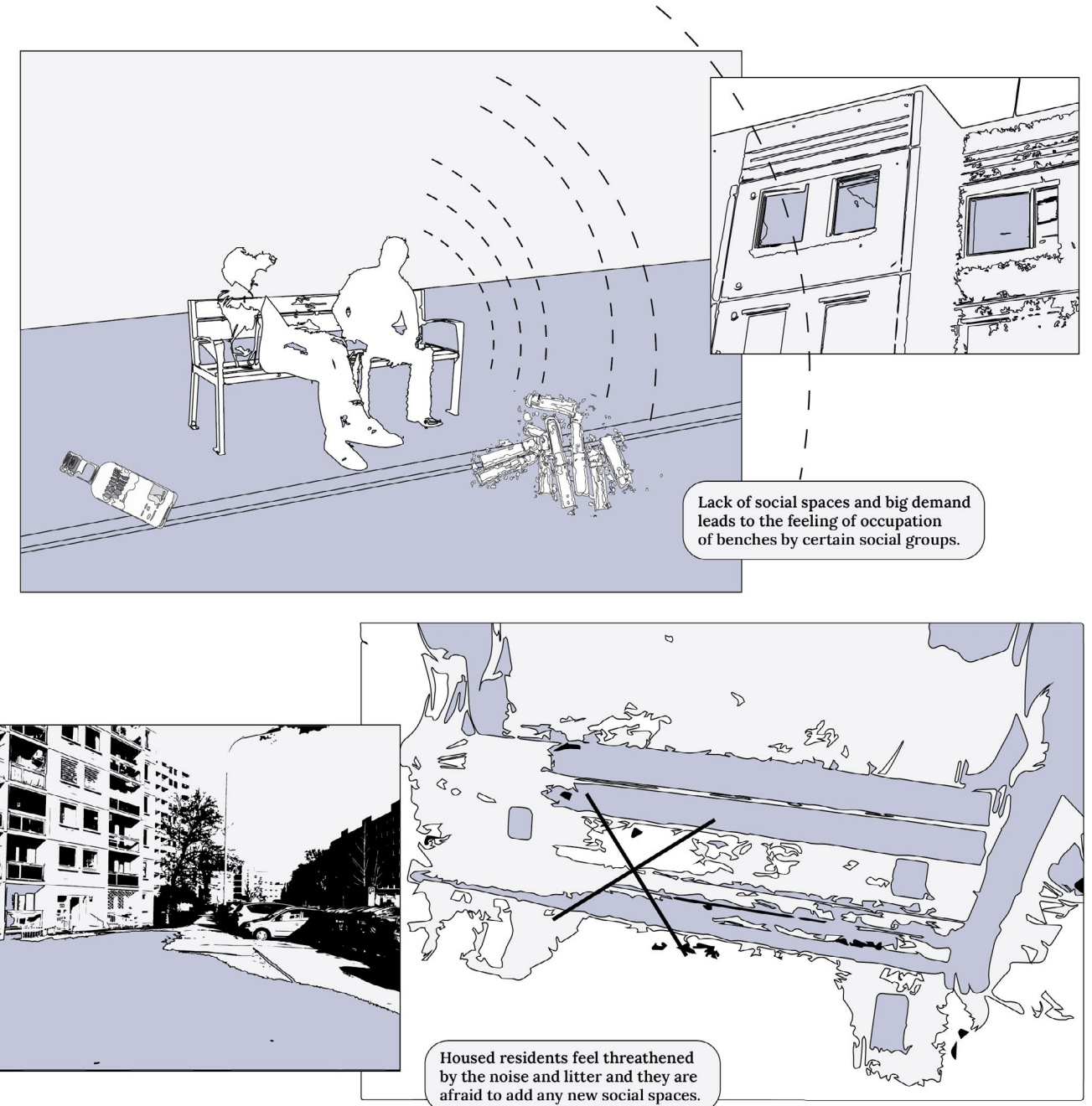
Fig. 173 Conflict, source: Author

Fig. 174 *Locations where unhoused people spend time, source: Author*
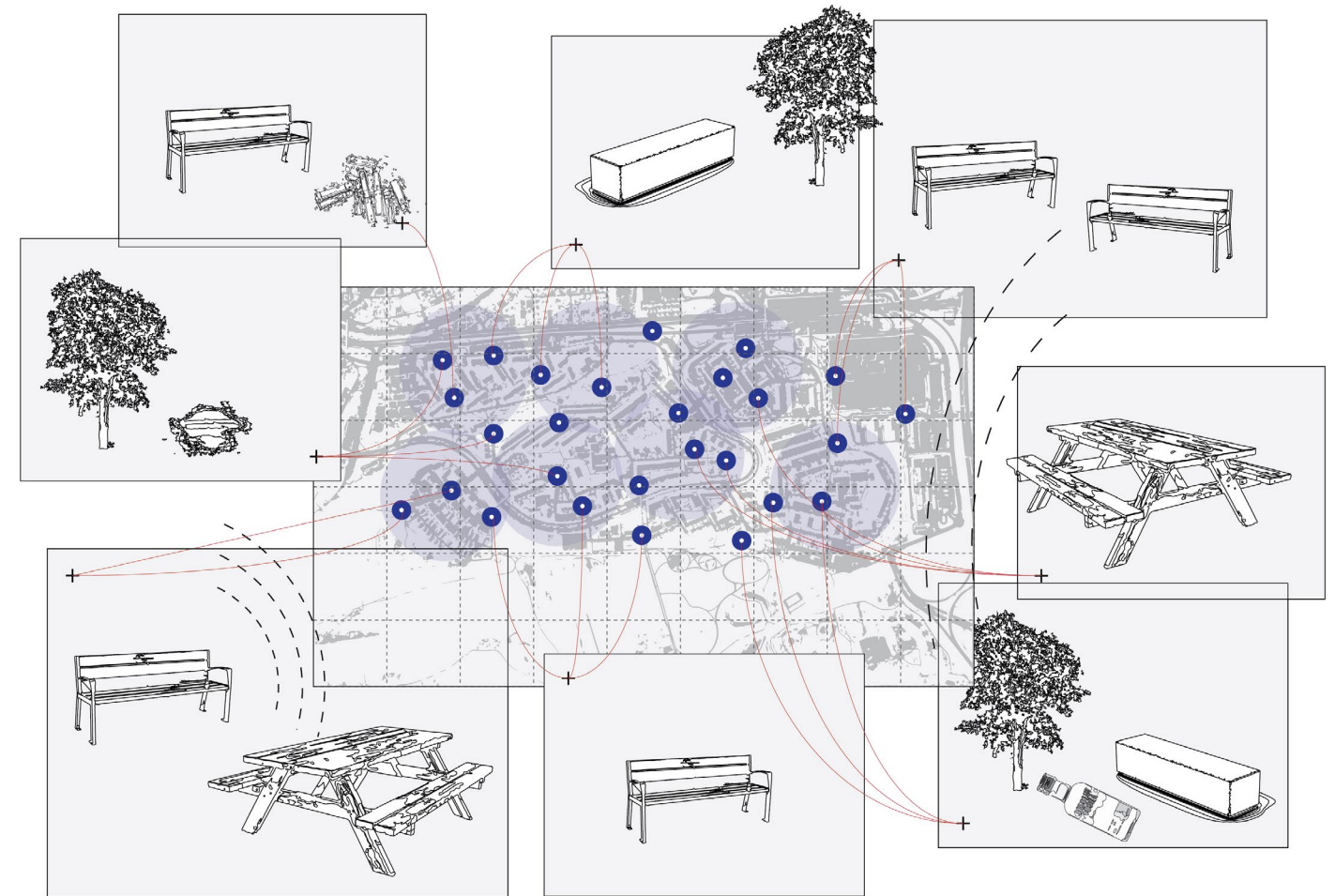
Fig. 175 *If we create more public spaces, the conflict would not be so intensive, source: Author*
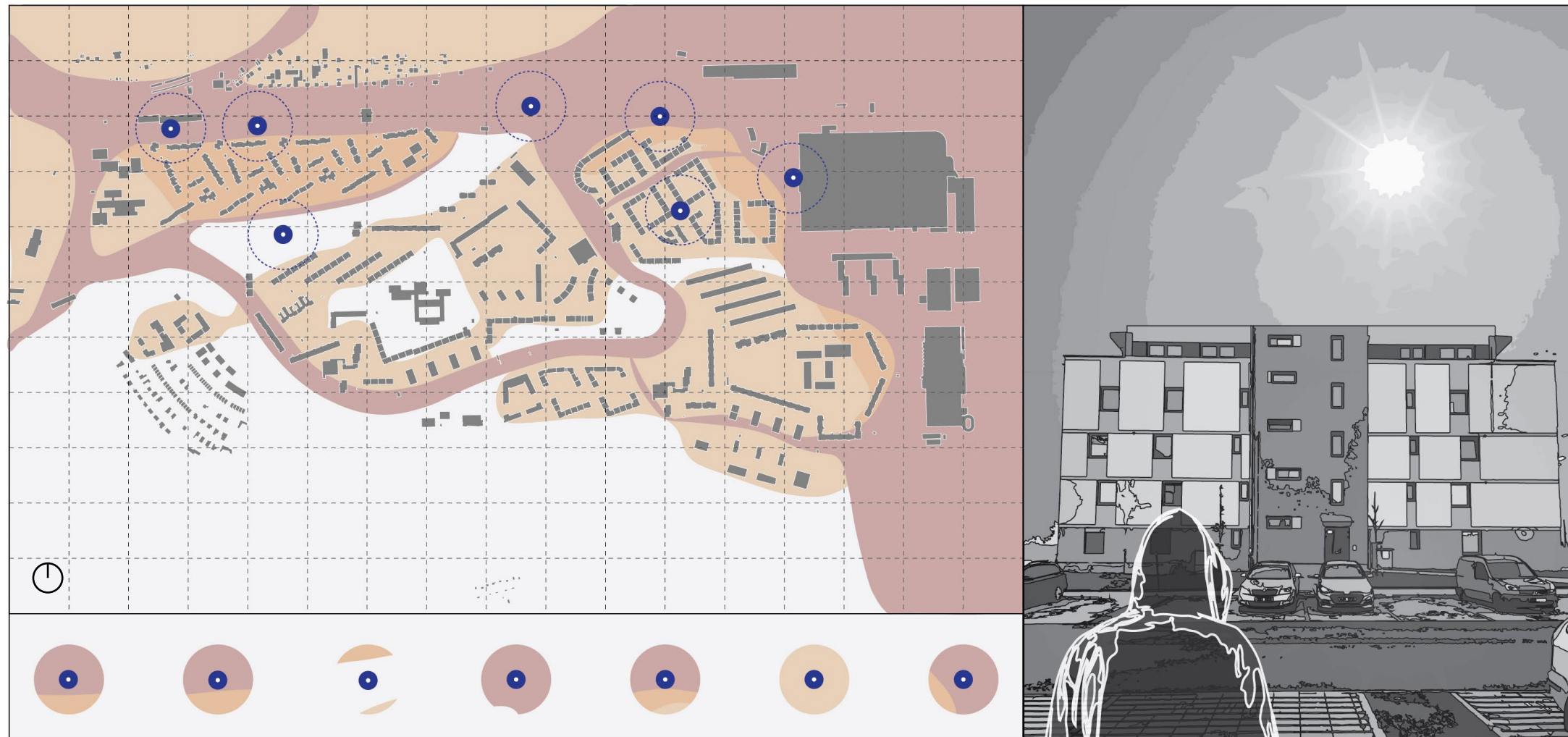
Fig. 176 The places where unhoused people spend their time are of the most
vulnerable to climate change, source: Author
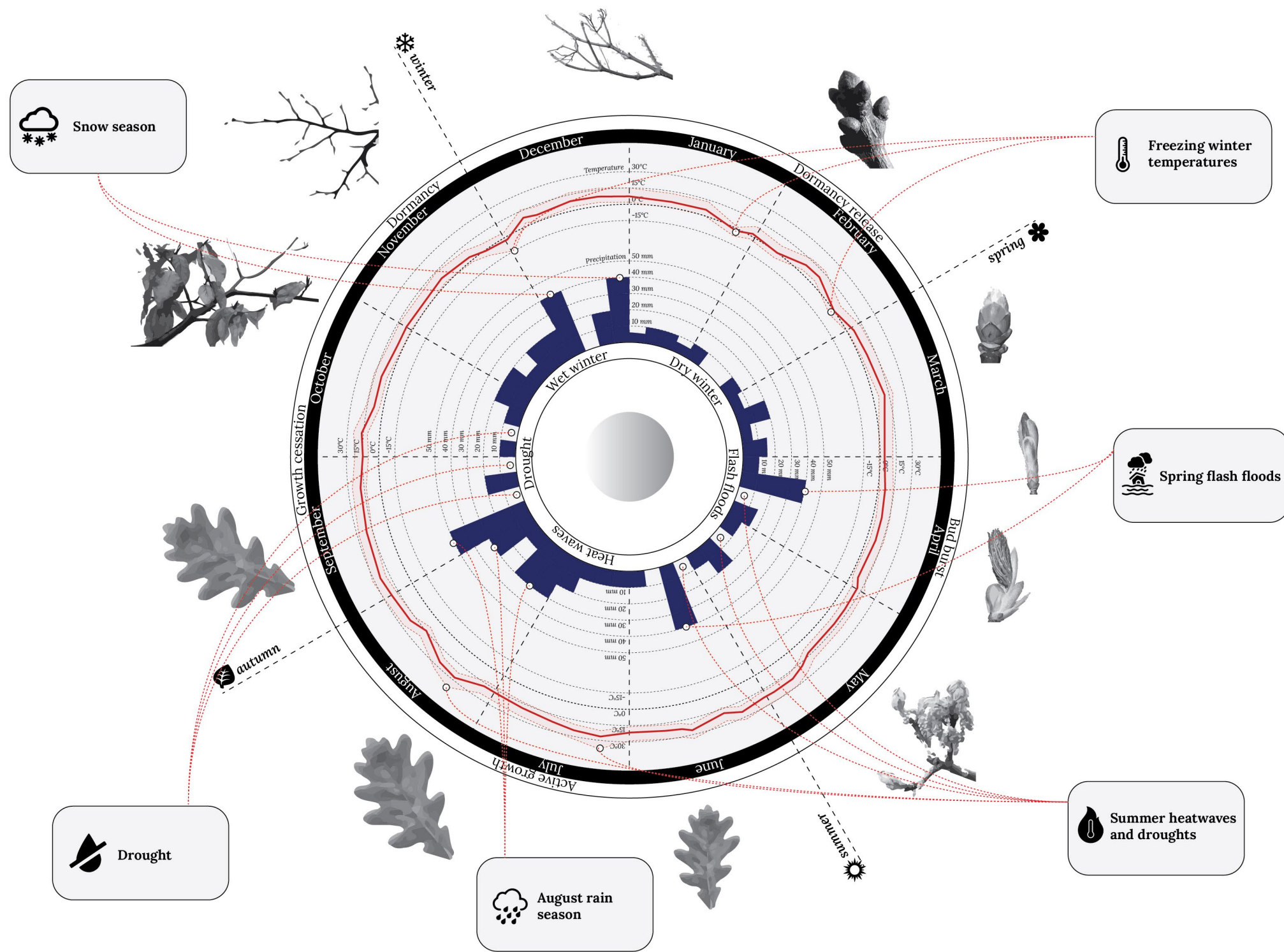
Fig. 177 Annual weather vulnerabilities, source: Author

Labels within the figure:

Snow season

Freezing winter temperatures

Spring flash floods

Summer heatwaves and droughts

August rain season

Drought

winter

spring

summer

autumn

January · February · March · April · May · June · July · August · September · October · November · December

Dormancy · Dormancy release · Bud burst · Active growth · Growth cessation

Wet winter · Dry winter · Flash floods · Heat waves · Drought

Temperature 30°C · 15°C · 0°C · -15°C

Precipitation 50 mm · 40 mm · 30 mm · 20 mm · 10 mm

Fig. 178 *The basic needs of unhoused people, source: Author*
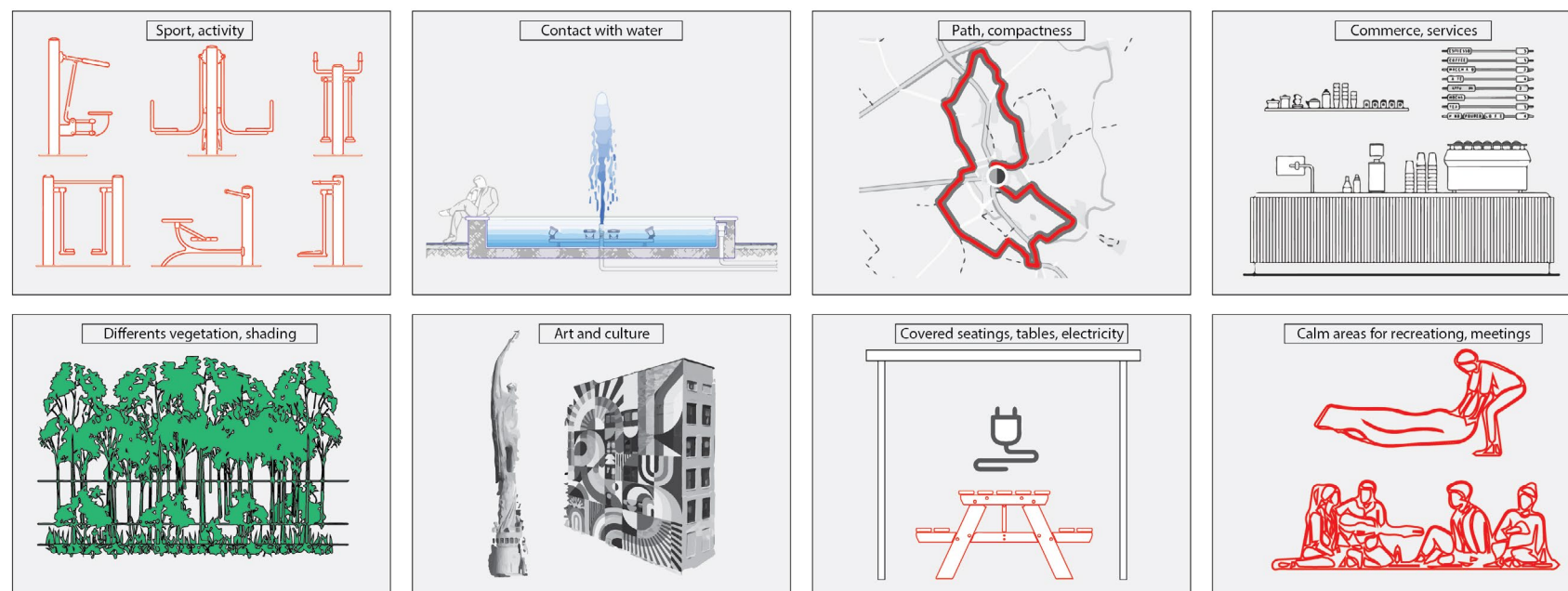
Fig. 179 *Visualised wants of the children from participation,*
source: Author

Fig. 180 Photo, source: Author

06 **Neighbourhood design principles**

*Richard Sennett even goes so far as to suggest that
people's lives should be knitted together through
necessity by making different people engage with each
other in order to survive, and that this can't occur
without friction and conflict (Sennett 1970).*

6.1 Introduction

The neighbourhood is a large-scale project, financially almost impossible to transform at once. Therefore, having a strategy, a set of design principles to work with, can help in future construction. The principles include the design toolbox for individual types of public spaces, integrating NBS solutions and participation. Another strategy is an applicated nature-based solutions in the neighbourhood scale, addressing the distribution justice and climate vulnerability. The third set of principles is an identity aspect, working with social cohesion and personalization of the public spaces in the neighbourhood.

Design toolbox

Applicated NBS
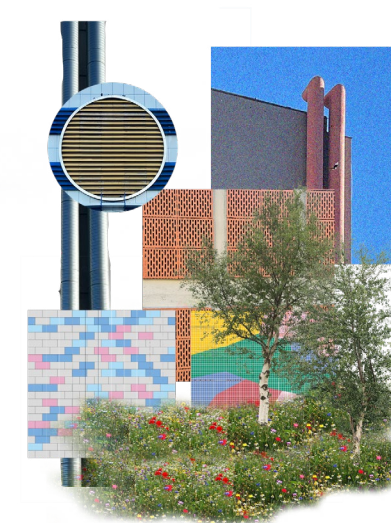
Identity

6.2 Design toolbox
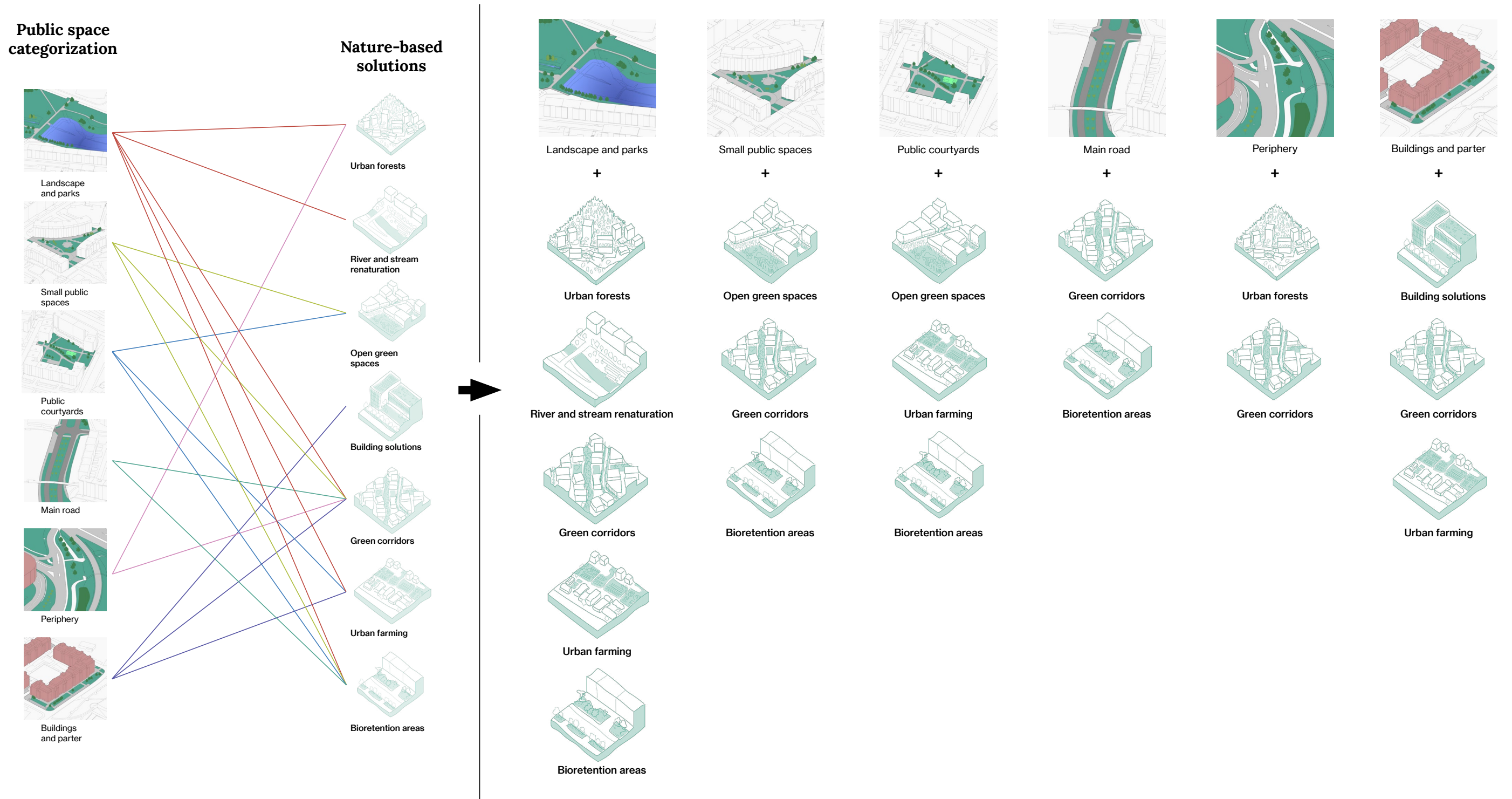
Fig. 182 *Design toolbox, Public space categories merged with Nature-based solutions catalogue, source: Author*

Buildings and parter

The approach to designing the buildings and streets comes from the analysis of the public space and the NBS. Building solutions, green corridors and urban farming translate into green roofs and facades, tree lines and shrub lines, smaller social spaces with picnic tables, playgrounds, community gardens, perennial garden beds or water collecting ditches, that can together cool down the streets, help with evaporation and infiltration, shading, biodiversity, and create social spaces that can help create a social control, contributing to safety and human contact. Also the design creates dedicated spaces for expression of thoughts through posters or legal graffitti. Smaller spaces like this can help strenghten community life, local identity, ease off the big parks and natural areas, and protect people on the streets as well as indoor spaces from overheating. It is possible, that some of these social spaces will be used by people making noise or drinking alcohol, but if enough of these social spaces are created, this exposure can be flattened and instead new communal relations can be made.

Controlled social spaces for all groups

Biodiversity
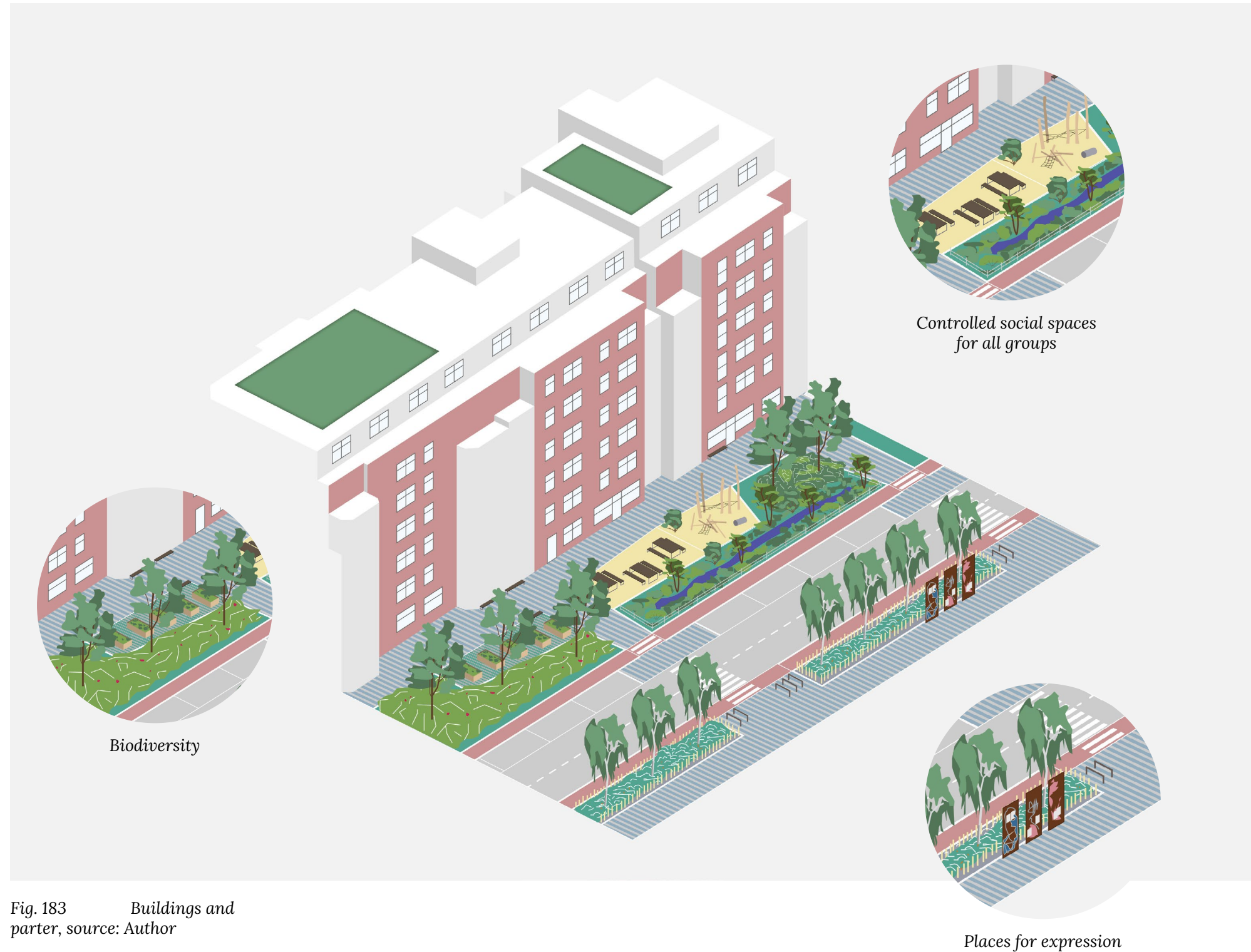
Fig. 183   Buildings and parter, source: Author

Places for expression

Vague terrains and peripheries

The biggest topic for this type of public space is connection, clarity and natural potential. Most of these spaces are caused by bad planning and car infrastructure, which creates large leftover areas. They pose a barrier to humans and animals. At the same time, they are large enough to create big biodiverse spaces. Clarity and safety can be created by protecting the pedestrians, connecting areas divided by the infrastructure and making visual clearness. Using right species of trees, schrubs and grasses can transform the vague spaces into refuge for animals and plants.

Vision and walkability

Natural corridors and water
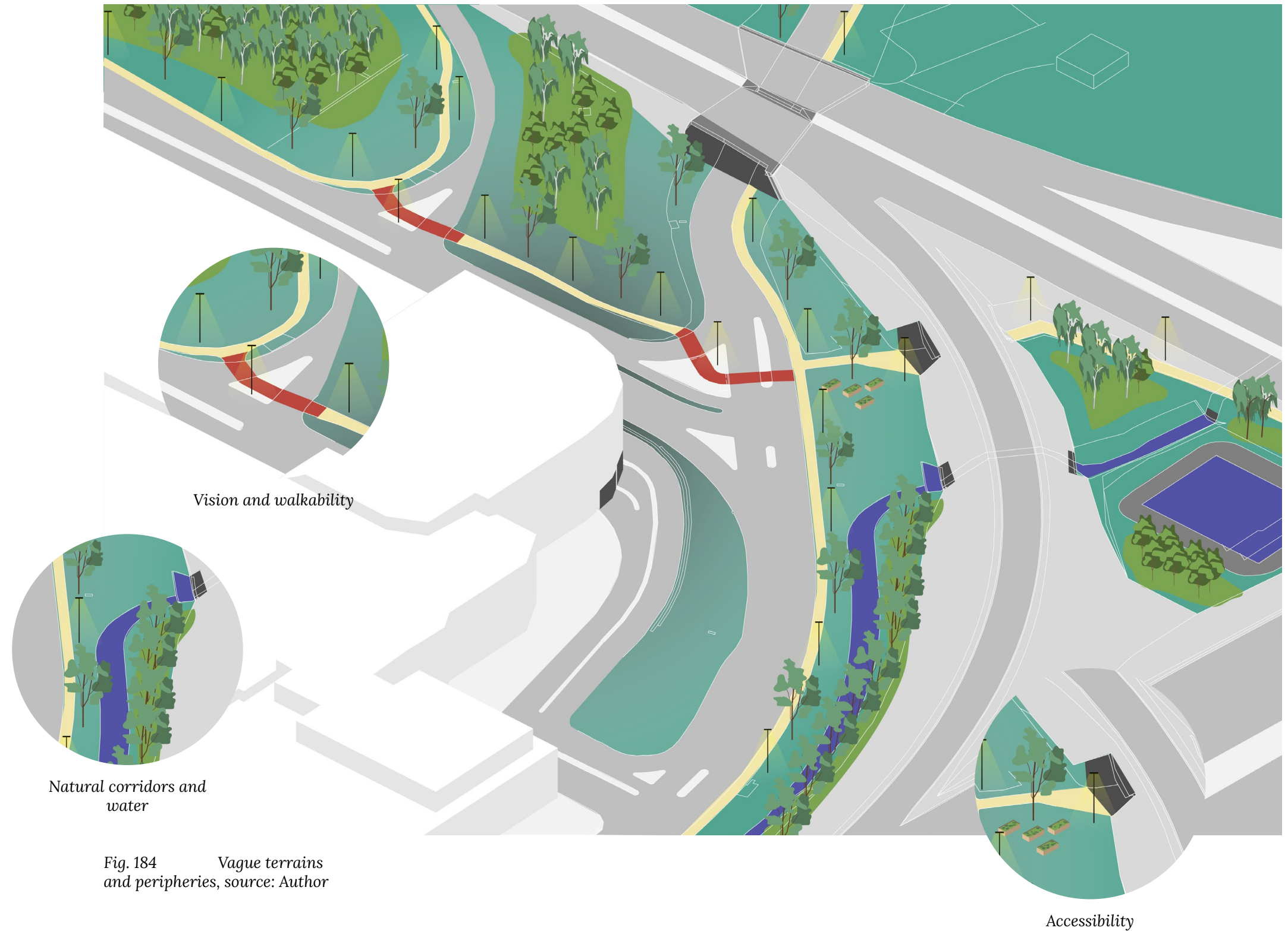
Fig. 184   *Vague terrains and peripheries, source: Author*

Accessibility

Main road

The main road going through the neighbourhood can serve as a big corridor and bioretention area, because it has a lot of space in the middle and on the sides. Water retention area can be created in the middle, collecting water from the road and creating a nice biodiverse situation. Shading by trees should cool down the asphalt surfaces, trees can form as a noise shield as well. Other types of mobility should be thought of here, like separated bike lanes, shaded bus stops, comfortable foot paths etc.

Public transport and separated bike lanes

Water retention

Green corridor
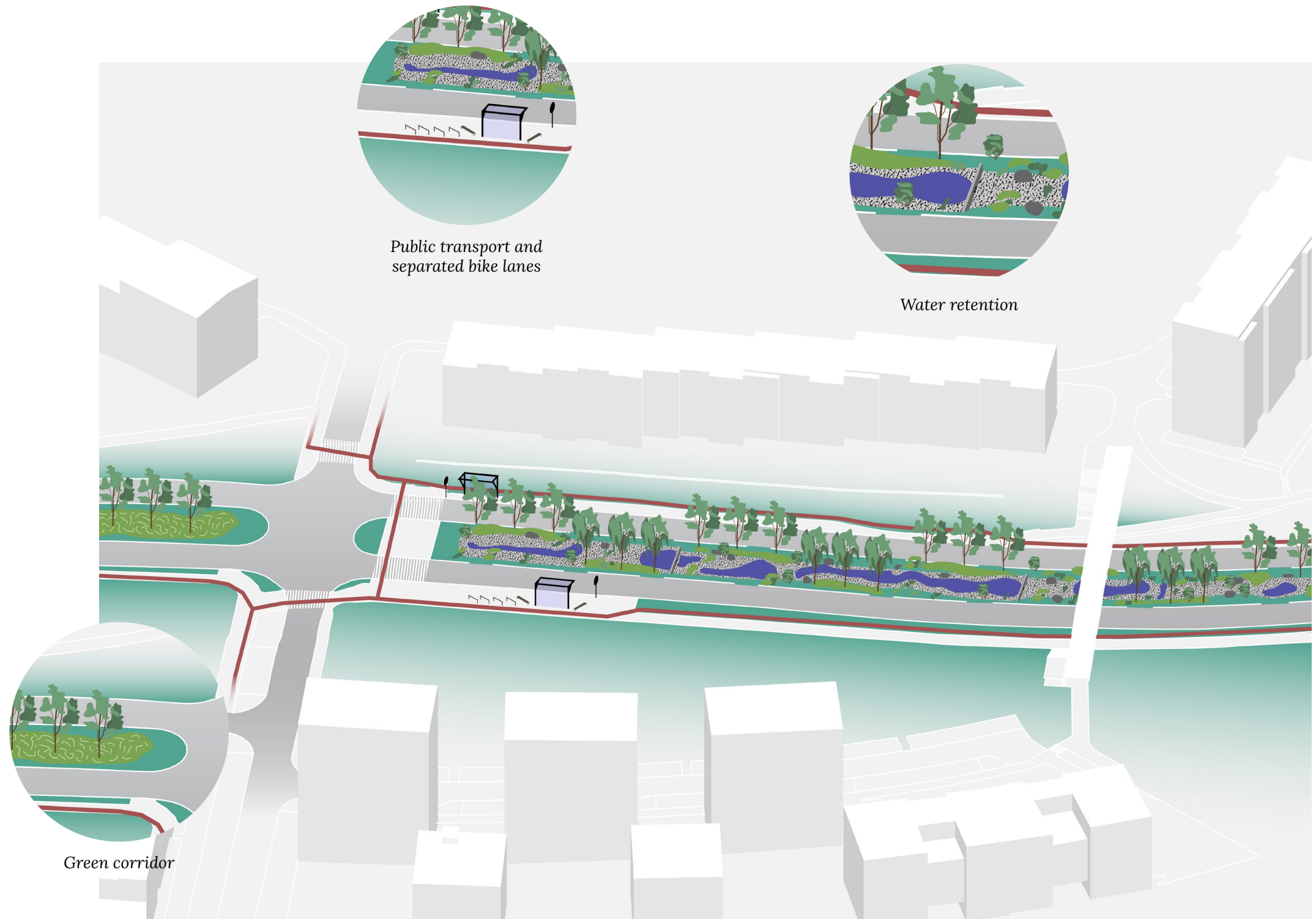
Fig. 185   Main road, source: Author

Public courtyards

Courtyard have a function to foster local community, providing for people living in the houses around. They can be formed from the NBS like open green spaces, urban farming, and bioretention areas. Furthermore, they provide mostly for informal, unpaved, and intimate athmosphere, using BBQ spaces with benches and tables, communal gardens, orchards, playgrounds, sportfields, and water collection from the roof. These aproaches can cool down surrounding buildings and combat extreme heatwaves, flash rain floods, or droughts. Local communities can claim the spaces, alter them to their needs, take care of them, but also meet each other throught them.

Gardens and water retention

Communal spaces
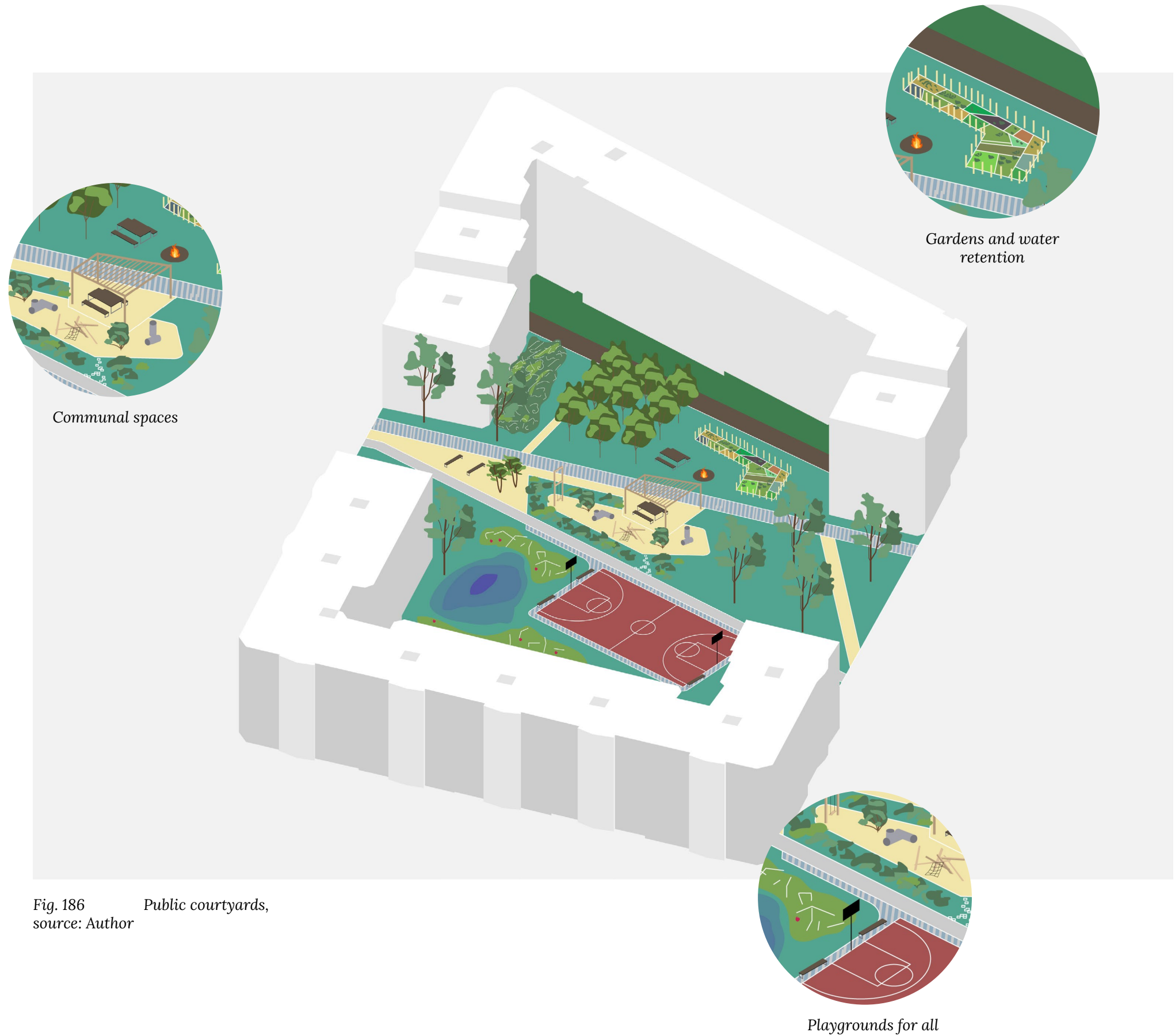
Fig. 186   *Public courtyards,*
source: Author

Playgrounds for all

Small public spaces

Contrary to the courtyards, open public spaces form a more formal, paved and representative function. However, they can still possess adaptive functions, such as bioretention, corridors, larger spaces for biodiversity and tree canopies. Open areas for periodical events like farmers market are important, but the spaces also need shaded areas for hot summer days. But just because squares play a more formal way of communal life, doesn't mean that they cannot have other activites, playgrounds or sportgrounds as well.

Activities

Periodical events
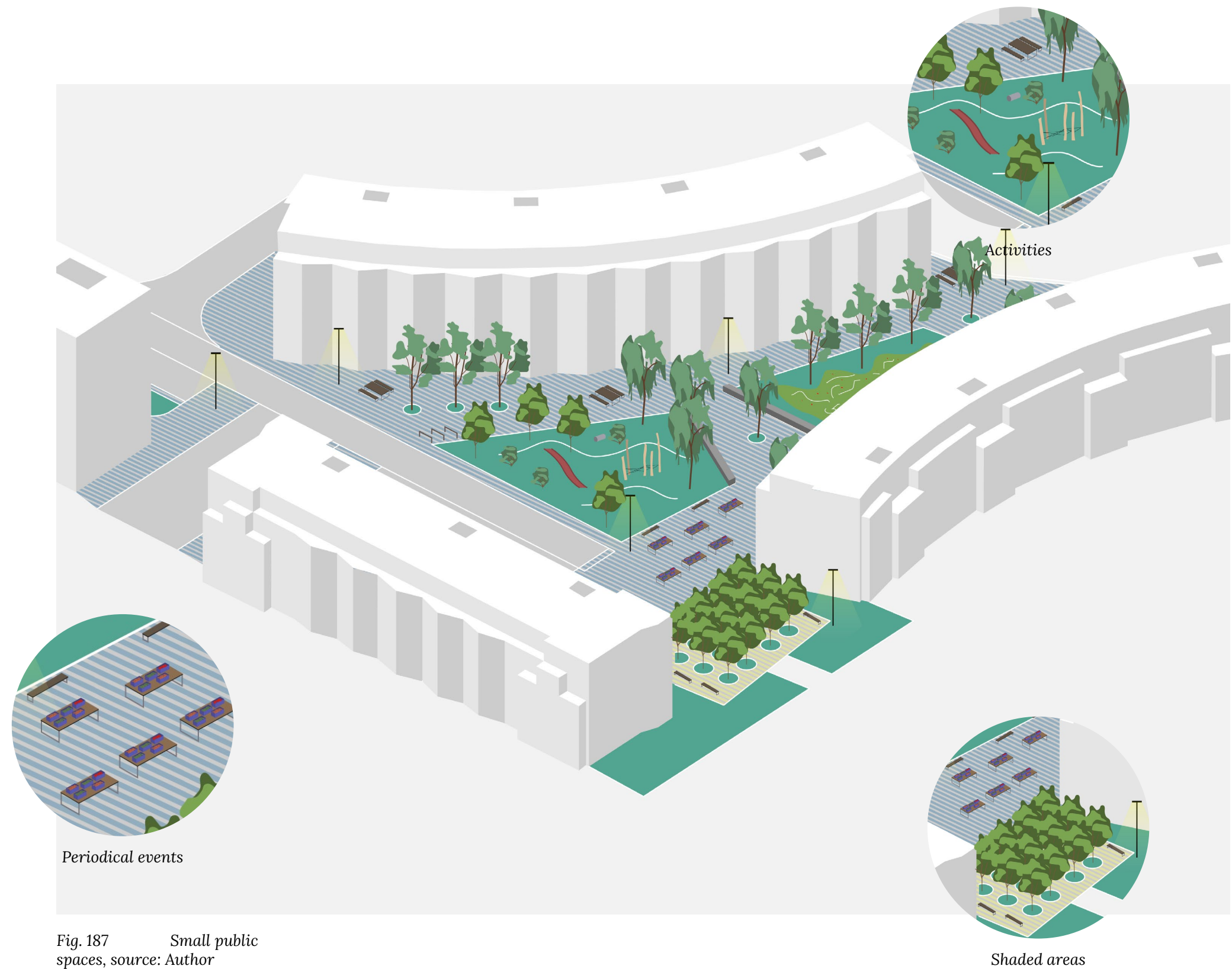
Fig. 187   Small public spaces, source: Author

Shaded areas

Landscapes, parks and river

The last category has a broad and diverse set of function and plays a crucial role in the neighbourhood. Large landscapes, parks and water areas serve as a spine to all climate adaptation, as they can absorb large amount of water, create natural habitats, provide shade and comfortable climate for retreat and form irreplaceable recreational function for citizens. They can use a lot of NBS, because they have a lot of space: urban forests, river renaturation, green corridors, urban farming, and bioretention areas. They can inhabit a lot of activities that require a lot of space, but emptiness and wildness is also important in this type of spaces.

Diverse activities

Contact with water

River renaturation
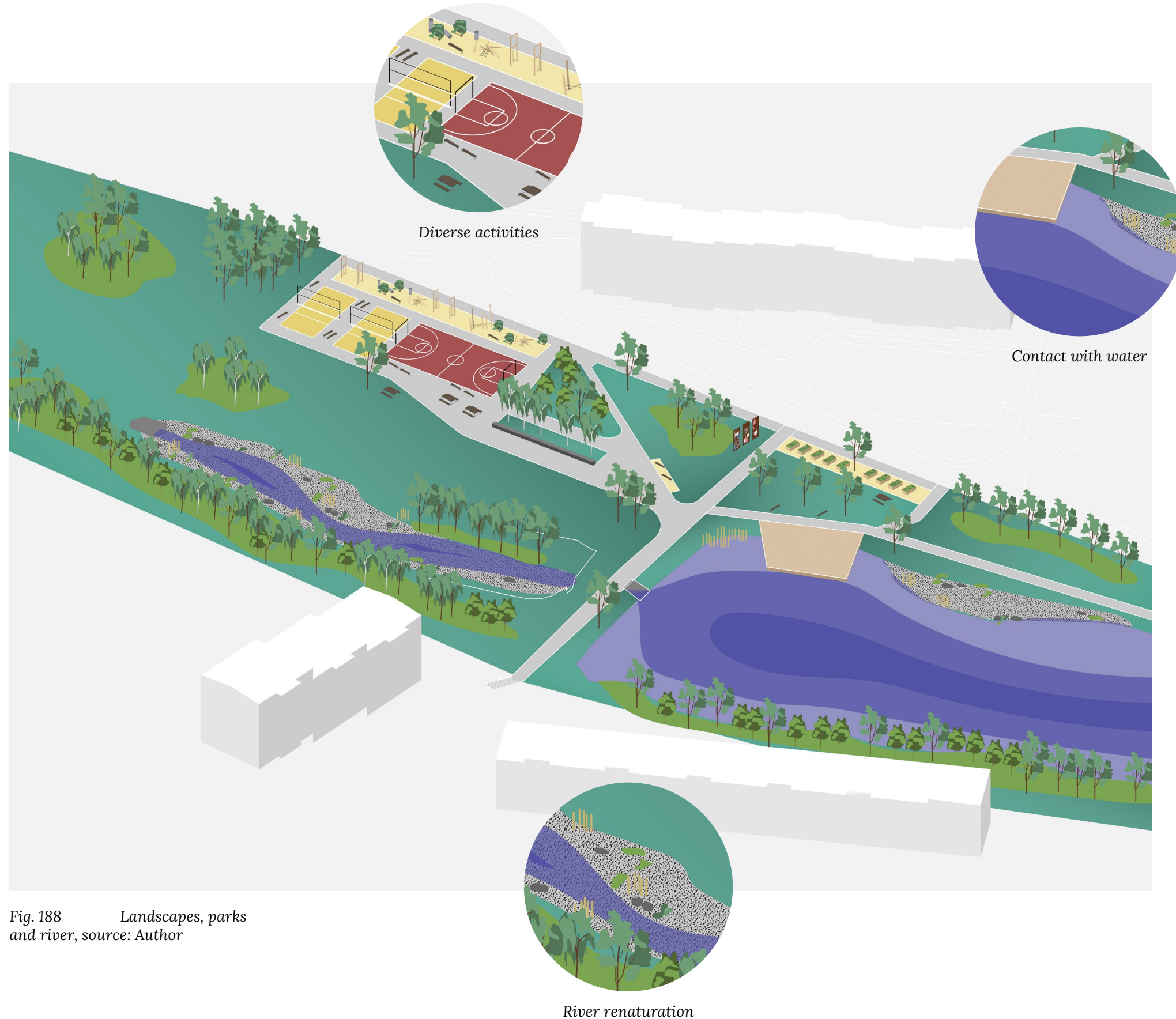
Fig. 188   Landscapes, parks and river, source: Author

6.3   Applied NBS

Urban forests: Forests can be connected to the large natural area to the south, which already have a dense vegetation. Therefore, the main strategy is integrating this part more into the neighbourhood.

Open green spaces: Small pocket parks form a vital network of green public spaces distributed equally throughout the neighbourhood. The old existing ones can be improved, while the new ones should be focused to the climate vulnerable parts in the north-east.

Green corridors: Spine connecting large green areas outside of the neighbourhood to the small ones inside the neighbourhood. They provide for a more informal unpaved public space in the back of the houses.

Building solutions: Street solutions represent integrating adaptations to the more formal representative public spaces in front of the houses.

River renaturation, Bioretention, Urban farming: These three NBS can be combined, because they constitute similar small interventions throughout the neighbourhood. On one hand, they provide crucial part of water management, on the other hand, they have an important role of identity and social connections.

Together, the system of Nature-based solutions works as an interconnected (eco-)system, providing a variety of functions in making the neighbourhood more resilient, connected and just, adressing the spatial justice analysis.

Fig. 191 *Green corridors, source: Author*

Fig. 192 *Building solutions, source: Author*

Fig. 189 *Urban forests, source: Author*

Fig. 190 *Open green spaces, source: Author*

Fig. 193 *Farming and water, source: Author*

Fig. 194 *All NBS together, source: Author*

Fig. 195   *NBS in the neighbourhood, source: Author*

1:5000

6.4 Identity of the neighbourhood

Paving
The point of the interventions is not only to create a technically climate adaptive neighbourhood, but also to create a socially resilient environment, where the residents identify with their neighbourhood and share a positive relationship with each other. Implementing distinctive elements connected to the history of the neighbourhood can contribute to making the project a part of the shared story that the area bears. Černý Most is known for its roughness, messiness and greyness. The prefabricated housing made of concrete has a characteristic grid of windows and colours. Paving in front of the houses should work with this characteristic and carry a grid and greyness to compliment the buildings, but it could also take a next step in the form of new colours luring in in a distinctive pattern. These colours will be associated with the period in which different parts of the neighbourhood were built. The positive side of this is that it does not need to be implemented all at once and can be introduced

every time a street is undergoing construction. The patterns can also have a collaborative aspect, involving artists and residents.

Vegetation
Using the paving principle can be extended to vegetation as well which also adds a time aspect. The flowers around the tree will support the tree until it's grown after the initial stage of plantation in the paved areas, which also creates a more visible effect when the trees are young. After they are grown, trees can be protected with a steel cage. In the case of unpaved areas, blooming flowers will have a similar function, but also pioneering trees will be added temporarily, helping to transform the area until the slower growing trees are bigger.

Elements
The neighbourhood can work with already existing elements, using them as inspiration in creating playgrounds, public art, street furniture etc.

Fig. 196   *Identity collage, source: Author*

Fig. 197   Elements, source: Author

Fig. 198   Paving scheme based on history of the locations, source: Author
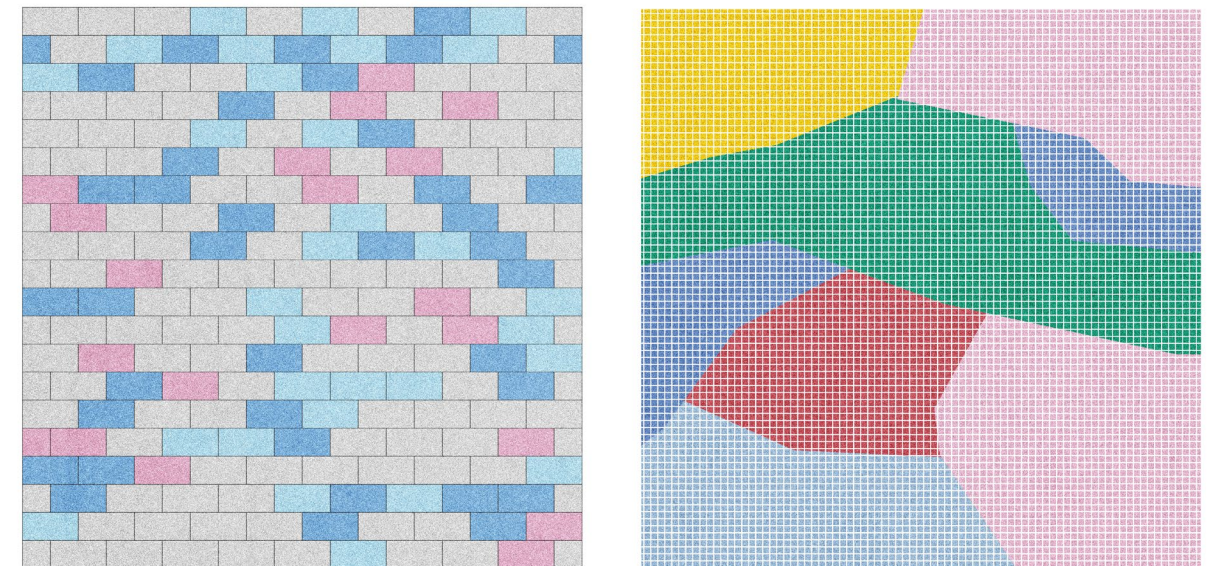
Fig. 199   Paving and planting detail, source: Author
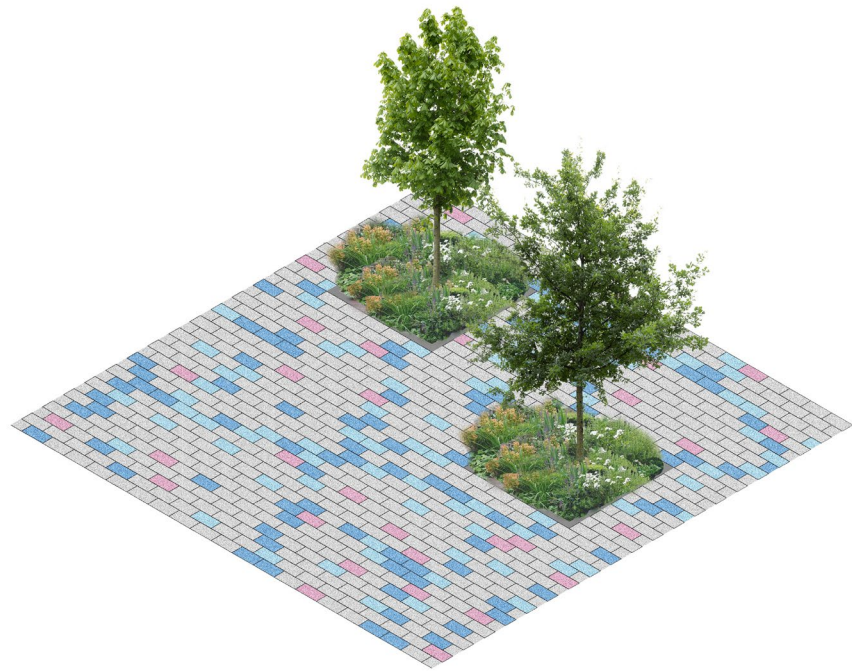
Fig. 200   *Initial stage paved areas, source: Author*
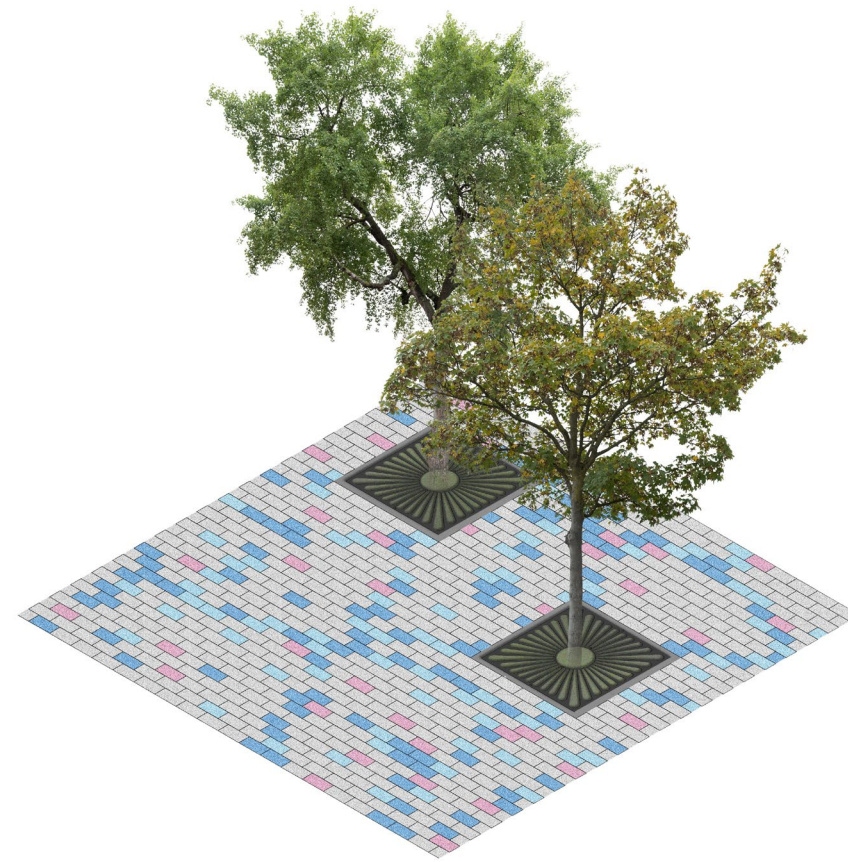
Fig. 202   *Over time paved areas, source: Author*

Fig. 201   *Initial stage unpaved areas, source: Author*
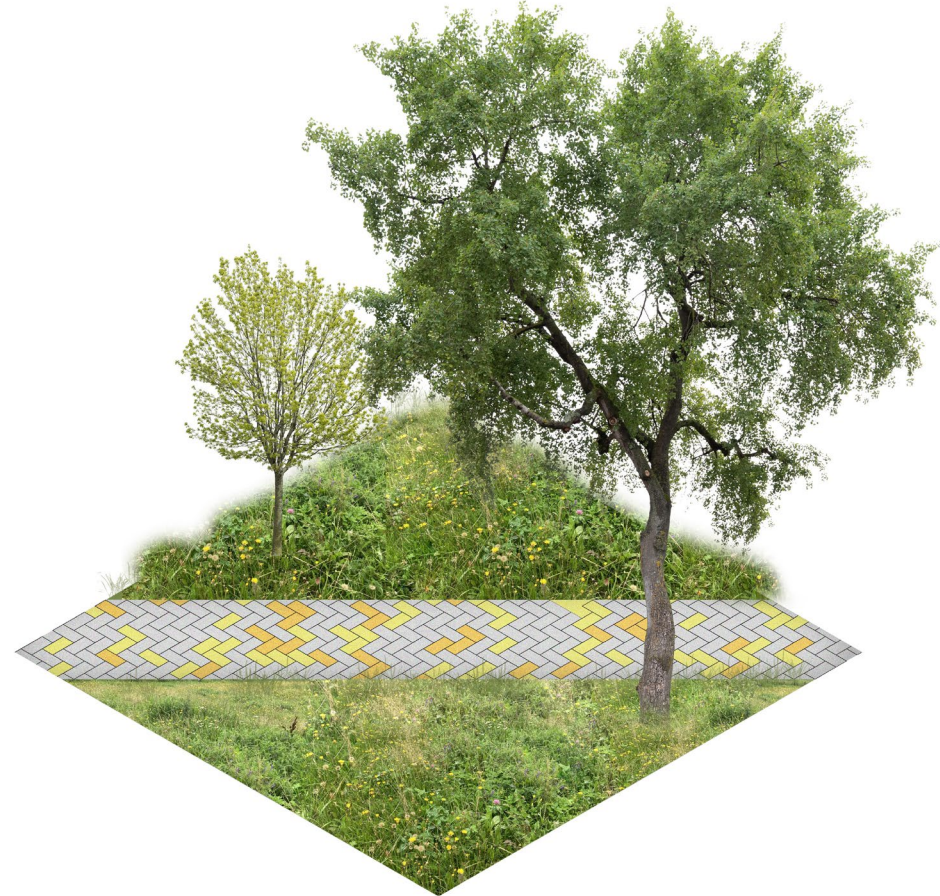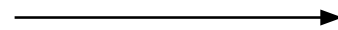
Fig. 203   *Over time unpaved areas, source: Author*

Fig. 204

Fig. 205

07 **Landscape design**
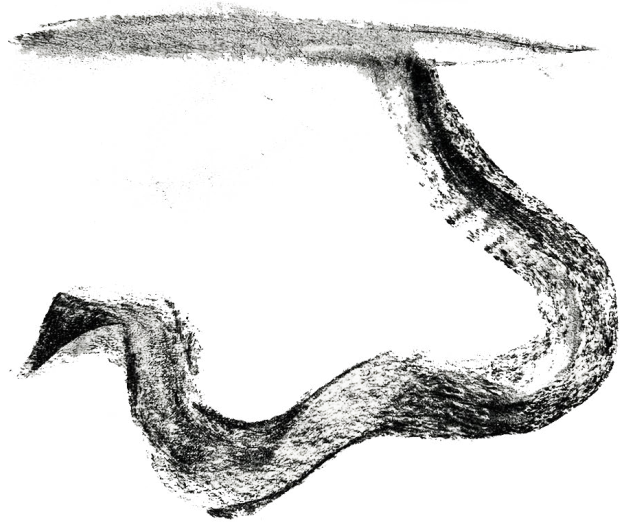
„*Perhaps true safety has very little to do
with discrimination and isolation.*"

Jess Myers, Here There Be Dragons podcast

7.1 Introduction

Based on all the previous work, one specific location from the neighbourhood is selected to be designed in more detailed. The landscape architecture design is made using the NBS, toolbox, participation outputs and all the analysis. First, goals are set-up from the conclusion of last chapter. Then, spatial concept is developed in sync with the participation outputs and design toolbox.

7.2 Goals

The goals for the design are:

1	Dispersing the exposure of the social conflict.

2	Creating open, inviting and accessible spaces.

3	Meeting the basic needs of the most vulnerable.

4	Using the wishes of the teenagers from participation.

5	Allowing difference, usage, porosity.

6	Protecting everyone from the climate change.

7.3   Design location

The chosen location is the same site used for the co-design participation event. It is located in front of the metro and the bus terminal. On the east side, there is a big shopping mall, while on the south-west side, the neighbourhood is starting. The site is hollow right now, with few benches and paths.

Fig. 207   Aerial photo, source: Google Earth

Fig. 206   Design location in context of the neighbourhood, source: Author

Fig. 208-213   Photos, source: Author, Google Earth

7.4   Concept

Nowadays, the site is shaped by a road bend. This connection influences the foot traffic and endangers pedestrians. People walk mostly from the metro station to the mall. The rest of the site is uninviting and empty.

The main point of the concept is to change the road shape into more pedestrian friendly form and create a new park in the middle to invite the people to spend their time there. The areas next to the buildings are activeted for foot traffic, but shielded from the park with trees. A series of paths in the middle of the park create loops. A new building is proposed by the metro station, where a small square is created. In the building, some of the activities and commerce can be located.

Fig. 215   Current situation, source: Author

Fig. 214   Concept scheme, source: Author
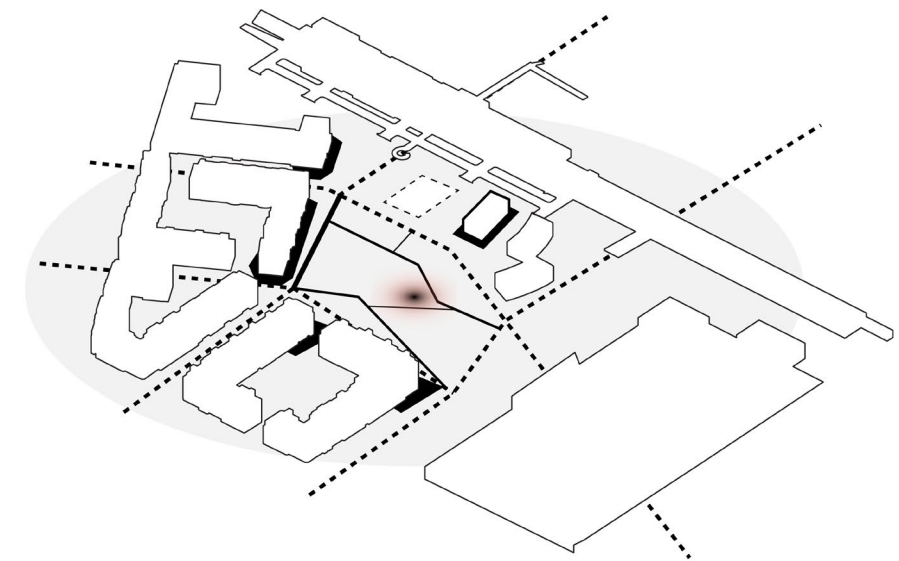
Fig. 216   Proposed concept, source: Author

7.5 Participation, Conflict

During the participation a list of activities and basic needs was created. This list is carefully selected to cover different ages and group of citizens. The activities are divided into several categories and distributed throughout the neighbourhood.

Toddler	Childhood	Schoolage	Teen	Adult	Elderly
Water					
Toilets					
Drinking fountain					
Heat					
Shelter					
Track, path					
Shading, vegetation					
Tables, places for celebration					
Calm area, place for dates, meetings					
	Playground				
	Terrain				
	Bike				
	Culture				
	BBQ, fire				
		Seating			
		Commerce, service			
		Skatepark, teenager space			
		Sport, workout			
		Electricity			
		Art			
		Social service			
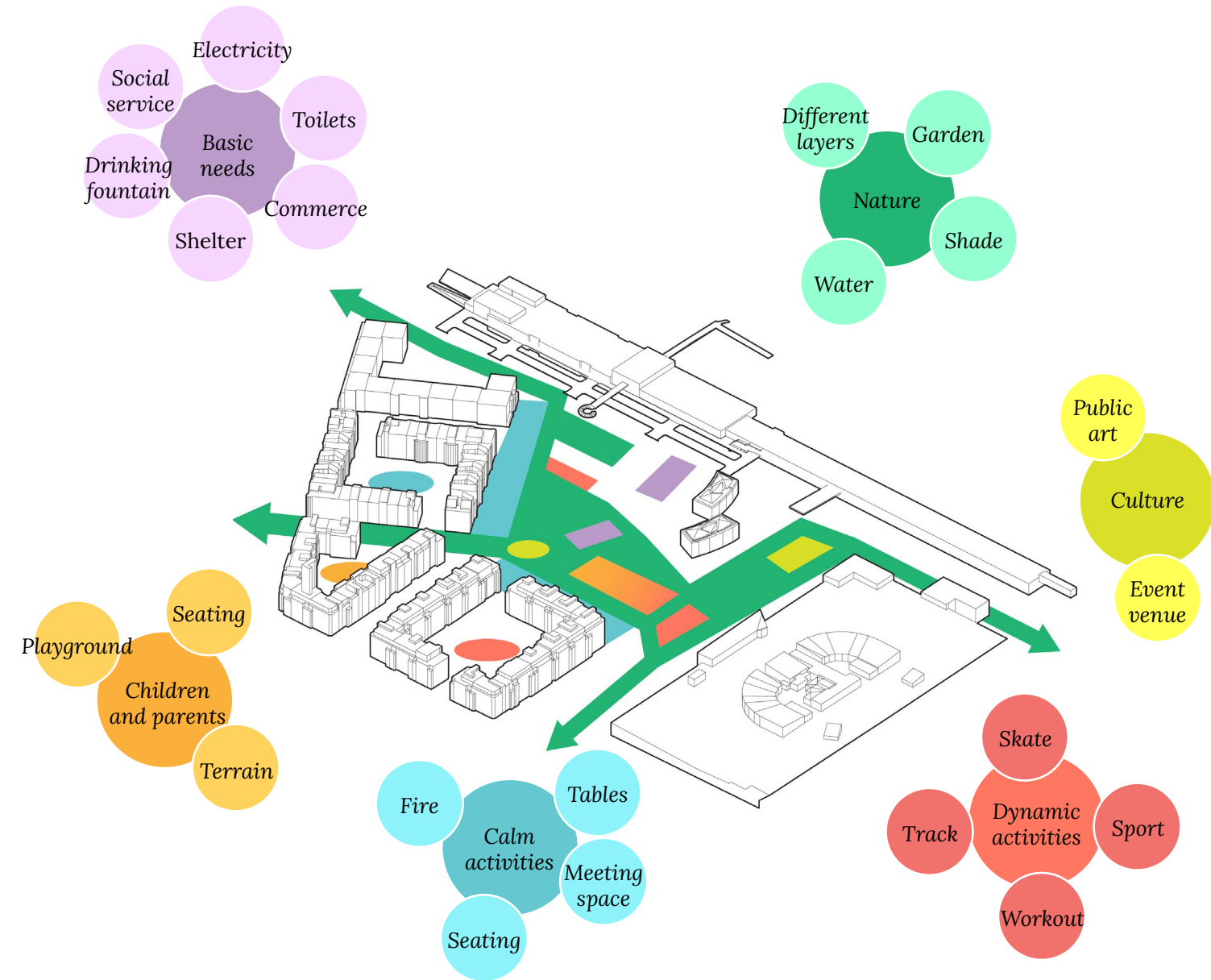
Fig. 217   Participation activities distributed, source: Author

Skatepark
This public space is mostly aimed at teenagers. It has a small skatepark, consisting of a pool and a few ramps. One of the ramps can also work as a long bench, when it is unused. The second ramp works as an elevated public space with stairs on the other side. People can use this space even when there are no skaters.
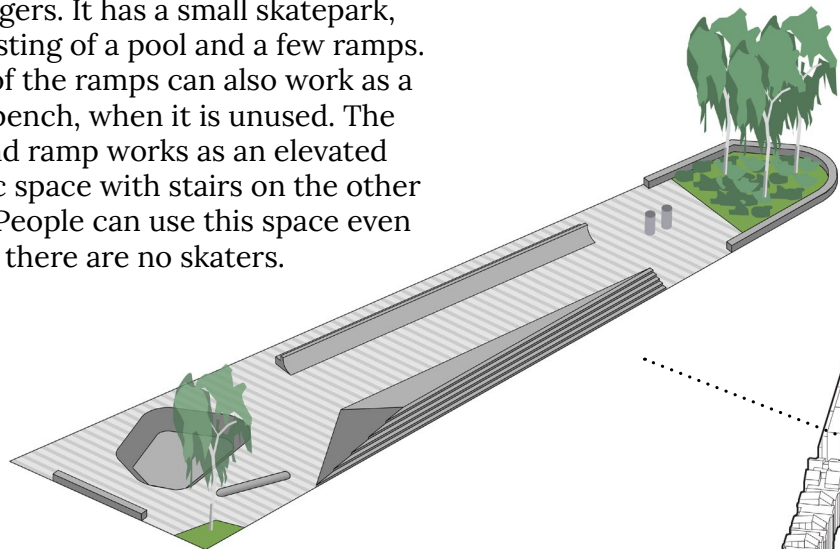
Public toilets and showers with a BBQ
In the heart of the park surrounded by vegetation is a small fireplace for BBQs. A facility building with free maintained toilets and showers is open for everyone. The form of the building is inspired by the surrounding existing buildings
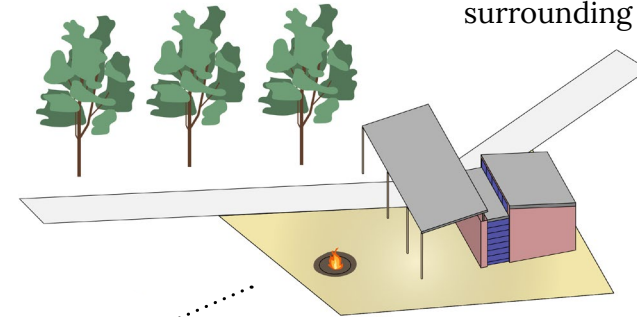
A corner
Public space consisting of benches, trees and picnic tables is there for everyone to have lunch, meetings, games or study.

Sport field and workout
This public space consists of a small football field and a workout ground, with benches and trees to shade.

Playground
Children playground, inspired by surrounding architecture, has a small playhouse, water element flowing into the park and a sandbox. Shaded by the trees and surrounded by hedges instead of fences.
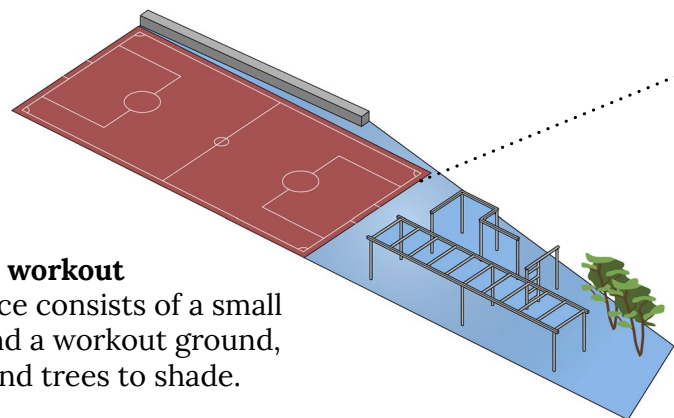
Fig. 218   Specific elements, source: Author

7.6 Adaptation, Toolbox

According to the developed toolbox, there are the Buildings and parters, Public Courtyards, Small public spaces and a Park. Also, there are two green corridors crossing and water can be collected from the roofs. In the paved areas, water can be collected underground and the root spaces of trees can be connected. In the open ground, water can be collected with gravity.

Small public spaces

Buildings and parter

Park

Public courtyards
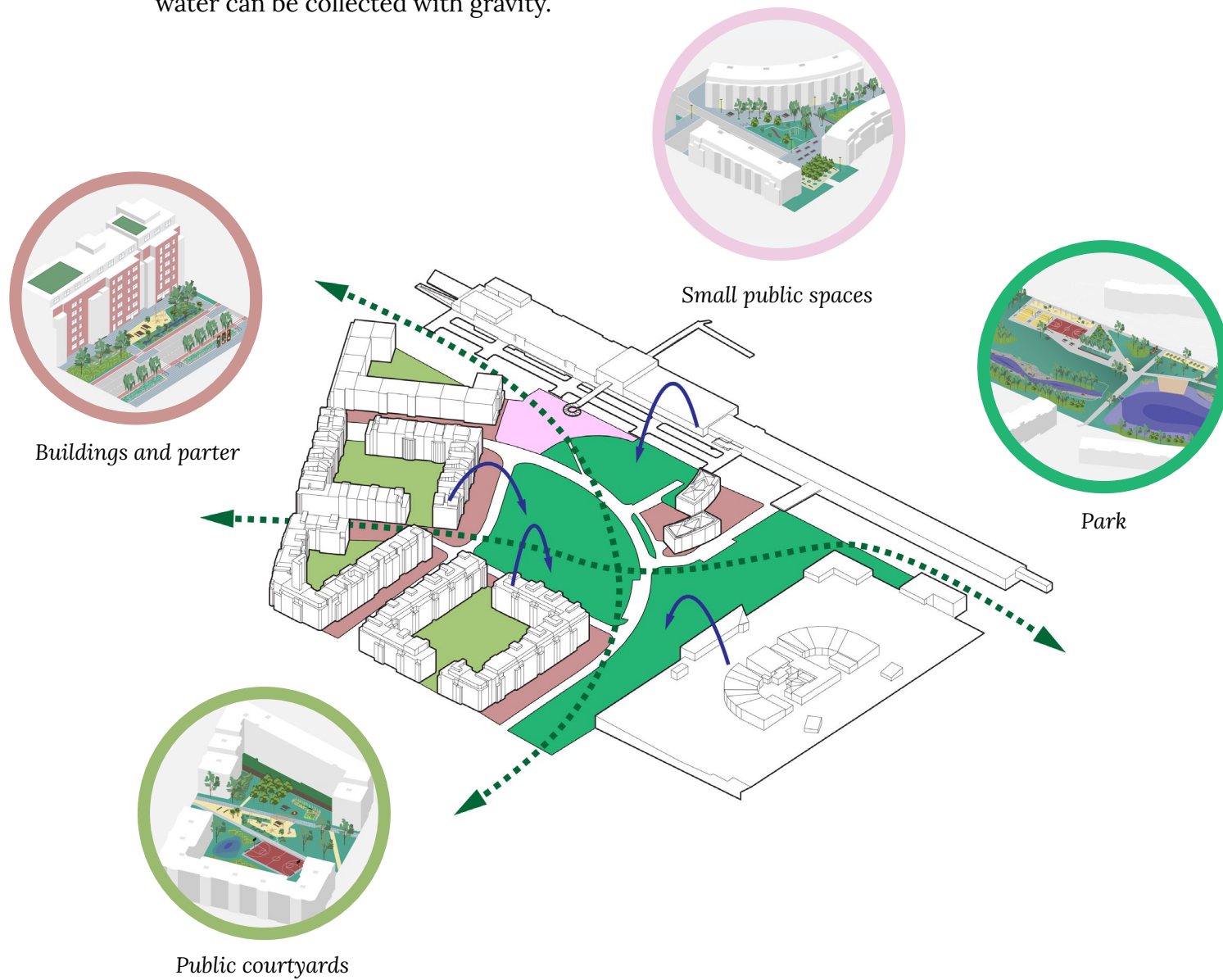
Fig. 219   *Toolbox on the site, source: Author*

Rain collection

Air cleaning

Carbon sequastration

Evapotranspiration

Cooling effect

Shade

Infiltration

Water storage

Sewer overflow

Biodiversity

Cooling effect

Water collection

Shade

Infiltration

Soil cleaning
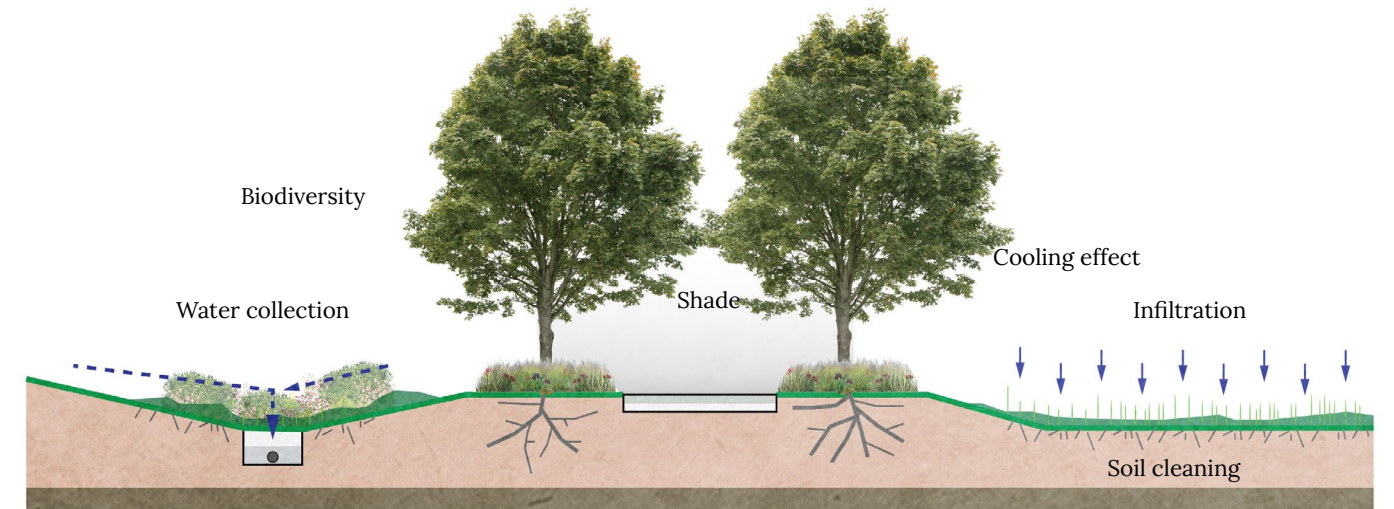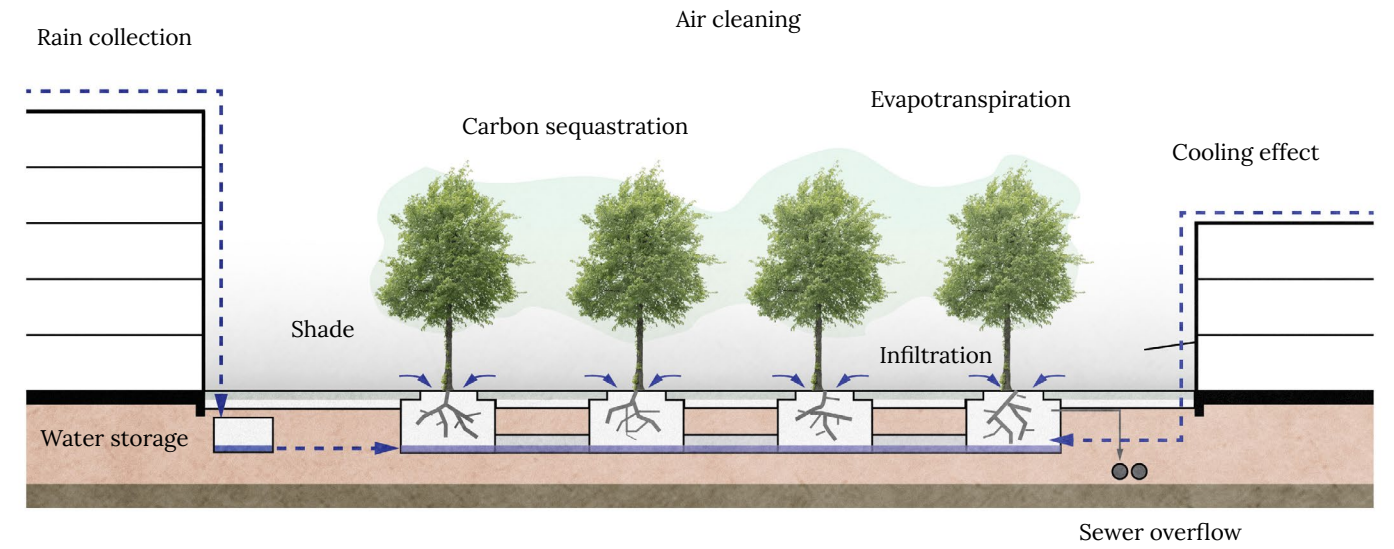
Fig. 220   *Green blue sections in paved and unpaved areas, source: Author*

Acer campestre

Betula pendula

Sorbus aucuparia

Tilia europaea
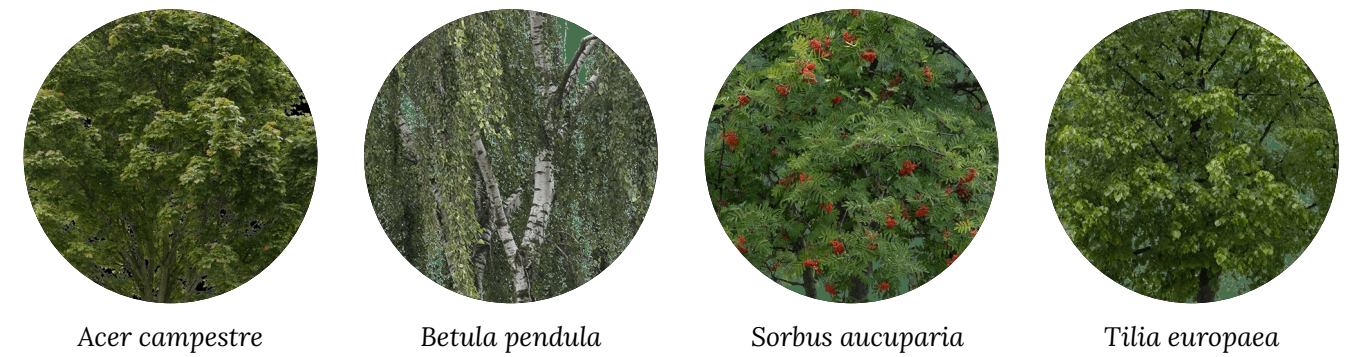
Fig. 221 –224   *Chosen tree species, source: meye.dk*

7.7 Design

On the plan to the right, the broader connection of the design is visible. The corridors and tree alleys are connected with the design, paths and car road, entrances to the buildings are visible as well.

- 🟡 Active parts (playground, skatepark, sport)
- 🔵 Passive parts (calmer areas for sitting)
- 🟣 Public spaces with higher importance
- 🟢 Community garden
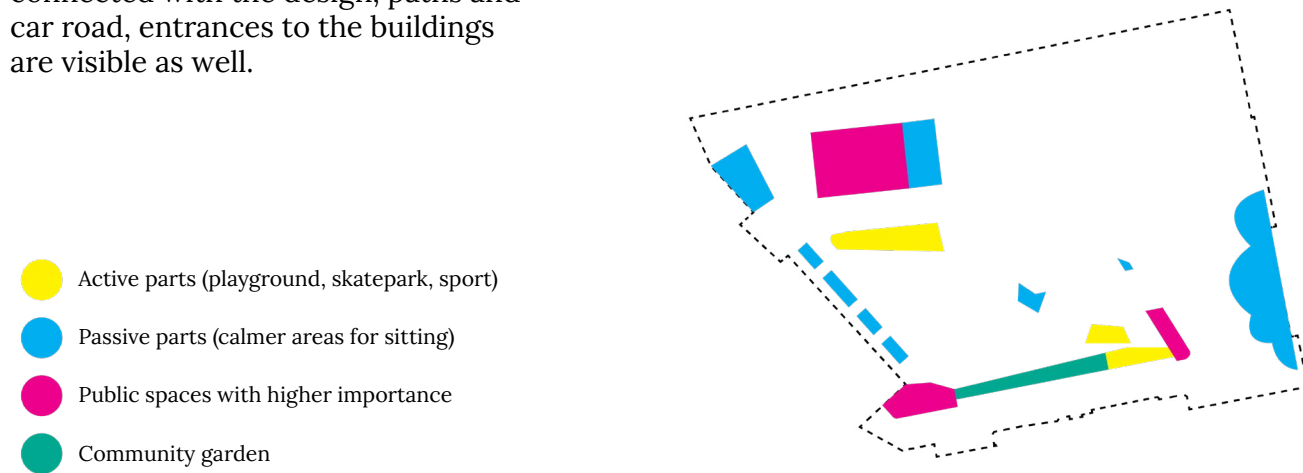
Fig. 225   *Activities and zones, source: Author*

- 🟢 Grassland areas with tall, dense, biodiverse species
- ⚪ Short cut grass for recreation
- ⚫ Semi-permeable crushed stones areas
- 🔵 Water surfaces for storing rain water
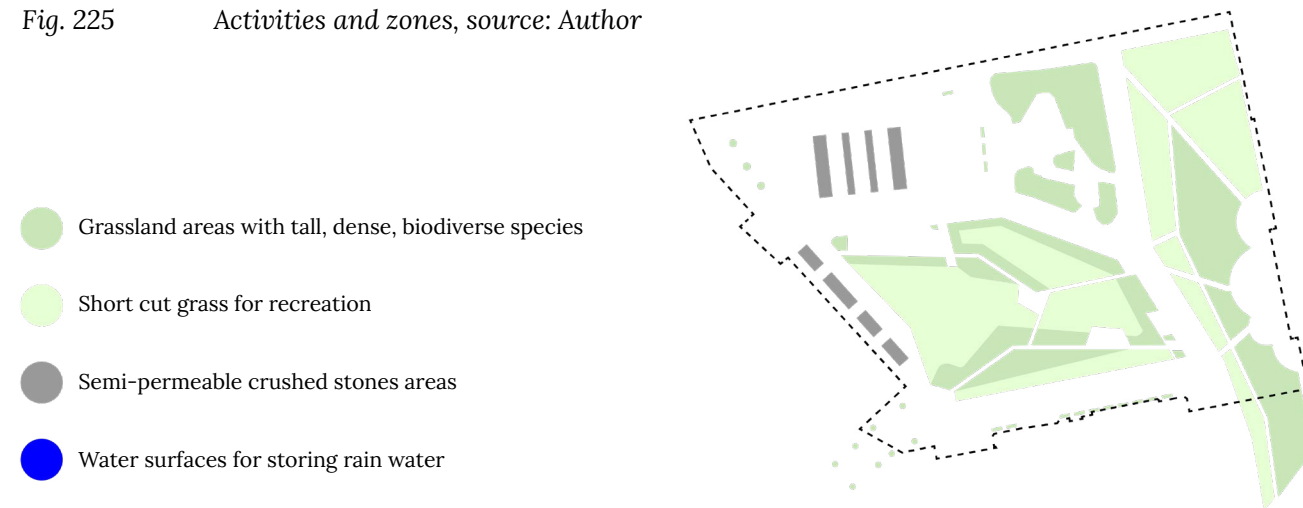
Fig. 226   *Permeable land cover, source: Author*

- 🟡 Fraxinus excelsior
- 🟢 Acer campestre
- 🟣 Sorbus aucuparia
- 🟢 Tilia europaea
- 🟢 Betula pendula
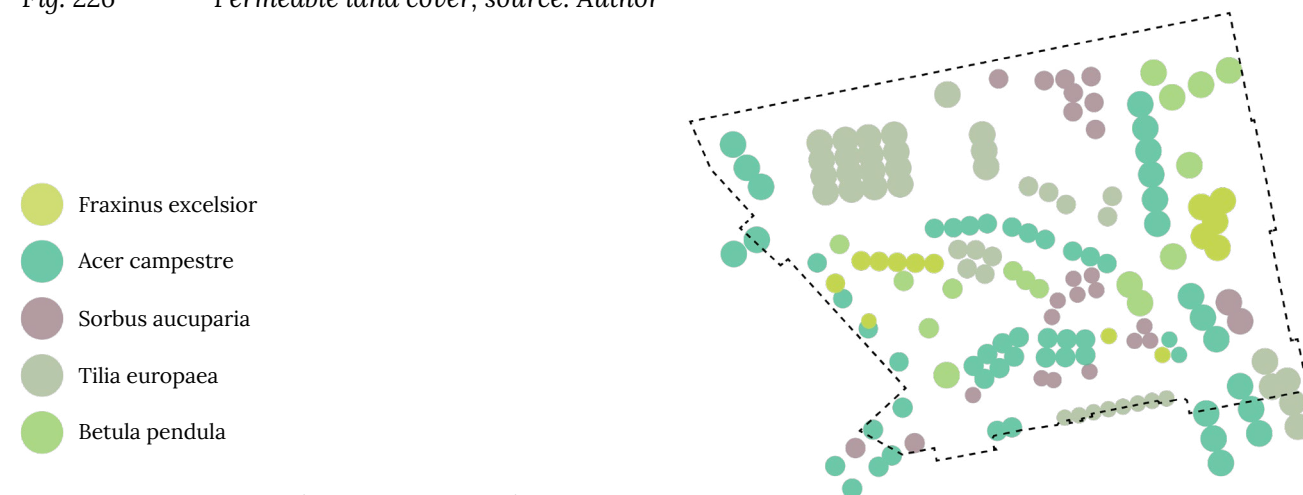
Fig. 227   *Tree scheme, source: Author*

Metro station

Bus station

Shopping mall

Neighbourhood

Pedestrian zone

1:2000

Fig. 228   *Broad relations to the site, source: Author*

Metro and bus station

Fountain and art

Skatepark

New building

Pedestrian connection

Open grass field

Corner entrance

Shopping mall

Fig. 229   *Design axonometry, source: Author*
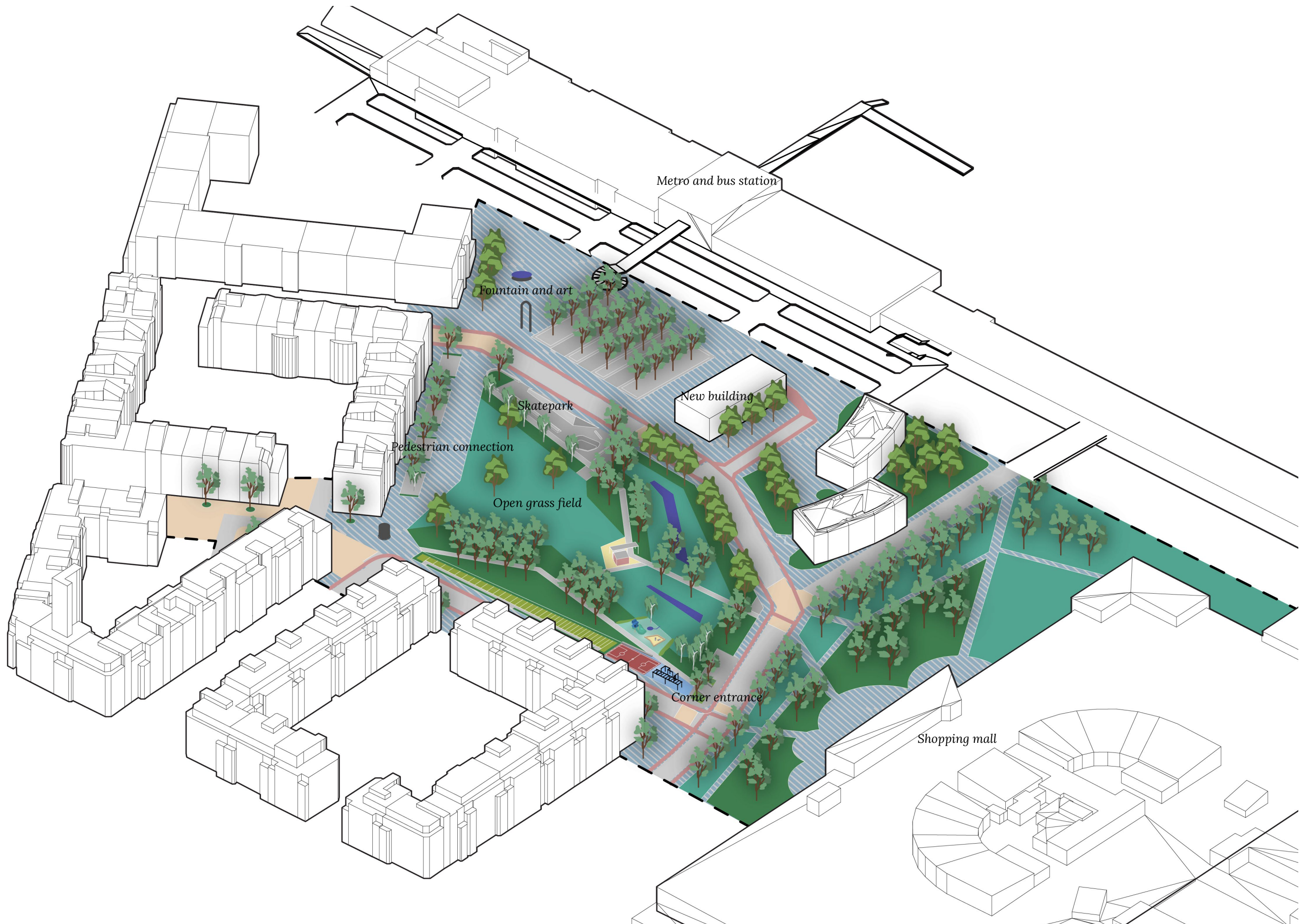
Fig. 230   Siteplan, source: Author

Landscape design   Across two worlds   Filip Chládek

Fig. 231   *In the park section view C, source: Author*
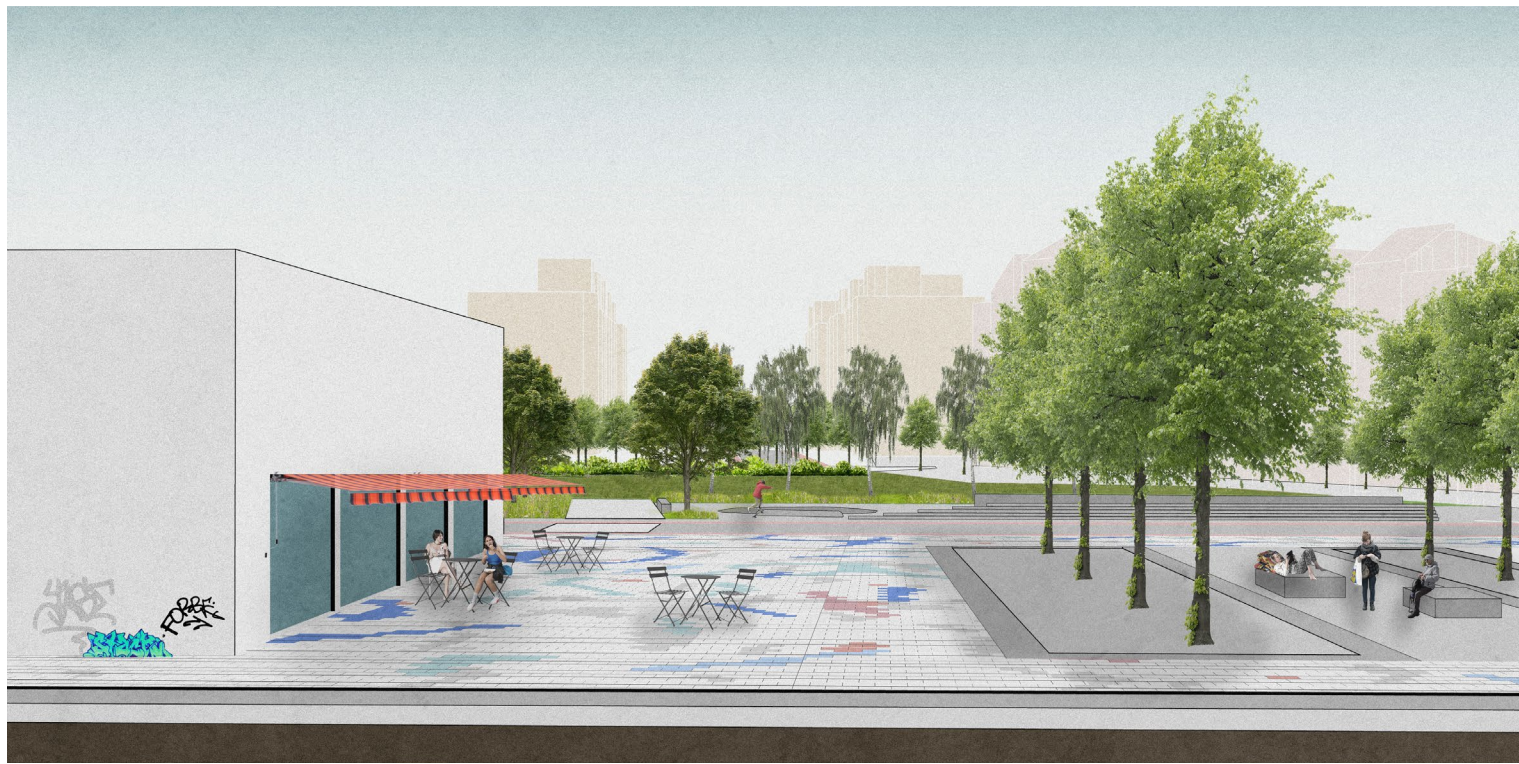
Fig. 233   *On the square section view D, source: Author*

Fig. 234   *Section A, source: Author*

Fig. 232   *Section overview, source: Author*
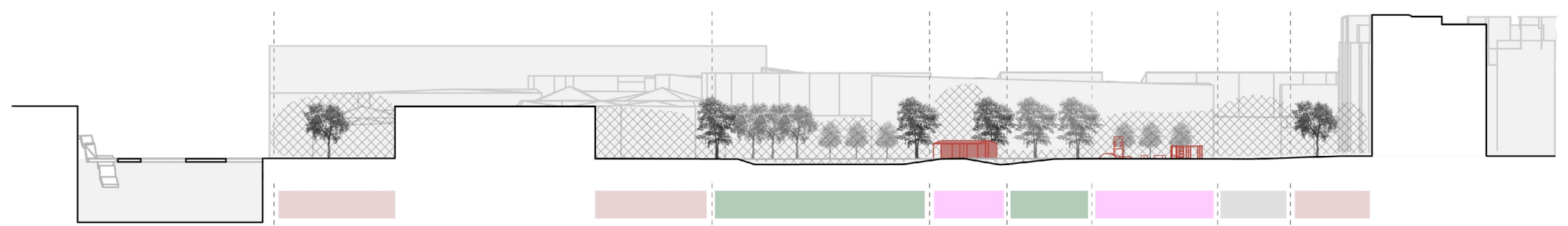
Fig. 235   *Section B, source: Author*
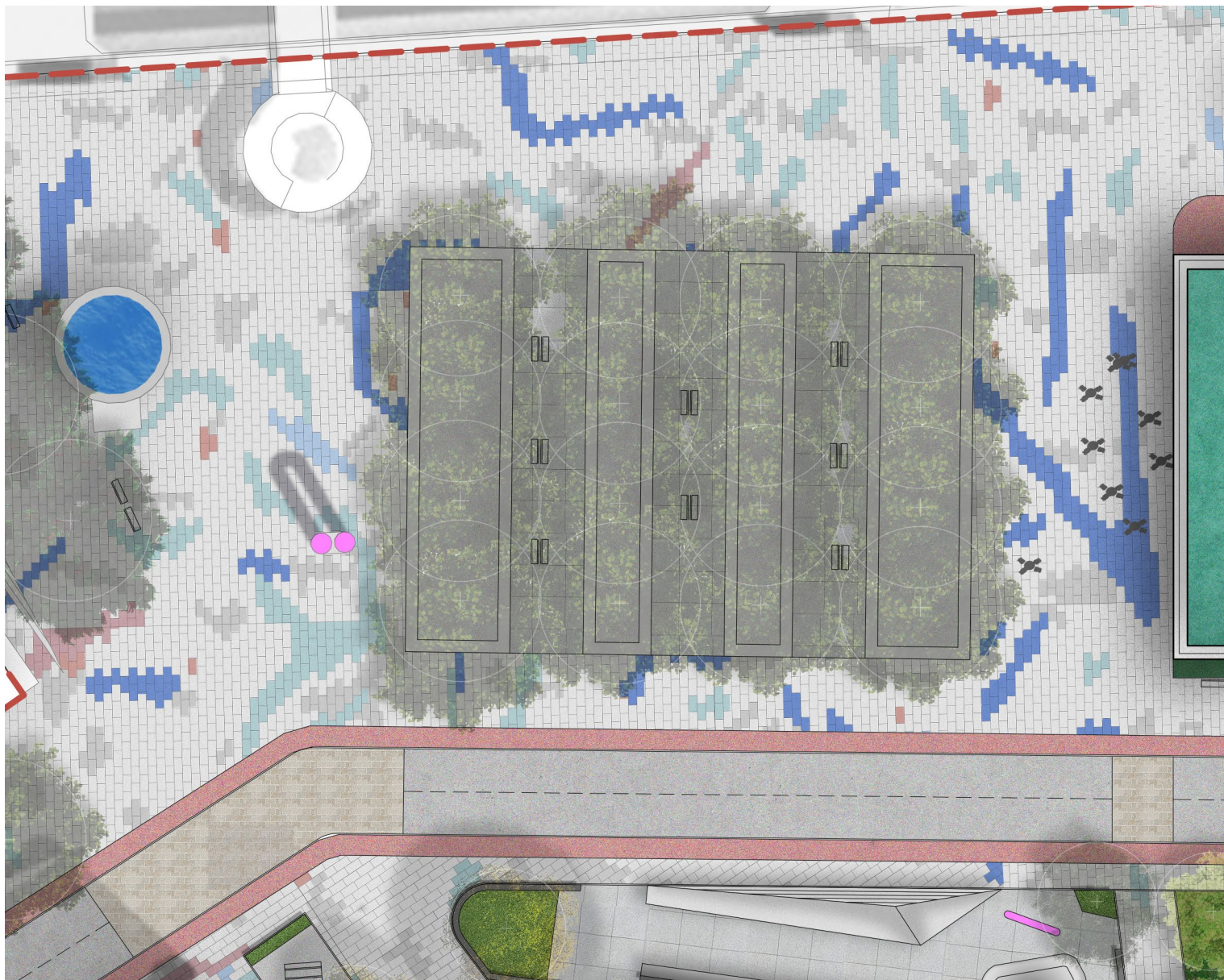
Fig. 236   Detailed zoom, source: Author

The square in front of the metro station,
consisting of water feature and existing art
piece. New bosquet is added with benches
shaded beneath the trees. The mozaique of the
paving disrupts the uniformity of the space. In
the straight axis the square is connected with
the park with a crossing.

Fig. 237   Perspective, source: Author

Fig. 238   Perspective, source: Author
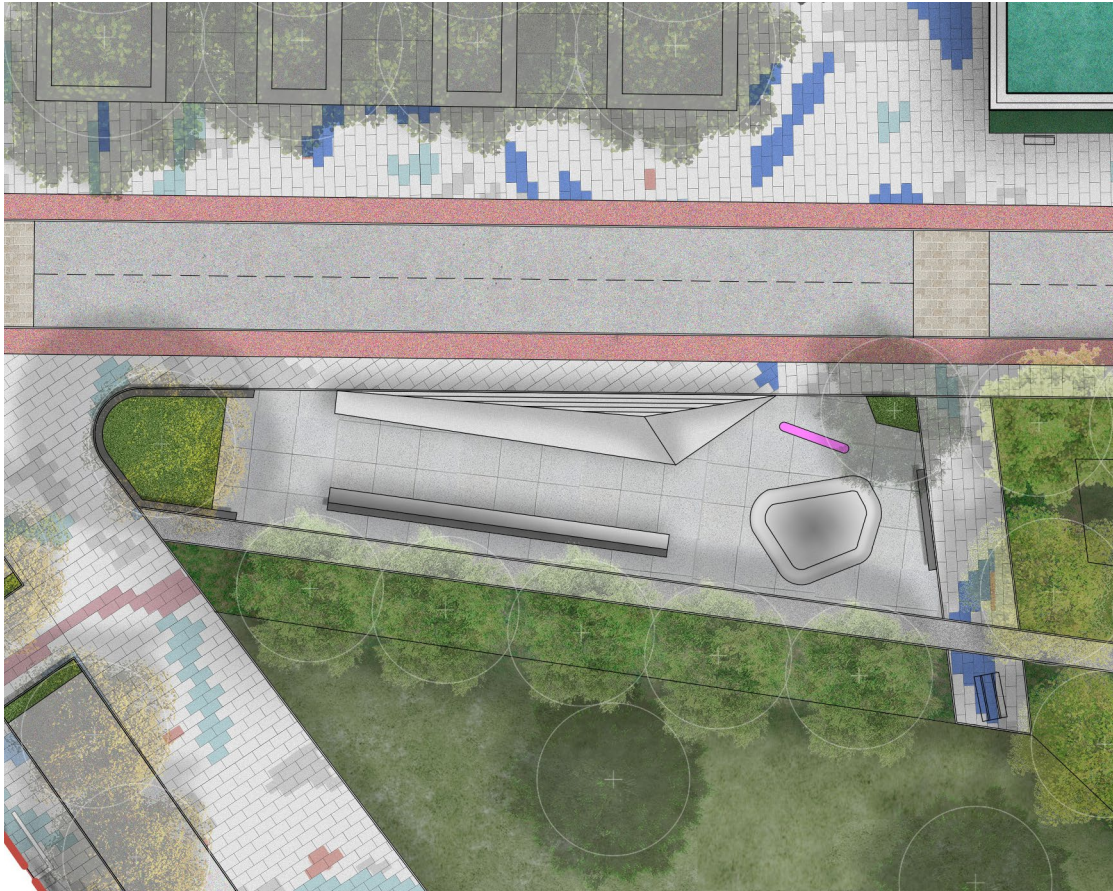
Fig. 239   Detailed zoom, source: Author

The space connected to the north-west corner can function as skatepark, but when not in use, it can be an interesting public space for everyione. One axis is going deeper into the park, ending with a picnic table with a view.
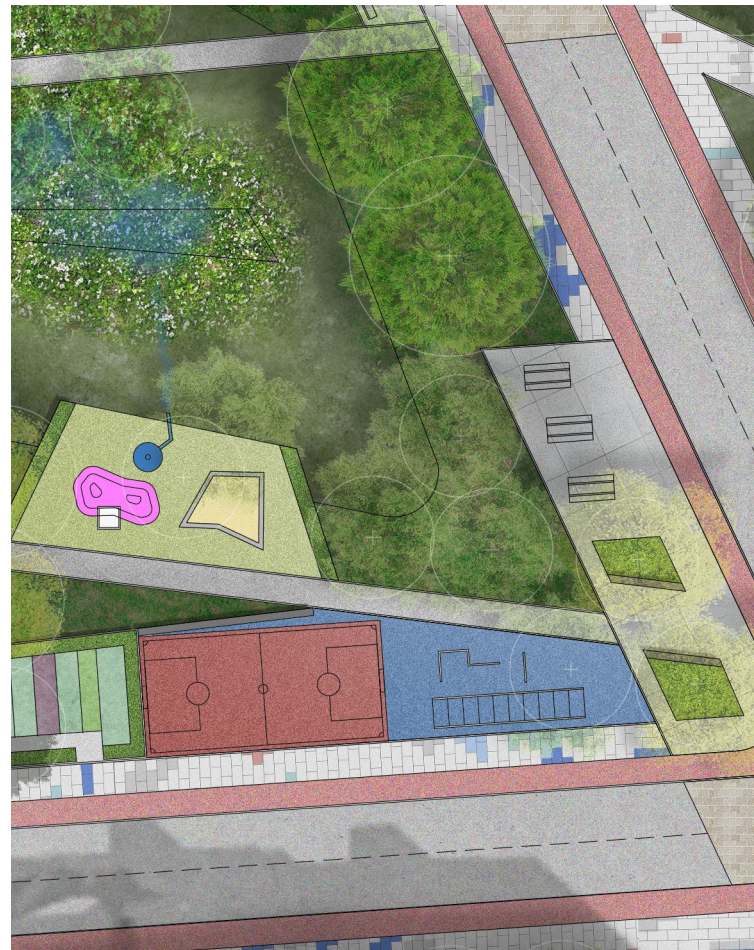
Fig. 240   Detailed zoom, source: Author

The south-east of the park is ended with multiple different public spaces. First, the corner and of the entrances to the park is filled with trees, places for sitting and picnic tables. Second public space to the south is sporting ground, with football field and workout space. The third more into the park, opened towards the water area, is a children playground.

Fig. 241   Perspective, source: Author

Fig. 242   Perspective, source: Author
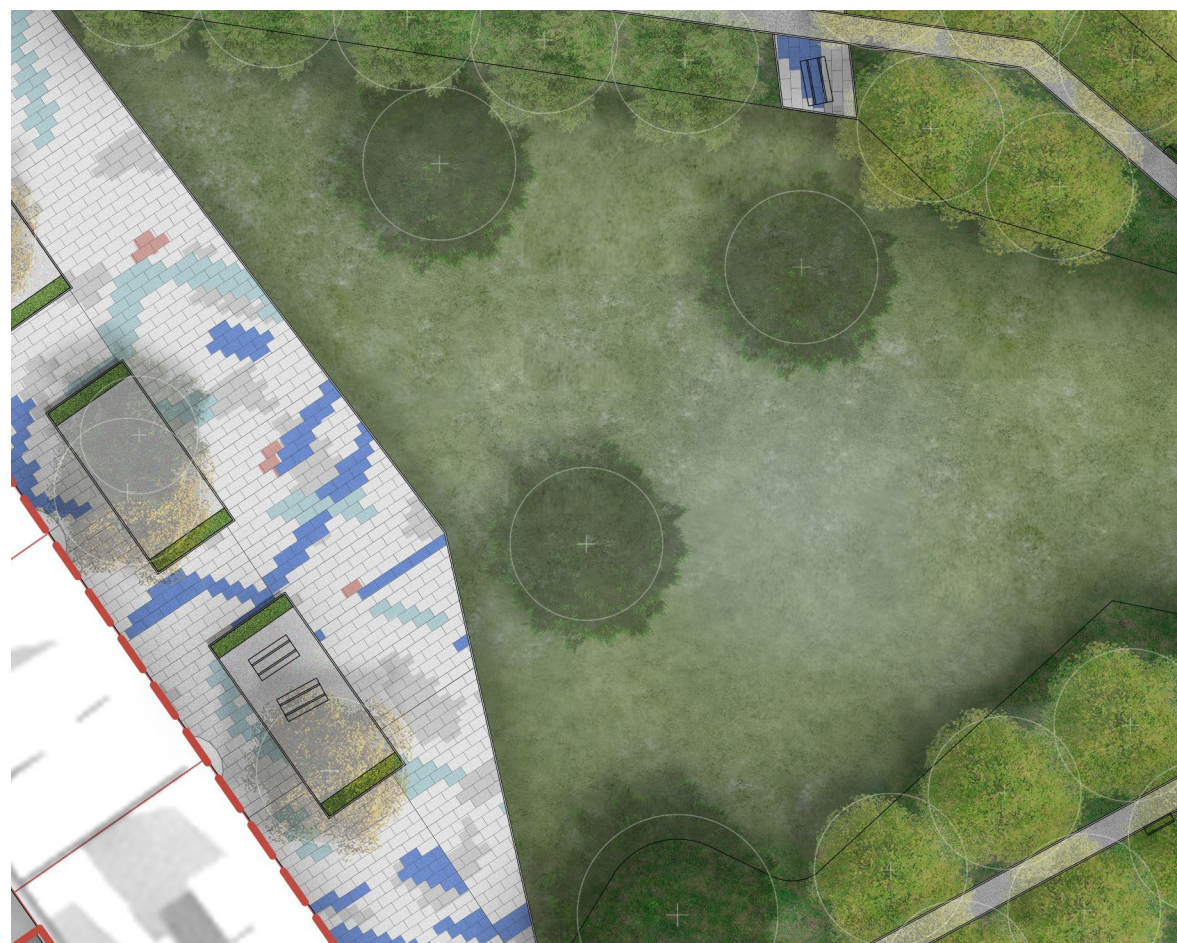
Fig. 243   *Detailed zoom, source: Author*

One car road is transformed
into pedestrian zone with public
spaces and trees. It is connected
to open field with park grass. The
background of this space is defined
with tree lines. In the middle of the
field a few solitaire trees are places.

Fig. 244   *Detailed zoom, source: Author*

The hearth of the park is a fireplace
on a wooden platform with a view
to multiple sides. The facilities with
free public toilets and showers are
connected to a shelter pergola.

Fig. 245   Perspective, source: Author

Fig. 246   Perspective, source: Author

Fig. 247   *Perspective, source: Author*

7.8 Conclusion, Vision for the future

The proposed design is only a small part of the whole neighbourhood, chosen for its importance, exposure and pedestrian traffic. It serves to illustrate a possible approach in redesigning all the public spaces in the area.

Such designs always require sensitivity to context and history to retain the atmosphere and identity of the district and to avoid flattening urban areas. Involving residents into the architect's process can help acomplish this goal.

At the same time, there is no need to transform everything all at once. A lot of the changes can be done even temporarily, with thought-out small scale interventions that recognise who is influence by the decisions, who can be hurt and who should be part of the process.

This participatory designing cannot close its eyes to people that do not speak Czech, to people having troubles moving or orienting in space, having financial or social problems. Prejudices, racism and power structures need to be recognised and outlined to actively work against them.

Using the neighbourhood design principles and the small scale proposed design, the surfaces of the neighbourhood could be piercied one-by-one, allowing the broad range of citizens and non-human actors to use and shape the public space. Again, the decisions in what is transformed and when is it transformed should be conciously adressing the spatial justice and climate vulnerability aspects.

"Instead, a more political understanding of porosity is key, which is not only about briefly opening the door for those on the guest list, but about all those present in the city being able to find points of extension where their bodies will be extended, to puncture the city's smooth surface where they think it is most needed, and to build the potential to collectively shape, organize, and maintain the porosity that emerges."

René Boer in Smooth City

08 **Conclusion and reflection**

8.1 Conclusion

I started this thesis with my personal fascination with the topic of Urban Adaptation Justice. I was struggling with even clearly explaining to others what this topic means, but I was hoping I can attempt to get into this topic from the bottom-up participation. Map and data analysis showed that there is an inequality in distribution of greenery and car roads in the neighbourhood, as well as outdoor social spaces, such as benches, playgrounds and other spaces for activities, correlating to the distribution of employment, leading to further increase of spatial segregation in the neighbourhood. Further analysis, observations and interviews revealed that the municipality is implementing participation on multiple levels of planning, but this participation is designed in a way which reaches and draws attention of only a small section of the residents. This "come to us" approach may not challenge the inequalities and may result in overlooking the opinions and problems of the marginalised and vulnerable groups. Designing my thesis participation events has therefore focused on these groups of citizens.

I was trying to design the participation events to understand (climate) vulnerability, to uncover the barriers preventing fair adaptation and to co-create ways allowing green and blue infrastructure into the existing urban environment. If I chose to view the plot of my final site design through different lenses, it could have resulted in a different future, such as new building construction and maximasing the capital. In an academic thesis, it is difficult to bring all the influencing factors into the process, therefore it is quite easy to design new nature-based systems in a city. No budgets and stakeholders allow for imagining every street turning into green paradise. It is not so simple in real decision making, therefore I decided to focus my attention on the parts of the neighbourhood that are struggling, such as the north parts close to the metro stations.

Climate change may not be the most pressing topic in the neighbourhood Černý Most right now, but it is a driver that influences the life of everyone on this planet. Having the climate impacts predictions in mind, even the Černý Most must start adapting to withstand the extremes that are coming. Instead, I uncovered a small part of how socio-economic conflicts influence public space, in making it more hostile and unfriendly to marginalised groups, resulting in hurting almost everyone living in the neighbourhood. The topics of climate change adaptation and this socio-economic conflict are inherently connected and must be dealt with together.

How can participatory designing contribute to urban adaptation justice in the public spaces of Černý Most, Prague?

I started with this initial research question and I believe it was the right question, or rather the right methodology and process, to research this question. I believe that participatory designing was the only way to understand some of the complex relations on the site, conflicts and struggles that I just would not be able to uncover from my computer. Even though the voices of teenagers and people living without a shelter are only a small portion of all the voices in the neighbourhood, my process outlines a possible future direction for the municipality and other designers that will try to transform the public spaces in the neighbourhood.

I chose these subquestions to answer the main question:

1. How to best organise for diversity and inclusion in urban participation processes?

The answer to this question lies in the designed participation process. The main approach was to primarily reach out to those who are not represented. Interviews helped me understand that focusing on only a small segment of vulnerable groups and not on everyone is beneficial to my project. Involving the local NGOs and social workers was also an integral part of the answer to this question.

Inclusion and participation should not be a checkbox to fill at the end of the project, when important decisions cannot be changed, but instead it should be a way of communicating. The same as in language and communication, the way a person speaks, the words they use or what they say depends on who they are talking to and where are they talking. In this same manner, participation must change and adapt accordingly to the people participating, so that it is effective and understandable. Participation needs to be easy to navigate and understand for the participants. They also need to feel safe and accepted.

The same as with every other method that is used by a designer, participation can be used as much as it is needed. Designer does not have to be an expert on participation, although involving experts is good. Participation methods can be quite simple and creative, participation does not need to take a lot of time and energy, I would even argue that an open mind and willingness to learn something new from the people one works with is enough. Participation as an approach and a state of mind can fill all the steps of a designer. Participatory designing that looks like this has the potential to involve diversity and inclusion, because with a curious mind and an approach to know more from the local people designer will feel the need to ask people that are not currently involved.

2. How to effectively transform participation outcomes into landscape architecture design?

Having participation is one thing, but being able to use it effectively and let

it alter the design is another thing. The written and drawn outcomes of the participation, as well as the schemes and final design of the small-scale project show possible answers to this question. Letting the process change me as a designer and recognising the needs, vulnerabilities and wants is vital to then use them in the design.

My design was influenced by the contact and interactions I had with the participants. Thanks to that, I was able to better understand and imagine their problems, lives and needs, and I could recognise them as individuals and not faceless groups. If I had outsourced this activity to some other organisation, I would have completely lost this benefit of being influenced and transformed by the process. Specific intervention included mindful dispersion of places spatially, to draw different types of people and give them safe distance to interact with each other and get to know each other better. That influenced the number of proposed activities and their placement, as well as inclusion of basic human needs. Big attention was given to the placement of street furniture, such as benches, trash bins and picnic tables, and to vegetation as well. To transform participation into design several methods were chosen, pragmatic lists of needs, drawings of spaces wished by the participants, to mapping and writing about the participation outcomes.

Usually in design practice we use visualisations of 'before and after' where we try to show the benefits of our ideas and proposals. Participatory designing operates in a possible third option 'in between'. It is not only about discovering the

current state of the site (before) or about imagining possible futures (after), it is about intangible mix in between where the designer has certain ideas, but they are not yet settled and decided. Communication and interaction with the participants steer and shakes designer's ideas. I had some of my ideas and opinions about the possible design, but thanks to the participation I had a chance to accept or refuse these opinions based on what I heard, saw or talked about with the participants. This was very important for my process and has helped to reshape and finalise my design, which was initially in a much different state than what it ended up looking like after reacting to participation.

3. How can landscape architecture and nature-based solutions contribute to effective transformations of public spaces post-war neighbourhood in Prague to respond to contemporary environmental and societal challenges?

Post-war neighbourhoods in Prague Post-war neighbourhoods in Prague have a unique urban fabric and vast amounts of public spaces, which are expensive to maintain. To control them it is usually easiest to flatten and smoothen the public space, that means mowing grass intensively, removing social spaces and letting playgrounds detoriate. I tried to create a series of design principles tailored to the neighbourhood, addressing the distribution of nature-based adaptations, toolbox for the design of public spaces, and a proposal for developing the identity of the neighbourhood. These principles can be used throughout the area in the form of small-scale

transformations or temporary interventions to change and help adapt the neighbourhood overtime. Public space and social problems are interconnected and are influencing each other, therefore, to address one you also must address the other.

Difficulties appeared when I was designing the participatory events and activities as I did not have a lot of experience in this. Executing them was another challenge, but this time a very pleasant one. Once I had a plan, it started getting very fast instead. The methods were accurately chosen and helpful. I am sad that due to time related reasons, I was not able to do one final participatory evaluation of the project, as I would love to bring my work to the people I already talked to and listen to their feedback one more time. Hopefully this is not the last time someone asks them about their opinion on the public space and hopefully this is not my last time dealing with participatory design.

8.2 Reflection

This thesis deals with topics like homelessness and socio-economic vulnerability. It is worth mentioning that solutions to these problems lie outside of the design field. But that does not mean that design practice can overlook them and not deal with them. These topics are tightly connected to housing and the state of public space.

I have chosen to focus on a way of participatory designing that involves people that are usually not participating in the processes that lead to transforming public spaces. I did not have a clear guide from the beginning that would help me come up with the best way to design the participatory activities or to outline the groups, aims and methods. I was never taught about using participation as a method in my education and my sources were solely literature, interviews, tutoring and more artistic approaches to participation. This lack of knowledge about participation among architects results in designers being afraid of involving citizens, as most of the experiences with participation are relatively unpleasant and useless. I encountered a lot of architects and landscape architects who were not sure about the importance and benefits of participation based on their experience. Often this was because they did not think about designing the participatory activities. Participation to them was about printing a plan and bringing it to a room with people who decided to come to the meeting. This type of participation often meant that they were talking about minor details that have nothing to do with important decisions.

As I experienced first-hand, the opposite approach to participation, that is participation as reaching out to citizens, is a useful tool and an approach. Having my activities somewhere in the middle between my analysis and designing process helped me to sort out my thoughts, learn new things and perspectives, and internalise other people's knowledge. I find it hard to distinguish between the two roles of designer and participator/facilitator. It is more important to realise these two roles exist and they have different responsibilities, but the same goal. Designer role is focusing on trying to find useful information and ideas that can be used in designing, while participator focuses on making the participation smooth, easy and understandable. Designer needs to make sure that the voices of participants will be heard, while the participator needs to care about the wellbeing of participants. Maybe the only time these two roles clash is when participants want to talk about something unrelated or they don't want to talk about something that the designer would find interesting. Then I need to find a comfortable balance between my two roles based on the situation. Sometimes it is okay to push and steer the conversation to something that I find interesting or useful, but sometimes it is also okay to let the participation go to where the participants want to take it. I would advocate that participation does not need to be always comfortable, going against the conflict or challenging some opinions might be okay, if it has a specific purpose outside of paternalizing and humiliating participants. At the end of the session, both of my roles need to find compromise. Designer should have some new ideas or opinions and broader point of view on the situation, participator should feel like people are satisfied with the session as well. The duration of the participatory session does not need to be linear, the conversation can shift, steer, slip away and then return, I found it that very rarely I would have a specific question A that the participants would answer with a specific answer B. Mostly, I needed to listen, write things down and give up absolute control over the sessions. I knew that my view is only mine and participants have their own view.

Sometimes, the ideas and opinions of participants are in conflict, either with other participants' opinions or directly with mine, as a designer. There is no easy rule to solve this conflict, but what I found important was to try to understand why their opinions are different. This was mostly due to their life experience or their way of life, both of which were different then mine. I think it is not necessary to listen and do everything the participants say, but if I, as a designer, can understand the reason behind our differences, I can make a design that will suit them more easily. Without participation and without knowing our differences I wouldn't know our differences at all and would surely miss it. This brief touch of multiple different worlds together is probably the most important and interesting thing about participation. I got immediate reactions to my questions, thoughts and doubts.

Often, participation is viewed as a checkbox at the end of the process, but to me, that is a wrong approach. For participation to be effective, it needs to have power to change things. This power needs to be mutually felt and respected. In this thesis, an important question of power arises. Participation events of my thesis were completely for academic purposes with no real power to change things in the public space. It is important to be very clear about this with the participants, so that they don't get disappointed with participation in general. This power relation between me, a student simulating participatory designing, and people, who in my case were coming from socially vulnerable environments, is very important to understand and remember every second of participation. A lot of the thinking process during designing of the participatory sessions needs to be dedicated to this, so that all the limits and possibilities of failing and hurting someone are outlined and understood. Participants are real people and my academic thesis operates in the real lives and worlds

of residents. Participants cannot feel objectified and exploited. It is my duty to make them feel respected and understand all the implications of my research, as well as get and keep their approval to participate. Should we even do participation in graduations if it doesn't have any power to change things? Can my thesis lead to change? Maybe these should be the first questions we should be asked when we decide to focus on participatory designing, especially in vulnerable environments. On one hand, academia must explore real environments, but on the other hand overload of participatory research on participants can lead to a greater divide. This question was further explored in the paper Strangers at the Gate: Gaining Access, Building Rapport, and Co-Constructing Community-Based Research from Christopher A. Le Dantec and Sarah Fox, who explored how the impact of institutional histories and personal relationships in their research went beyond simply identifying potential partners, but fundamentally guided their research questions and approach. I think every project has a different answer to this question of lack of power to change things. When it is considered during the research, then I think it is already a good way to avoid hurting someone.

It is also important for designers to curate the process from the beginning and tailor activities specifically to the groups of people. As Brian Eno described it: design beginnings, not endings. To allow people to continue the unfinished, it is crucial it is also easy to continue. From my experience, participation also requires interpretation of the context. For this, collaboration with

NGOs was probably one of the most helpful things for my activities. Not only did they let me into the community and guided me through, helping with my process along the way, but they were also incredibly helpful in explaining and interpreting what was being said and what was happening. This interpretation of context was very helpful in navigating what is important and what is not, so that the contrast in the participation outcomes can be resolved and the question of who and how is given space (power) is answered.

Listening skills and empathy were probably the most useful skills in this process. An open mind and open approach, reaching out to the people also requires putting oneself out there and facing rejection or miscommunication. Accepting this and remembering the less useful parts was also an important part of the process.

Apart from integrating this approach into regular studio workflow, there is also a big question of how to enable this kind of participation from the perspective of municipality. I understand the resources are not infinite and this is not the most essential topic politically, but I would really be interested in systematic frameworks in allowing porosity in public space from the municipal point of view in the future. Porosity, as mentioned in the theory, is a state of the public space that allows difference and is inclusive. It is also a collectively maintained state of governance of public space. If I should be very critical of my thesis and my design, I was not able to fully fulfil this goal. My design is very definitive, although I can

imagine it transforming over time, but I did not give enough space to temporality, collective maintenance and appropriation of space. This goal is very hard to manage as an academic assignment because it requires collective imagination and organisation of the community, while the academic thesis requires specific decisions and a clear story. This porous state often happens unsearched for, spontaneously, so I understand the hardness to create this on a municipal level. But I can also imagine there are ways to create a legal environment which allows porosity to happen. Maybe it starts with this state of mind which I mentioned previously that cares for the opinions of people who are missing in the decision making.

Another big question in my process was how to translate the participation into the design process. One side of this is visualisation, which sort of requires picking several tangible things from the activities and incorporating them into the final design. But I felt like I learned so many things during the process which are hard to describe and sell to others. I can still clearly remember a lot of the things that the teenagers and homeless people told me. Individualising them, spending limited time with them and thinking of them during the designing was one of the biggest influences they had on me. Mediating the conflict and bringing several opposing groups of citizens together was not possible in the timeframe of this thesis but would be a very interesting research topic in the future as well.

I also was not able to delve deeper into the side of maintenance over time, even though time is a

significant aspect of landscape architecture. The literature that I read on under-maintenance and over-maintenance was very interesting and designing using only maintenance and small-scale interventions would be an amazing topic for another thesis. Temporality in public space, materials that can be replaced, designs that can be changed, those are important topics to include as well, but I was not able to focus on that as much as I would have wanted.

How can design establish previously mentioned porosity? How does a public space for literally everyone look? Those are difficult questions, hard to answer in simple sentences. The best I learned during the time of this thesis: only through empathy.

Fig. 250

Fig. 252

Fig. 253

References and bibliography

Balestrini, Mara, Yvonne Rogers, Carolyn Hassan, Javi Creus, Martha King, and Paul Marshall. 2017. "A City in Common: A Framework to Orchestrate Large-Scale Citizen Engagement around Urban Issues." In Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 2282–94. Denver Colorado USA: ACM. https://doi.org/10.1145/3025453.3025915.

Boer, Rene. 2023. Smooth City: Against Urban Perfection, Towards Collective Alternatives. Valiz.

Brabec, T. 2021. 'The state and development of the municipal housing stock in the city districts of the capital city Prague: Update 2021'. IPR Praha.

Bruno Soares, Marta, Alexandre S. Gagnon, and Ruth M. Doherty. 2012. "Conceptual Elements of Climate Change Vulnerability Assessments: A Review." International Journal of Climate Change Strategies and Management 4 (1): 6–35. https://doi.org/10.1108/17568691211200191.

Carmona, Matthew. 2010a. "Contemporary Public Space: Critique and Classification, Part One: Critique." Journal of Urban Design 15 (1): 123–48. https://doi.org/10.1080/13574800903435651.
———. 2010b. "Contemporary Public Space, Part Two: Classification." Journal of Urban Design 15 (2): 157–73. https://doi.org/10.1080/13574801003638111.

Copernicus Climate Change Service (C3S), 2024. European State of the Climate 2023, Summary: https://doi.org/10.24381/bs9v-8c66

Czech Statistical Office. 2018. "Statistical yearbook of Prague."

Dodman, D., B. Hayward, M. Pelling, V. Castan Broto, W. Chow, E. Chu, R. Dawson, L. Khirfan, T. McPhearson, A. Prakash, Y. Zheng, and G. Ziervogel, 2022: Cities, Settlements and Key Infrastructure. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 907–1040, doi:10.1017/9781009325844.008.

Eriksen, Siri, E. Lisa F. Schipper, Morgan Scoville-Simonds, Katharine Vincent, Hans Nicolai Adam, Nick Brooks, Brian Harding, et al. 2021. "Adaptation Interventions and Their Effect on Vulnerability in Developing Countries: Help, Hindrance or Irrelevance?" World Development 141 (May):105383. https://doi.org/10.1016/j.worlddev.2020.105383.

European Environment Agency. and European Topic Centre for Air Pollution and Climate Change Mitigation. 2018. Unequal Exposure and Unequal Impacts: Social Vulnerability to Air Pollution, Noise and Extreme Temperatures in Europe. LU: Publications Office. https://data.europa.eu/doi/10.2800/324183.

Few, Roger, Katrina Brown, and Emma L. Tompkins. 2007. "Public Participation and Climate Change Adaptation: Avoiding the Illusion of Inclusion." Climate Policy 7 (1): 46–59. https://doi.org/10.1080/14693062.2007.9685637.

Füssel, Hans-Martin, and Richard J. T. Klein. 2006. "Climate Change Vulnerability Assessments: An Evolution of Conceptual Thinking." Climatic Change 75 (3): 301–29. https://doi.org/10.1007/s10584-006-0329-3.

Gehl, Jan. 2011. Life Between Buildings. Island Press.

Global Change Research Institute of the Czech Academy of Sciences. 2017. 'Examples of possible adaptation solutions and pilot area Prague 6'.

Global Change Research Institute of the Czech Academy of Sciences. 2017. 'Vulnerability Analysis of the City of Prague'.

Hajer, Maarten, and Arnold Reijndorp. 2001. "In Search of New Public Domain."

Hassan, Rashid, Neville Ash, and Robert J. Scholes. 2005. "Nature: Ecosystems without Commodifying Them." Millennium Ecosystem Assessment (MA), Island Press, Washington DC, USA.
IPCC. 2022. IPCC 2022. 1ST ED. CAMBRIDGE: CAMBRIDGE UNIV PRESS UK.

Havlovec, Vojtěch, Pjeer van Eck, Šimon Matějka. 2018. Line 141: Černý Most: a housing estate that has become a legend. Prague: Stop Zevling productions.

IPCC. 2001. Climate change 2001: Impacts, Adaptation and Vulnerability, Summary for Policymakers, WMO.

Jonsson, Anna C., Mattias Hjerpe, Yvonne Andersson-Sköld, Erik Glaas, Karin André, and Louise Simonsson. 2012. "Cities' Capacity to Manage Climate Vulnerability: Experiences from Participatory Vulnerability Assessments in the Lower Göta Älv Catchment, Sweden." Local Environment 17 (6–7): 735–50. https://doi.org/10.1080/13549839.2012.685880.

Kouprie, Merlijn, and Froukje Sleeswijk Visser. 2009. "A Framework for Empathy in Design: Stepping into and out of the User's Life." Journal of Engineering Design 20 (5): 437–48. https://doi.org/10.1080/09544820902875033.

Le Dantec, Christopher A., and Sarah Fox. 2015. "Strangers at the Gate: Gaining Access, Building Rapport, and Co-Constructing Community-Based Research." In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing, 1348–58. Vancouver BC Canada: ACM. https://doi.org/10.1145/2675133.2675147.

Long, Joshua, and Jennifer L Rice. 2019. "From Sustainable Urbanism to Climate Urbanism." Urban Studies 56 (5): 992–1008. https://doi.org/10.1177/0042098018770846.

Loukaitou-Sideris, A. & Banerjee, T. 1998: Urban Design Downtown: Poetics and Politics of Form (Berkeley: University of California Press).

Michal Lehečka. "Černý Most, the most stigmatized place in Prague, is not to blame for our middle-class fears." A2larm, 16.12. 2022, https://a2larm.cz/2022/12/cerny-most-nejstigmatizovanejsi-misto-prahy-nemuze-za-nase-stredostavovske-obavy/

Milton, Anna. 2006. "What Kind of World Are We Building? The Privatisation of Public Space." London: RICS.

Raymond, Christopher M., Niki Frantzeskaki, Nadja Kabisch, Pam Berry, Margaretha Breil, Mihai Razvan Nita, Davide Geneletti, and Carlo Calfapietra. 2017. "A Framework for Assessing and Implementing the Co-Benefits of Nature-Based Solutions in Urban Areas." Environmental Science & Policy 77 (November):15–24. https://doi.org/10.1016/j.envsci.2017.07.008. Sennett, Richard 1970. The Uses of Disorder: Personal Identity and City Life. New York: Alfred A. Knopf.

Shi, Linda, Eric Chu, Isabelle Anguelovski, Alexander Aylett, Jessica Debats, Kian Goh, Todd Schenk, et al. 2016. "Roadmap towards Justice in Urban Climate Adaptation Research." Nature Climate Change 6 (2): 131–37. https://doi.org/10.1038/nclimate2841.

Spash, Clive L. 2001. "Broadening Democracy in Environmental Policy Processes." Environment and Planning C: Government and Policy 19 (4): 475–81. https://doi.org/10.1068/c1904ed.

Šmíd, Jaroslav, Radek Vondra, Pjeer Van Eck, Vojtěch Havlovec. 2022. Story of Prague 14. Prague: Doubravka Praha 14

Williams, David Samuel, Osman Balaban, Akgün Ilhan, Hande Paker, Ümit Şahin, Beyza Sarıkoç Yıldırım, Ethemcan Turhan, Baran Alp Uncu, and Marta Olazabal. 2022. "A Policy Content Analysis for Evaluating Urban Adaptation Justice in İstanbul." Environmental Science & Policy 136 (October):476–85. https://doi.org/10.1016/j.envsci.2022.07.014.

World Bank. 2021. A Catalogue of Nature-Based Solutions for Urban Resilience. World Bank. https://doi.org/10.1596/36507.

List of figures