



Designing for Co -Existential Spaces

The Case of Afrikaanderwijk



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P5 Report
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COLOPHON

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The Case of Afrikaanderwijk

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Figure 1. Welcome in de Afrikaanderwijk
Image by dandoen, Streetartwandeling in de Afrikaanderwijk.

Abstract

In the last decades, due to a number of reasons, cities have become more diverse than ever. This diversity, although an “inherent characteristic” is not always perceived as positive, especially in the so-called deprived areas, which mainly consist of multicultural, low-income social groups, having serious implications not only on how people live together in space, but also on the actions taken to “minimize” the differences.

Research increasingly shows that low neighbourhood status, poverty, stigmatization of lower income areas with high concentration of ethnic minority households, and racial discrimination have a great impact on how inhabitants of an area perceive and interact with one another.

And Rotterdam South is a prominent example of this situation. Afrikaanderwijk is one of those hyper-diverse and socio-spatially segregated neighbourhoods, where spatial interventions in the public space are necessary, in order for co-existence to be ensured.

Investigating the city from the perspective of hyper-diversity and acknowledging it as a given, the current project aimed at contributing to redefining the public space, in Afrikaanderwijk, where conflicting interests between local authorities, people of power and local inhabitants regularly occur, in order to ensure social cohesion and create a common identity for all.

In this process, a number of methods were used to conclude to the spatial interventions in the public space, with the use of design principles proving to be one of the most important in bridging research and design and creating the basis for the design interventions that focus on local-based alternatives to the demolition and renovation plans of the municipality.

Thus, this thesis, through spatial interventions, and taking into account the needs and identities of different social groups, aimed at enabling the participation of people from different socio-economic statuses, lifestyles, attitudes and activities to interact and communicate, consequently steering the city towards fairer opportunity distribution and a more harmonious and co-existential urban environment.

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Figure 2. Wake up Rotterdam, 2021
Image by Joke Schot. <https://rechttopdestad.nl/buurtentweebosbuurt/>

Motivation

Coming from Greece and more specifically from Athens, a city with so many faces and social, cultural, economical antithesis and having spent my bachelor's years in the middle of the economic crisis, made me realize the importance of designing with and for the people.

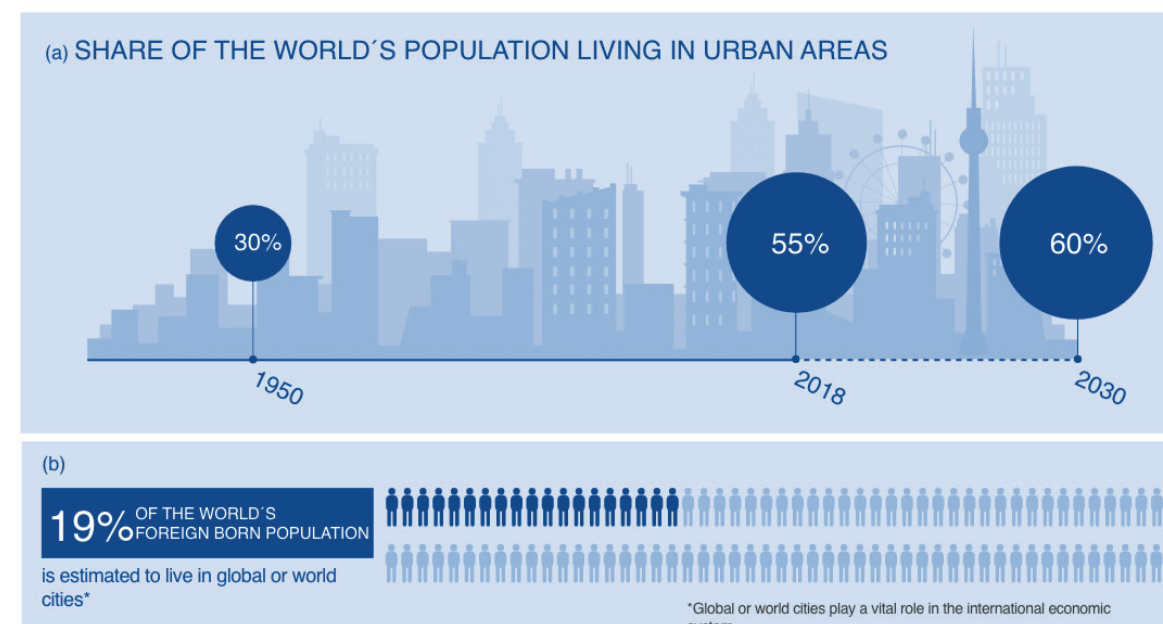
The economic crisis, the changing climate and the growing social problems caused by a number of reasons, such as migration, diversification of inhabitants or mistrust in the political leaderships, create challenges that pressure the resilience and sustainability of densely built cities. These areas need to be able to adapt to new circumstances and transform, in order to be able to respond to the unprecedented needs of society.

Having already dealt with the redefinition and reclamation of public spaces and buildings of various neighbourhoods in Athens, both in a theoretical and practical context for my previous studies, the prospect of exploring those practices in a different environment really intrigued me from the beginning. Especially when it came to a country and a city so different from what I had experienced before.

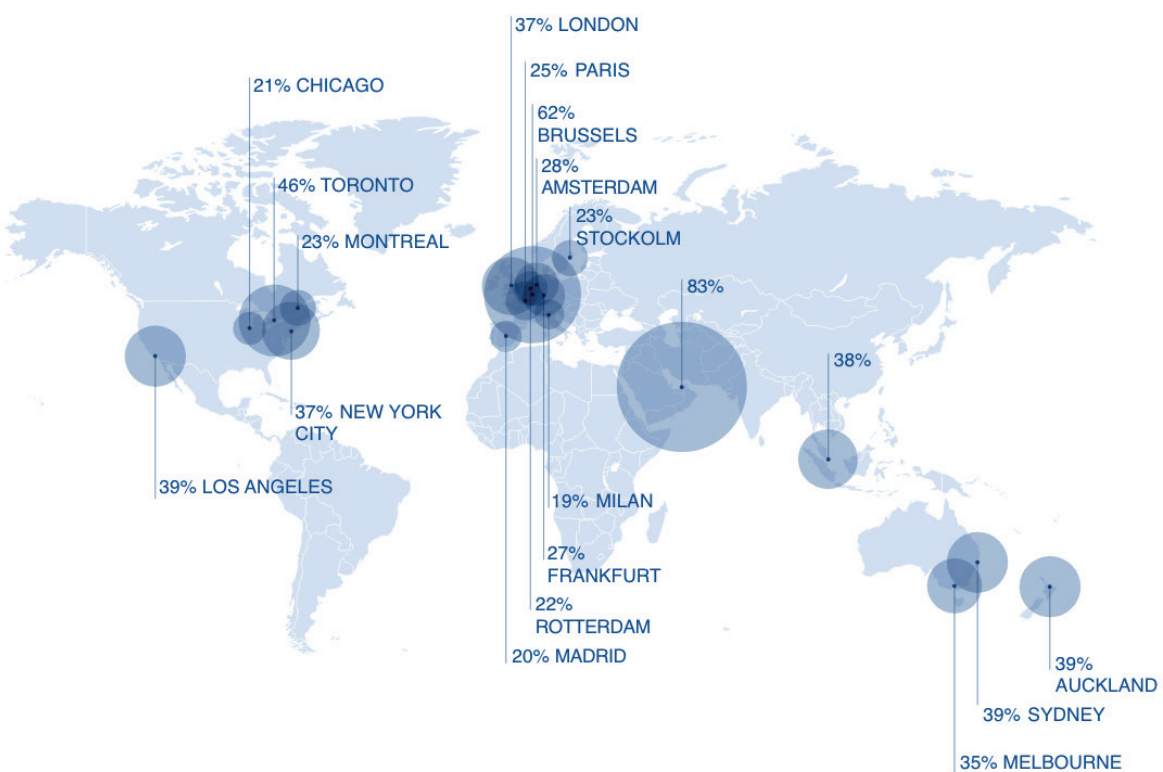
While exploring Rotterdam, and more specifically its southern part, I came to realize that although the environment and culture change, maybe not all things are so different than previously expected.

1.1 | Problem Field

URBANIZATION AND MIGRATION



(c) FOREIGN-BORN POPULATION IN SOME MAJOR GLOBAL OR WORLD CITIES



Source: (a) UN DESA, 2018; (b) IOM, 2015 based Çağlar, 2014; (c) Compiled by IOM from various sources, 2015 © IOM's GMDAC 2019 www.migrationdataportal.org

Figure 3. Urbanization and Migration
(Image by a- UN DESA, 2018; b- IOM, 2015 based Çağlar, 2014; c- Compiled by IOM from various sources, 2015)

Globalization and urbanization have made cities attractive places to be, providing both economic opportunities and a variety of different amenities. This has led to a sharp increase in migration, which is also one of the most important elements of the increased diversity of cities. Diversity, although inevitable and an “inherent characteristic of cities” (Tasan-Kok, 2014), with proven benefits on the long term, on the short term it can be one of the main factors of alienation, shrinking of the social capital and weakening of all social networks (Putnam, 2007).

However it is also proven that segregation, both spatial and social, cannot be, in many cases, directly associated to multiculturalism (Amin, 2002). On the one hand, migrants are not the ones that choose the deprived areas to live in, but are in most cases “forced” to, because of the integration policies of the western countries about the newcomers. The housing shortage and the need for quick actions to accommodate the growing population, had as a result the formation of neighbourhoods with technically very insufficient quality buildings, namely “cheap” constructions, which very quickly deteriorate, causing very bad living conditions (Andeweg et al., 2007).

On the other hand, the economic instability is as much accountable for the unsettling of the population and sometimes pre-exists the ethnic mixture, thus it cannot be an explanation of failure. According to Ahmadi (2017, p. 82), “by promoting a one dimensional relationship between diversity and social cohesion, we lose sight of other important factors that impact on cohesion (such as deprivation, neighbourhood status and institutionalized racism)”. Research increasingly shows that low neighbourhood status, poverty,

stigmatization of lower income areas with high concentrations of ethnic minority households, and racial discrimination have a great impact on how inhabitants of an area perceive and interact with one another. (2017)

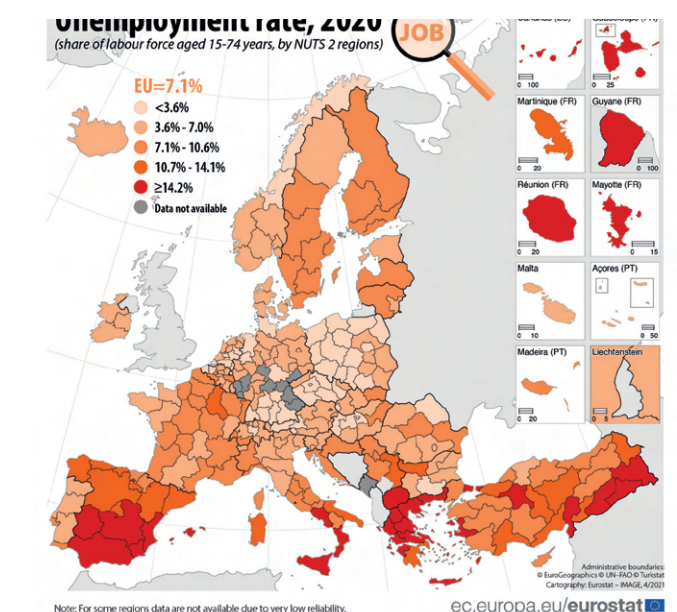


Figure 4. Unemployment Rate in Europe
(Map by Eurostat 2021)

1.2 | Problem Analysis

Rotterdam South

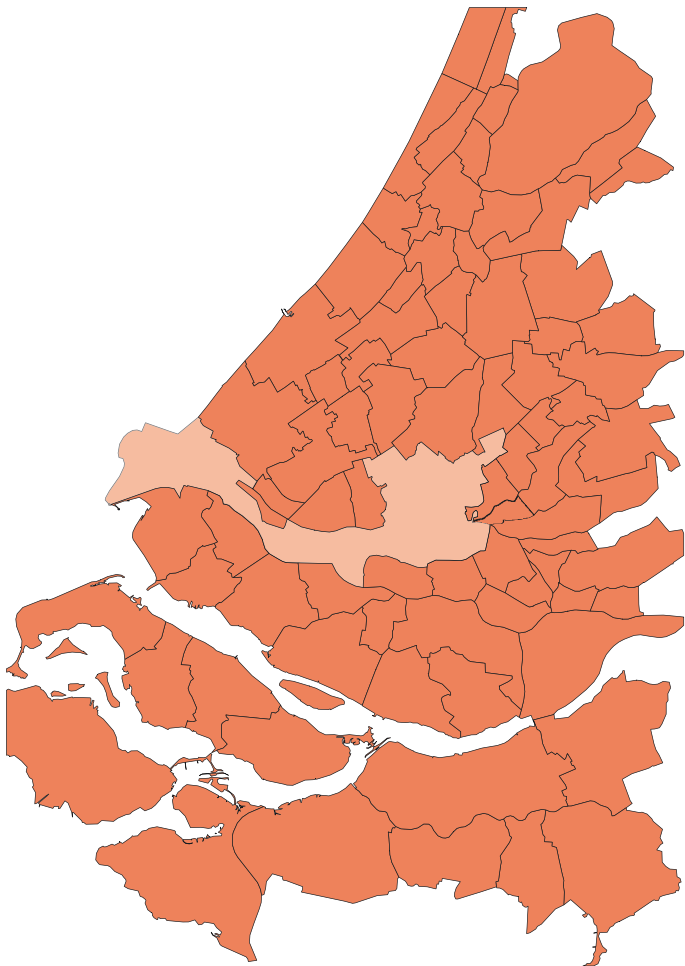


Figure 5. Rotterdam
(Map generated with QGIS, by the Author)

Rotterdam South is an area characterized as the “typical immigrant neighbourhood”

| Region name | Type of region | % Migration background Turkey | % Migration background Morocco | % Migration background Suriname | % Households below or around social minimum | % Low Income Households |
|-------------------------|----------------|-------------------------------|--------------------------------|---------------------------------|---|-------------------------|
| Afrikaanderwijk | Neighbourhood | 27% | 15% | 12% | 28% | 27% |
| Nederland | Country | 2% | 2% | 2% | 7% | 8% |
| Rotterdam | Township | 7% | 7% | 8% | 14% | 14% |
| Kop van Zuid | Neighbourhood | 4% | 3% | 4% | 3% | 4% |
| Kop van Zuid - Entrepot | Neighbourhood | 12% | 14% | 9% | 16% | 16% |

Figure 6. Top 5 Features with the Biggest Difference
(Table by allecijfers.nl)

the deprived part of the city of Rotterdam, on the other side of the river Nieuwe Mass that has to deal with amongst other things, segregation, crime and most recently gentrification. Rotterdam South consists of four sub-districts which are divided into different neighbourhoods, covering one third of the total population of the city of Rotterdam.

In most of these working – class districts, the majority of the households are of non Western origin, making Rotterdam South one of the most multicultural areas of the Netherlands. Some of them are also the leaders with the highest share of long-term low incomes in Rotterdam, causing a lot of segregation between the different neighbourhoods of the area.

Figures from Statistics Netherlands (2007) show that Feijenoord, after Delfshaven, is the leader with the highest share of long-term low incomes in Rotterdam, namely 22%. According to the same statistics, single older women (45-65 years), single-parent families and couples with minor children are particularly affected. In Afrikaanderwijk, Katendrecht and Bloemhof, six out of ten single women live on a low income. 63,9% of the households in Feijenoord are of non-Western origin (CBS 2006).

Western Migration Background

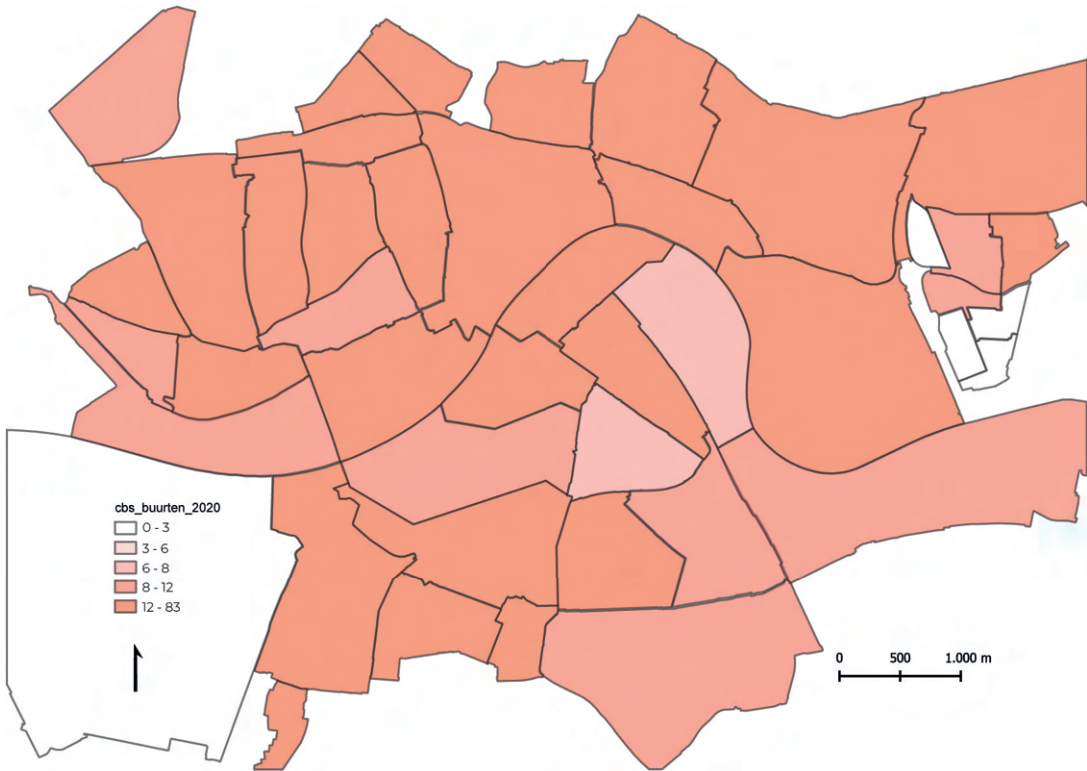


Figure 7. Western Migration Background
(Map generated with QGIS, by the Author)

Non - Western Migration Background

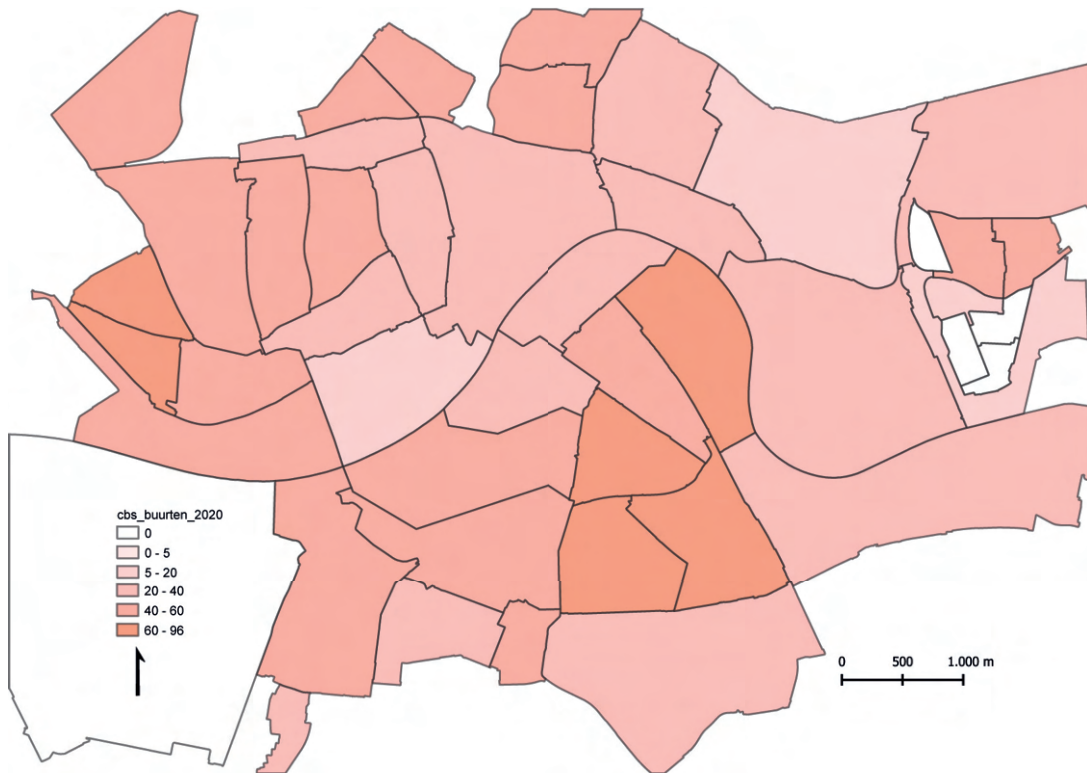


Figure 8. Non - Western Migration Background
(Map generated with QGIS, by the Author)

An Area Under Transformation

Rotterdam South is an area that scores very low on liveability, in comparison to the surrounding areas. In a four year survey about housing preferences in 2004, Zuid scored poorly on safety and enjoyment of living, with the house often not being the reason for dissatisfaction, which was also rated fairly well in poorer neighbourhoods. Nevertheless, in 2006 the Pact op Zuid was launched, which later on was renamed to the National Program Rotterdam South. It is an initiative by the municipality and housing associations but also entrepreneurs and residents with the aim of upgrading the South in terms of school, work and living.

The third pillar the living which is also the most expensive has caused a huge transformation in the area, because it is realized by means of demolishing or renovating the affordable housing stock into residencies for middle and upper class residents. This policy was introduced in 2016 and has since had a lot of criticism especially considering the housing shortage.

The municipality offers pleasant and affordable living for those with middle or higher incomes creating monofunctional housing blocks in the empty spaces but also in the place of former social housing units while at the same time little to no attention is given on the public or semi-public space or on the supportive services for the community.

The map(fig.) is part of the Rotterdam Act, a law introduced in 2006, showing where special target groups are allowed to search for housing, giving municipalities the option to control the influx of population groups in a number of designated neighborhoods.



Figure 9. Pillars of Rotterdam South National Program (Image by www.platform31.nl)

NPRZ is working on a new perspective for Rotterdam South. We focus on:

- SCHOOL
- WORK
- LIVING
- RESIDENTS
- CULTURE
- SAFE

Figure 10. NPRZ (Image by www.nprz.nl)

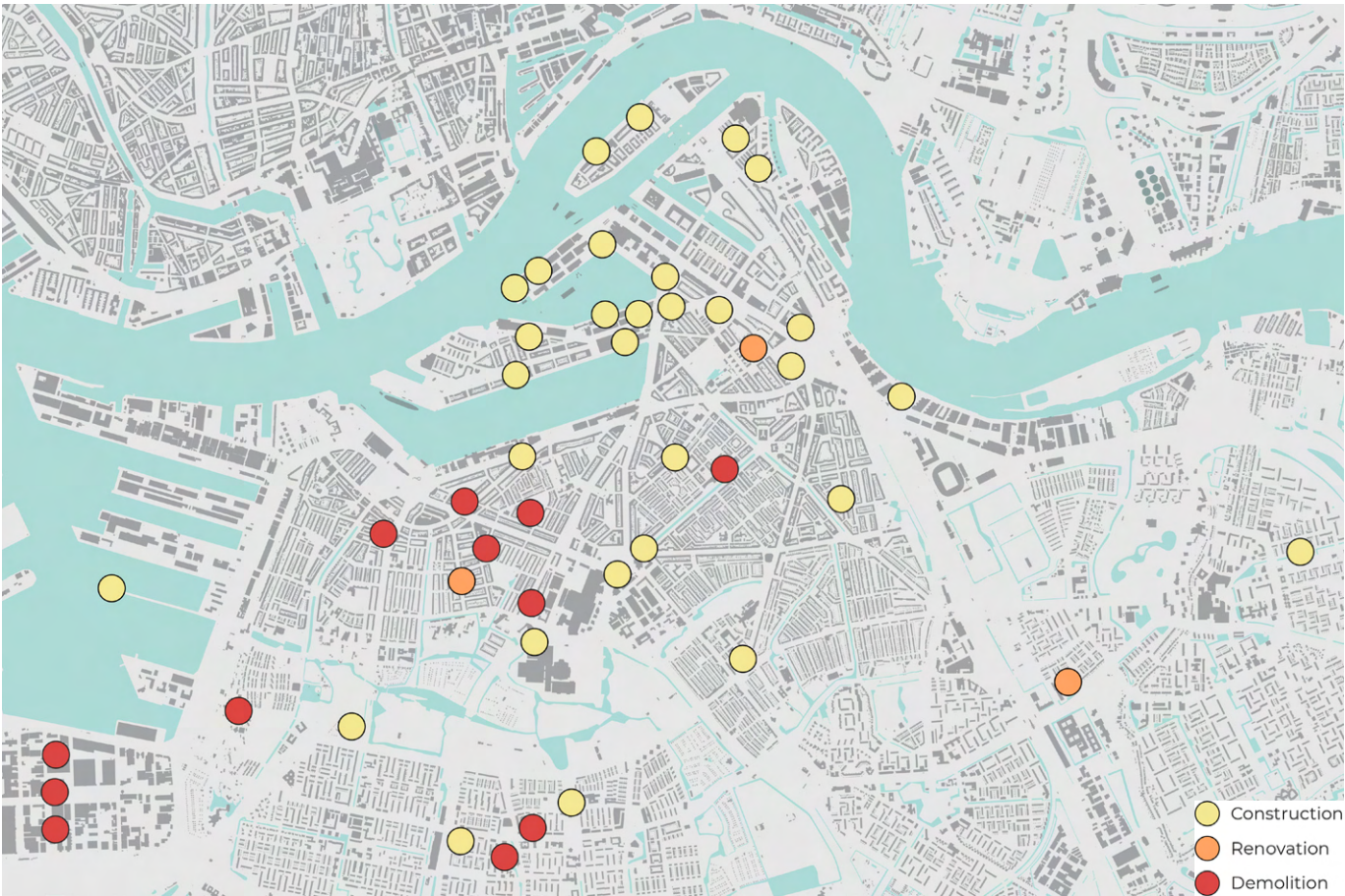


Figure 11. Rotterdam South Renovation and Demolition Areas (Map by J.W. van Aalst, www.opentopo.nl, Adapted by the Author)

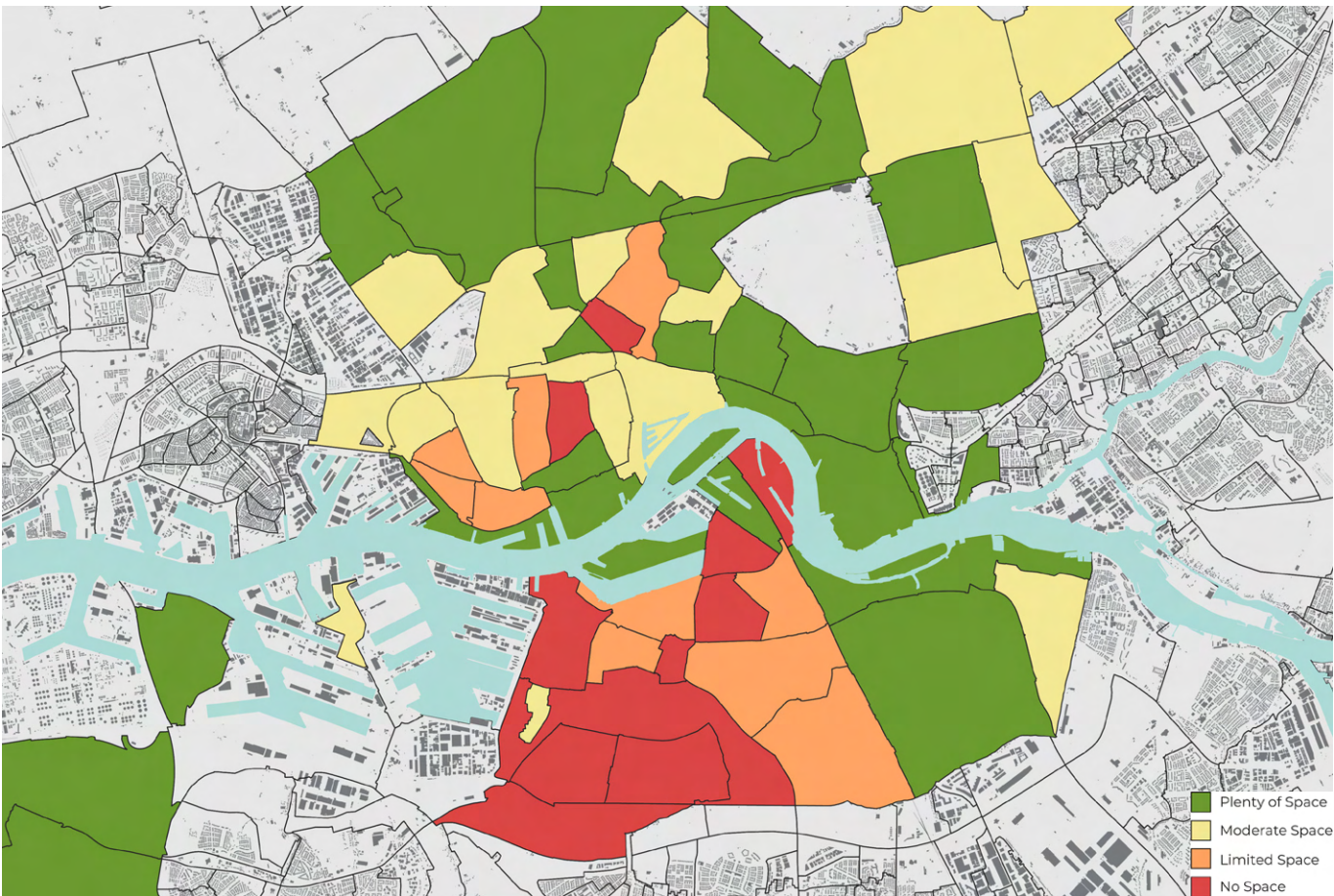


Figure 12. Places for Housing Special Target Groups (Map by Gemeente Rotterdam, SO R&W, Adapted by the Author)



The maps show how a neighborhood is doing on the following domains:

physical (e.g. vacancy of buildings, public space, living experience)

safety (e.g. crime, nuisance) and

social (e.g. education, work and income, interaction with local residents).

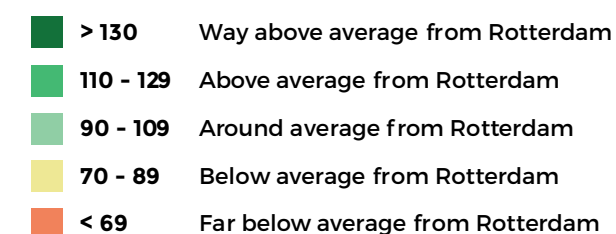


Figure 13. Index Scores of Rotterdam
(Maps by <https://wijkprofiel.rotterdam.nl>; Adapted by the Author)

Afrikaanderwijk - Social Characteristics



Figure 14. Women with Shopping Bags
(Image by www.versbeton.nl)

Figure 15. Kids in Afrikaanderwijk
(Image by www.versbeton.nl)

Figure 16. Women in Rotterdam South
(Image by www.versbeton.nl)

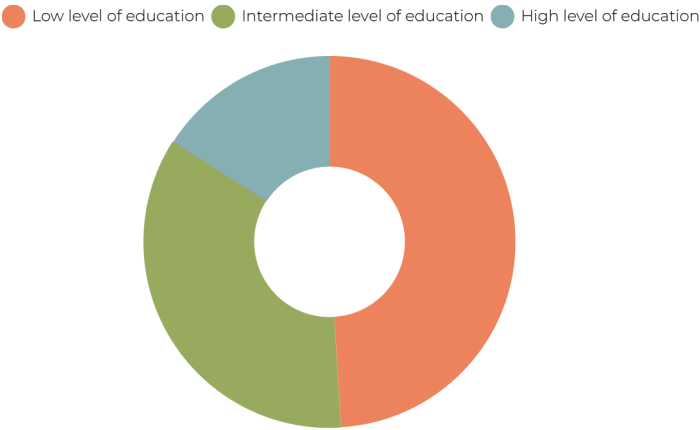
Afrikaanderwijk is a neighbourhood, already under transformation due to the housing policy. It is a typical working-class district, one of the first neighbourhoods in the Netherlands, where a majority of the population is of immigrant origin, comprising more than 50% of the population with 28% of the households below or around the social minimum.

Currently, the area scores very low on the liveability rates, with a very distinct shrinkage of the population in recent years. At the same time crime and unemployment are growing, with the National Program not focusing on the current residents but on how to relocate them and lead them out of the area, often referring to these problems as “un-dutch”, thus blaming people with a different cultural background for these phenomena.

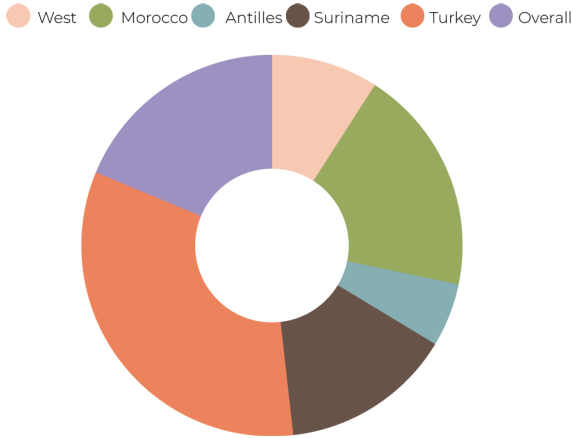
This multicultural area because of the fact that consists of people with very different backgrounds, not only cultural but social as well, strives a lot to achieve social cohesion creating the image of a segregated and neglected area. Most of the public spaces are neglected, not really appropriated by the users, because of the notion that when many different minorities come together, the city becomes dangerous or unsafe.

The low educational level and unemployment and crime rates, make the problem bigger causing segregation between the different communities.

Education Level of residents aged 15 to 75



Migration Background 2020



Population Numbers per year

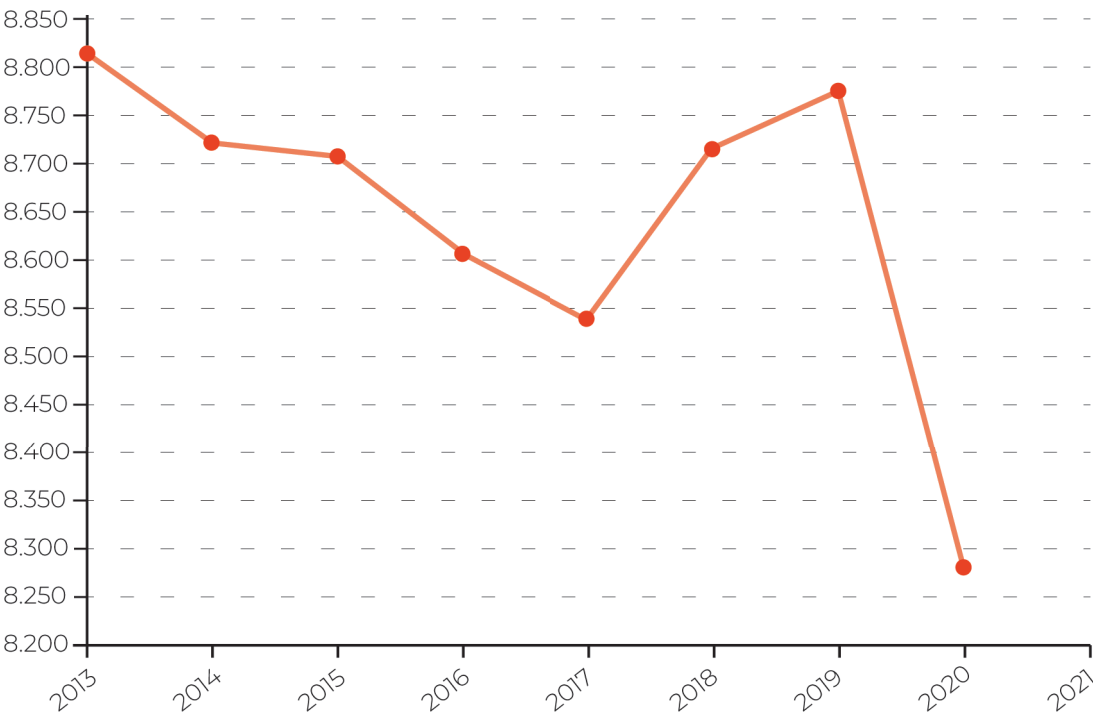


Figure 17. Education Level of residents aged 15 to 75, Afrikaanderwijk
(Graph by www.allecijfers.nl; Adapted by the Author)

Figure 18. Migration Background 2020, Afrikaanderwijk
(Graph by www.allecijfers.nl; Adapted by the Author)

Figure 19. Population Numbers per year, Afrikaanderwijk
(Graph by www.allecijfers.nl; Adapted by the Author)

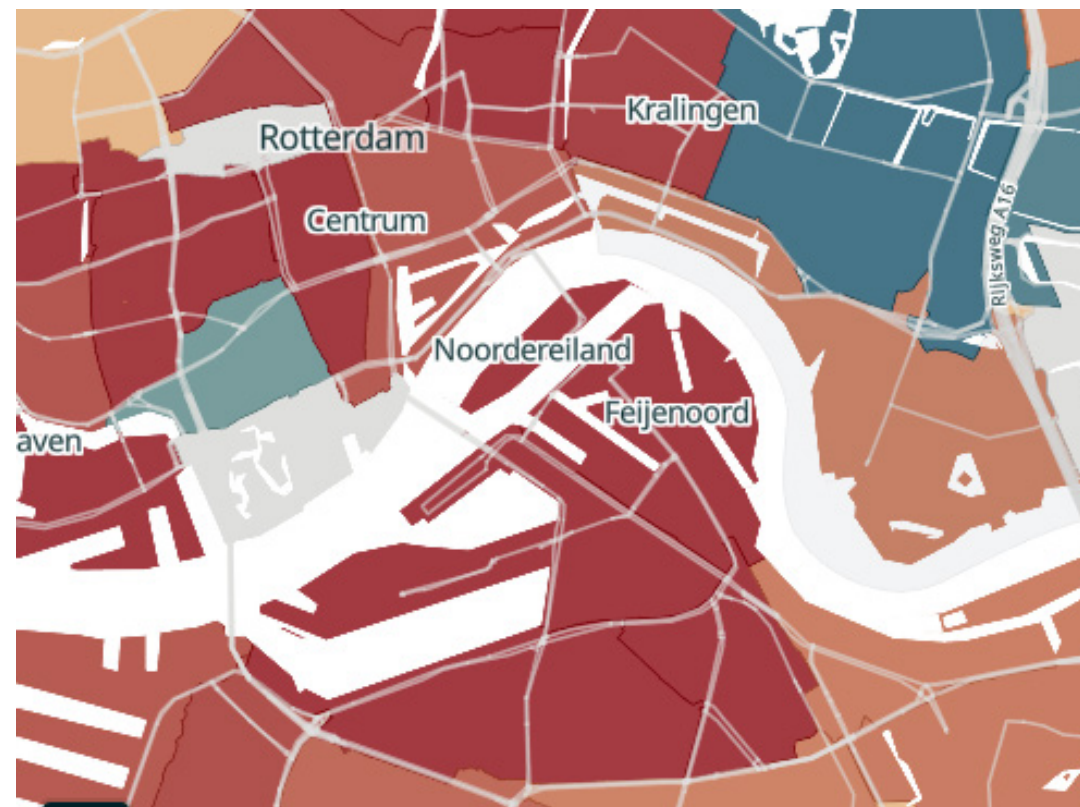


Figure 20. Income Level of Residents in their 30s
(Map by Kansenkart)

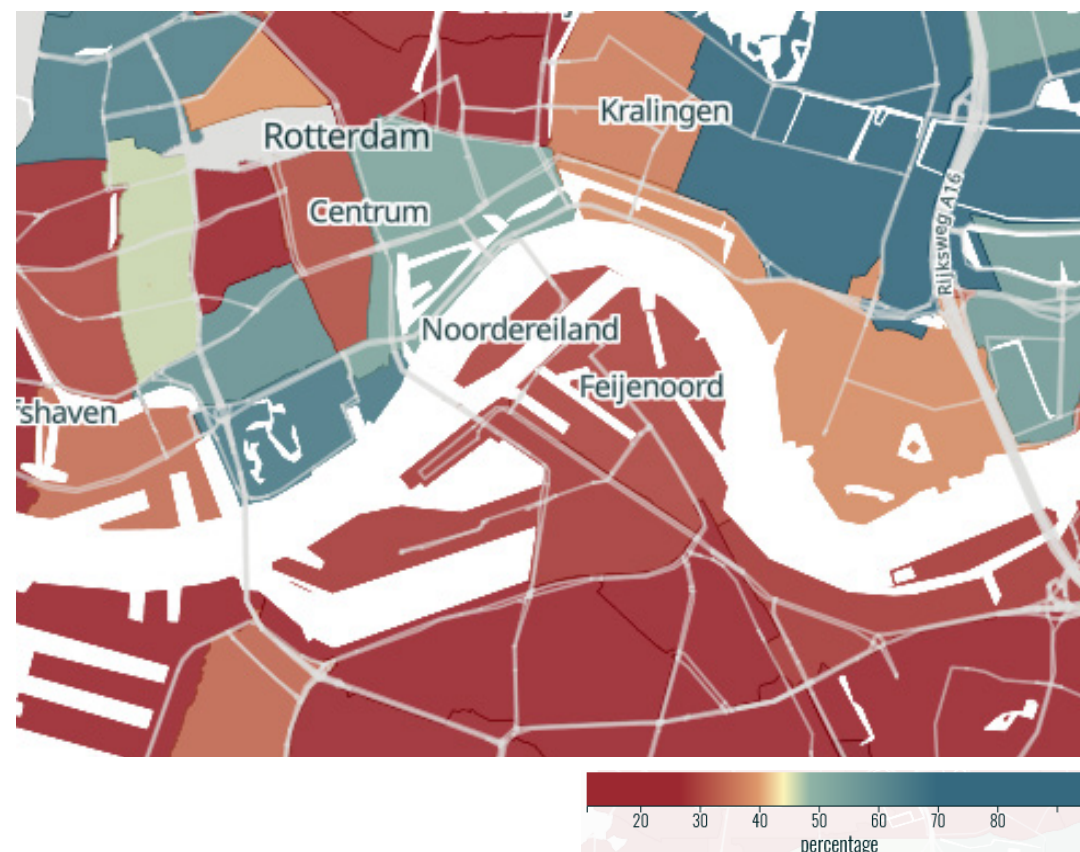
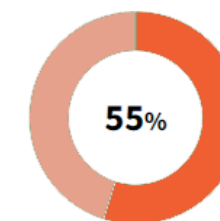
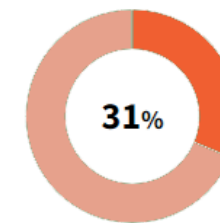


Figure 21. Higher Education Level
(Map by Kansenkart)



Satisfaction for Own Neighbourhood

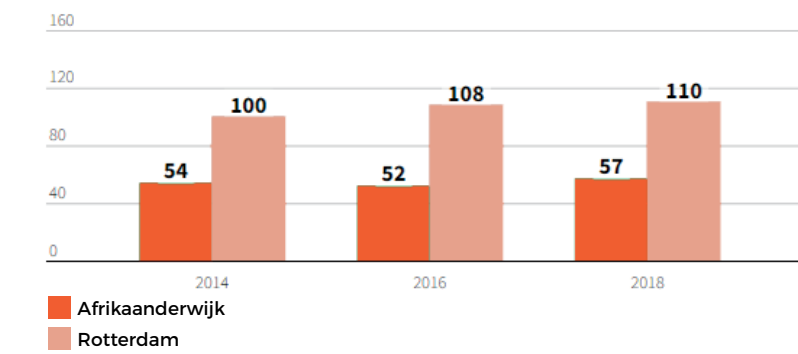


Figure 22. Satisfaction for Own Neighbourhood
(Graph by www.onderzoek010.nl; Adapted by the Author)

Sense of Responsibility for the Neighbourhood

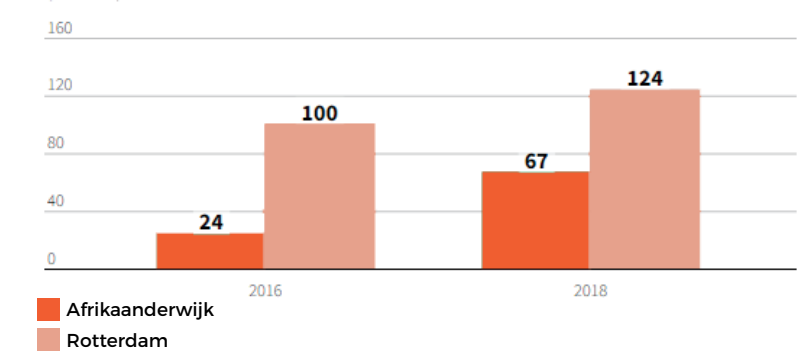


Figure 23. Sense of Responsibility for the Neighbourhood
(Graph by www.onderzoek010.nl; Adapted by the Author)

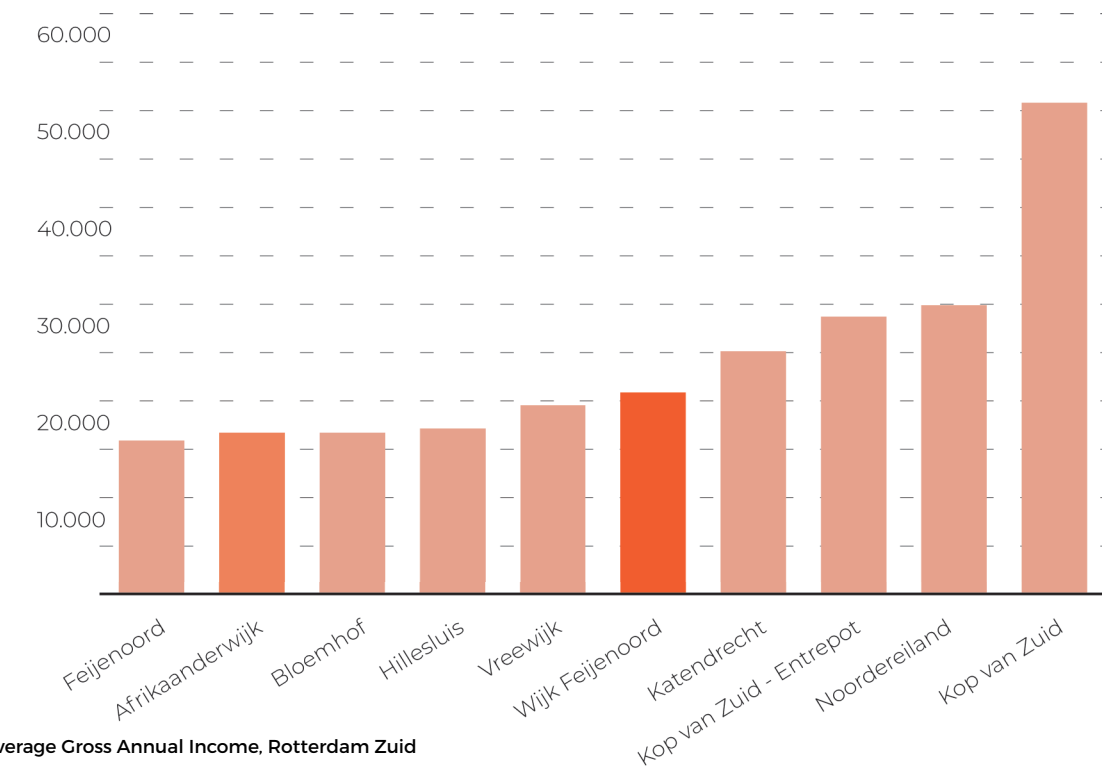


Figure 24. Average Gross Annual Income, Rotterdam Zuid
(Graph by www.allecijfers.nl; Adapted by the Author)

Figure 25. Share not Experiencing any Nearby Problems
(Graph by www.onderzoek010.nl; Adapted by the Author)

Afrikaanderwijk - Spatial Characteristics

The area now is characterized by a very distinct differentiation between different land uses. Most of it is mainly residential with few industrial zones left on the ports with others turned either commercial or office spaces. Few disconnected public spaces most of which are currently not easily appropriated by the users and even fewer services and amenities for the residents.

One could argue that the only exception is Afrikaanderplein, a square that was designed to function as the heart of the area, where a lot of actions and community gatherings take place and where the community meets and socializes. With a closer look, however, it is easy to understand that it is not the actual square or, for that matter, park that is appropriated, but the range of activities that take place in its surroundings.

It consists of one of the biggest markets in the Netherlands, showing how a place can influence the way people behave in it and on the other hand, how a place is transformed by the way people use it. And it is also surrounded by community buildings, sports fields and playgrounds for kids, as well as a Mosque, the bigger in the area, very important for the local community of Muslims as a meeting place.

Afrikaanderplein is also the place where, in recent years a lot of initiatives were formed, in order to tackle the gentrification processes that have been threatening the existing community of the area.

Figure 26. Public Space in Rotterdam South
(Image by the Author)

Figure 27. Basket Field
(Image by the Author)

Figure 28. Kids' Drawings on Mantel
(Image by the Author)

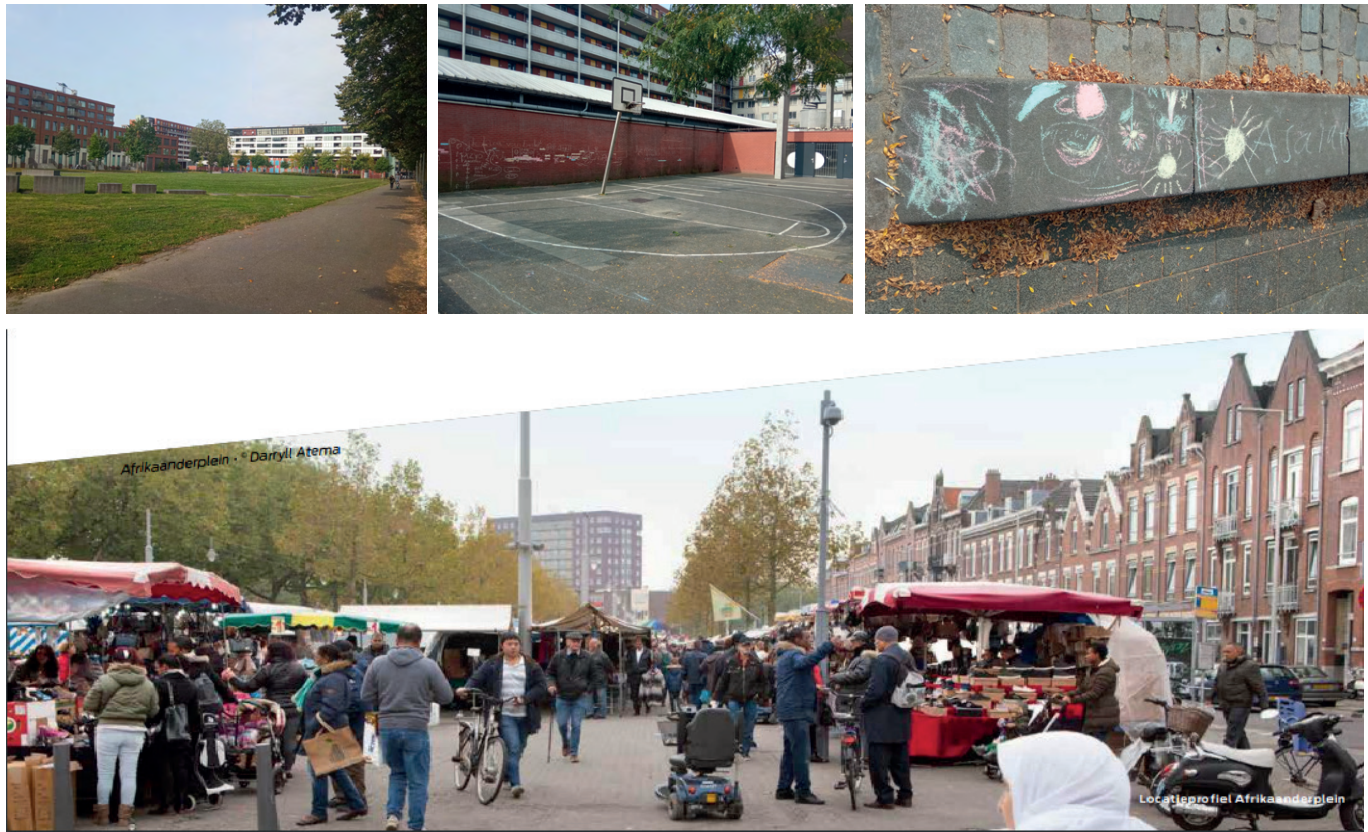
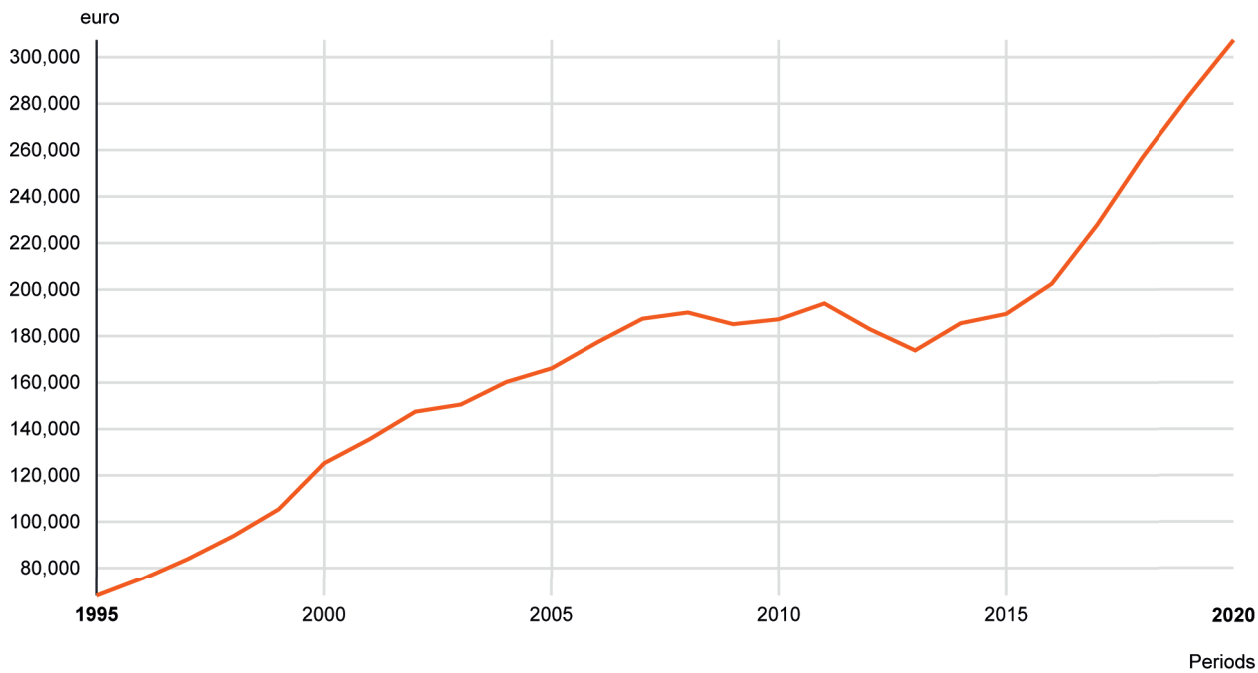


Figure 29. Afrikaanderplein
(Image by Darryll Atema)

Existing Own Homes ; Average Purchase Prices



Rent Increase Dwellings

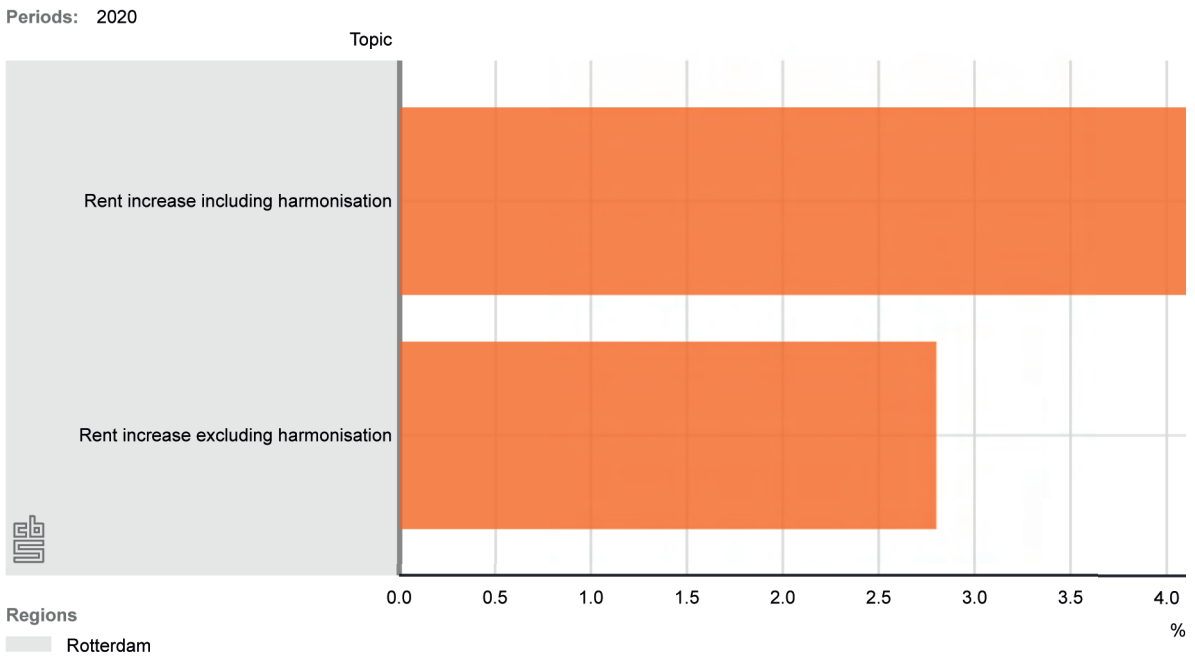


Figure 30. Existing own homes, average purchase price
(Graph by CBS; Adapted by the Author)

Figure 31. Rent increase dwellings
(Graph by CBS; Adapted by the Author)

Gentrification



Figure 32. People Protesting in Afrikaanderplein
(Image by www.woonbond.nl)

Figure 33. Vestia Ratten
(Image by www.woonbond.nl)

Figure 34. Woonopstand
(Image by www.woonbond.nl)

Rotterdam's housing policy has led to serious social problems. As stated before, the municipality aims on residents with higher incomes, while the affordable housing stock is being deliberately reduced through demolition and renovation.

Together with the rising prices on the housing market and the growing number of home seekers, has resulted in serious problems for the lowest income groups, the jobless as well as students and starters, who in many cases are forced to abandon their homes. Thus the formation of initiatives such as the "Right to the City" movements shows that it is crucial for a community to form a strong social network in order to be resilient.

An important point that the residents themselves make, is that residents must be able to make a substantial contribution and participate in decision - making about the development of the plans.

In South, policy is lagging behind most

The National Program Rotterdam South (NPRZ) can hardly keep up with the new Rotterdam. The demolition plans are becoming more expensive, the housing shortage is increasing, but the program that South has to upgrade is getting stuck in the time of 'bad lists'.



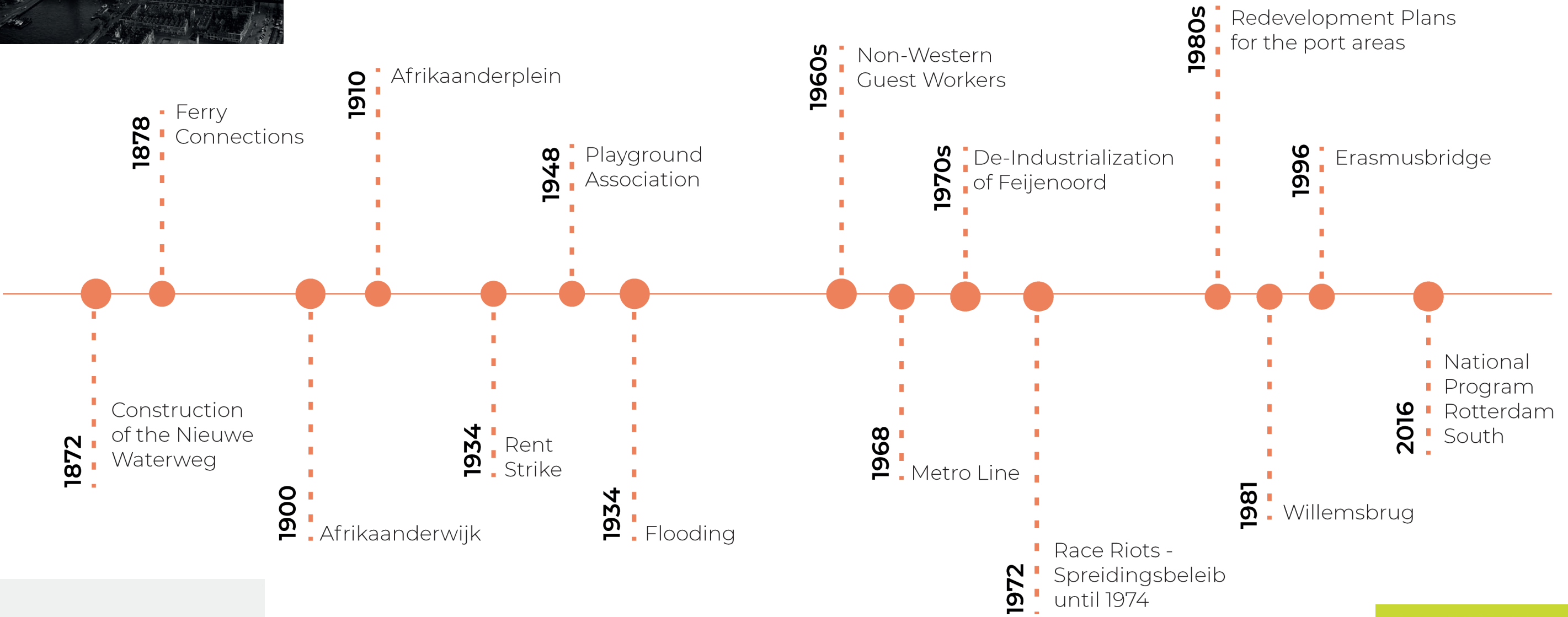
Rotterdamers join forces for better housing policy

Resident groups from various demolition and renovation neighborhoods and other concerned Rotterdamers have united to work together for a better housing policy in Rotterdam in the coming period. On Sunday 7 March, the 'Right to the city' initiative was launched during a well-attended meeting in the Afrikaanderpark.



Figure 35. Headlines and Posters against Gentrification in Rotterdam South
(Collage by the Author)

1.3 | Historical Analysis



Looking back at the historical dimensions of the area, it can be seen how these urgencies are reoccurring through the decades, making Rotterdam South, a problematic area since its formation.

Even before the construction of the ports and the big industrialization, it was the place for everything that didn't fit on the North, serving in the 1600 as the place for plague patients and criminals.

With the construction of the Nieuwe Waterweg in 1879, companies settled on the other bank of the Mass, with Feijenoord providing the space for port and industries until the end of the 1970s. When Feijenoord was not enough and new harbor basins had to be constructed, the polder landscape of the area was destroyed. At this time job seekers came from the countryside of South Holland Brabant and Zeeland to settle there. It was the first time that Rotterdam South gained its reputation as an immigrant neighbourhood. Later on, when the completion of ports could not provide work anymore, a new wave of residents arrived, guest workers from Turkey, Morocco and Eastern Europe.

Separated from the rest of Rotterdam by the Maas and for out of sight of the politicians, even accessibility was difficult, having only ferry connections until the early 20th century, only improving after the second world war with the introduction of the metroline in the 60's and later on in the 1990s with the construction of bridges.

Three events were major turning points for the area. The flooding of 1953, which resulted in land loss due to the heavy infrastructural developments that had to be constructed and the race riot of 1972 when native Dutch residents rebelled against guest workers, for occupying houses and thus reducing the available stock. This led to a dispersion policy allowing only a maximum of 5% of foreigners to settle in each district.

Such a law has also been re-introduced in the recent years. The third turning point was the de - industrialization of the port areas which left behind a lot of space for transformation in the 80s.

Figure 36. Aerial view of the Koningshaven in the 1920s
(Image by Rijkswaterstaat)

Figure 37. Afrikaanderplein
(Image by www.wikipedia.com)

Figure 38. Feijenoord
(Image by www.indebuurt.nl)

Figure 39. Afrikaanderwijk
(Image by www.wikipedia.com)

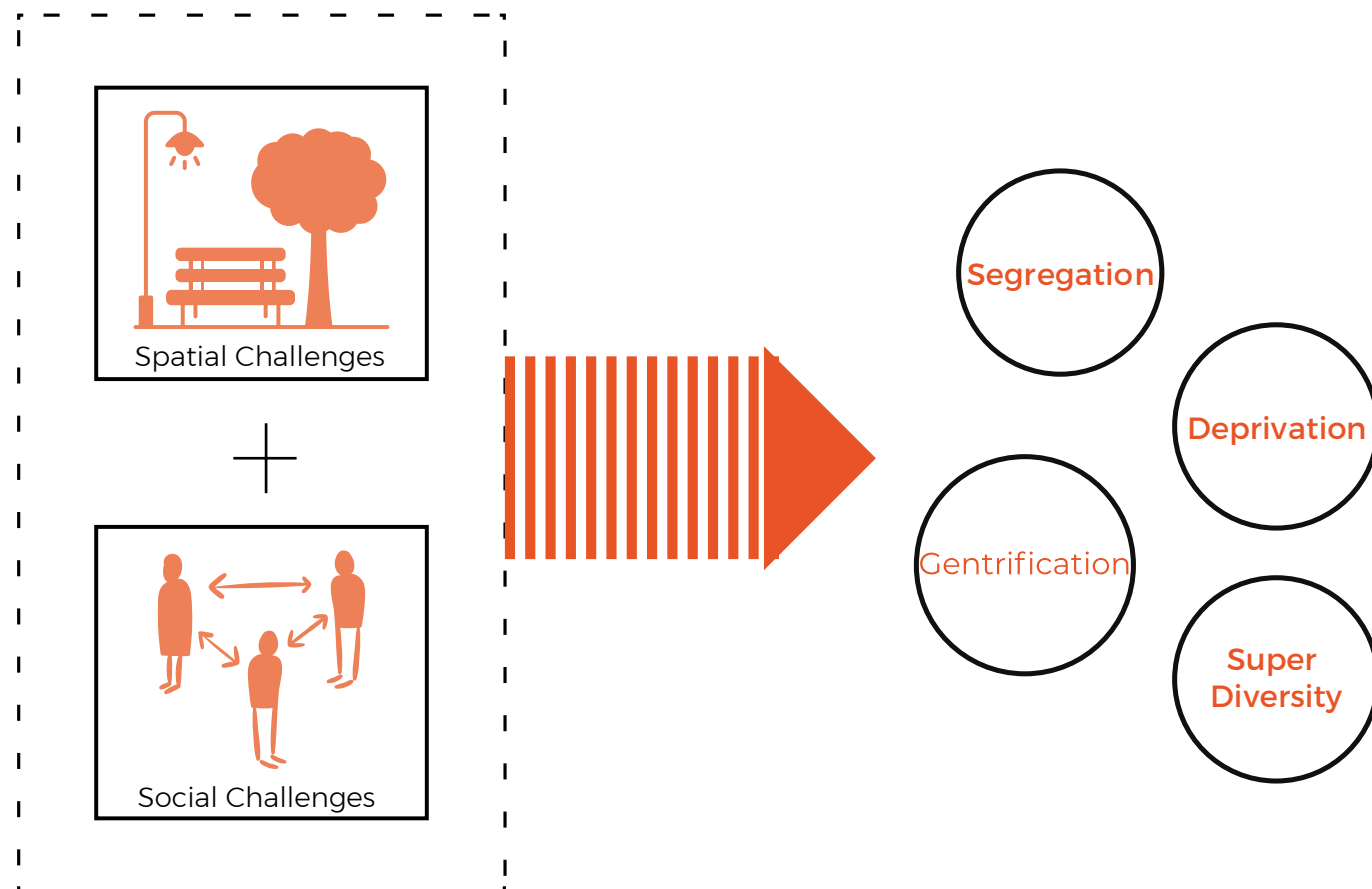
Figure 40. Harbor from the 50s and 60s of the last century
(Image by www.bertha010.nl)

Figure 41. Harbor from the 50s and 60s of the last century
(Image by www.bertha010.nl)

Figure 42. Race Riots
(Image by www.wikipedia.com)

Figure 43. NPRZ
(Image by www.nprz.nl)

1.4 | Problem Statement



Urbanization and the rapid development of cities, both economically and in size, often attributed to industrialization, has always attracted both national and international migrants in western Europe and has shaped their form and composition. In the last decades, also due to the global economic crisis, cities have become more diverse than ever. This diversity, although an “inherent characteristic of cities” (Tasan-Kok, 2014a) is not always perceived as positive, especially in the so – called deprived areas, which mainly consist of multicultural, low – income social groups.

This has serious implications not only on how people live together in space, but also on the actions taken to “minimize” the differences, with Rotterdam South being a prominent example of this situation. More specifically, this thesis project focuses on Afrikaanderwijk, which as stated before, is one of the most multicultural neighbourhoods of the area and also in the epicentre of the current urban transformations.

Policy and political circles still aim at traditional ways of “regenerating areas”, with gentrification being a central strategy for the neoliberal remaking of urban space (Paton, 2016) and presented as a necessity in order to persuade that social mixing is really what residents envision (van Gent, 2013). In this context, socio – spatial segregation and lack of cohesion are often very prominent, with the design of public space failing to respond to the current needs of the society, in contrast, often exacerbating racial and social stereotypes and further isolating marginalised groups (Valentine, 2008). The traditional notions of what public space means for a place and its community and how and for whom it should be designed,

often leads to exclusion and self – exclusion of several different groups, who do not have the opportunity to participate in public life and coexist under the same conditions. This has immediate effects on the neighbourhood and the city in total, jeopardising its inclusiveness and resilience. In this situation, perceiving a city or a neighbourhood as “super – diverse” (Vertovec, 2007), categorizing people in groups based only on their ethnic and demographic characteristics, can amplify even more the dipoles and stereotypes and oversimplify the way contemporary cities are developed.

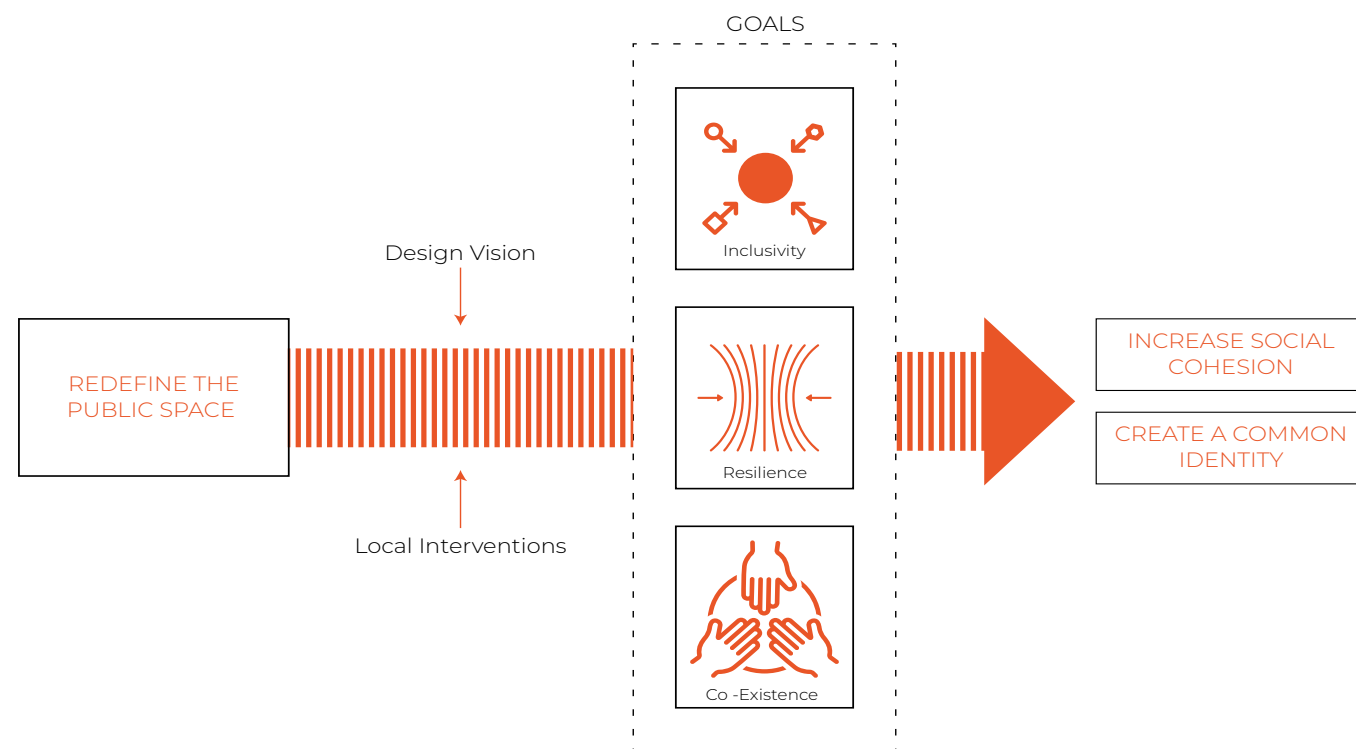
Hence, the general problem this thesis is dealing with, is the problematic way in which the different social groups of Afrikaanderwijk are perceived and treated, the way they interact and socialize with each other and therefore the way they occupy and appropriate the public space or not.

Therefore, this project aims to explore the possibilities for spatial and socio-economic transformation, through strategic and local scale interventions that promote common platforms for interaction and communication amongst varied social groups in the area. Ultimately, these interventions may help tone down the increased social division and disparity between the neighbourhood, but also the different parts of Rotterdam and promote a fairer distribution of opportunities.

Figure 44. Problem Statement Diagram
(Diagram by the Author, Icons by <https://thenounproject.com/>)

1.5 | Research Aim

Redefine the Urban Landscape in Socio -Spatially Segregated, Hyper - Diverse Neighbourhoods



The main aim behind this project is to contribute to redefining the urban landscape, especially in those so-called deprived neighbourhoods, which are characterized by hyper - diversity, where conflicting interests between local authorities, people of power and local inhabitants regularly occur, in order to ensure social cohesion and create a common identity for all. Through spatial interventions, the goal is to enhance the inclusiveness and resilience of disadvantaged neighbourhoods, using Afrikaanderwijk as a case study for the implementation of those, in the context of creating coexistential places.

Given the social urgencies mentioned, embracing diversity in Rotterdam South, can be linked to the 11th Goal of "Sustainable Cities and Communities", set by the United Nations in the 2030 Agenda for Sustainable Development (2020).

In order to achieve this goal, firstly, a set of design values about inclusivity and resilience will be formed, which will frame the way that this project will tackle the creation of places of coexistence; thus public spaces, whether interior or exterior. Later on, through these values, a set of design principles will be set, which will form the basis for the design strategies and interventions.

Through these strategies, a public space and social network will be proposed, which will integrate formal and informal carriers, as well as a densification plan with emphasis on common spaces. The final designs on the micro-scale will focus on spatial interventions in key locations, by creating new public spaces or transforming current ones, new commons and shared and temporary spaces and activities.

Figure 46. Research Aim Diagram
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 45. Sustainable Cities and Communities
(Image by www.sdg.un.org)

1.6 | Research Question

To what extent can co - existence be ensured through inclusive spatial interventions in the public space, in the hyper - diverse and socio - spatially segregated neighbourhood of Afrikaanderwijk?

Research Sub - Questions

- SQ1** What can be defined as public space and space of co - existence?
- SQ2** What are the urgencies, associated with the lack of socio - spatial cohesion in deprived, hyper - diverse communities?
- SQ3** How can hyper - diversity transform from a given to a quality, in the context of socially deprived neighbourhoods?
- SQ4** In what way could we design for inclusivity and resilience?
- SQ5** What are the socio - spatial characteristics of Rotterdam South and more specifically of Afrikaanderwijk, at different spatial scales?
- SQ6** Which groups of people and in what ways, appropriate the public space in Rotterdam South? Which ones face the most challenges?
- SQ7** How can the needs of the current and future residents of the area be answered, through spatial interventions in the public space?

1.7 | Relevance

Scientific Relevance

The scientific relevance of my project has to do with the fact that although a lot of literature exists in terms of how to design a public space, it is not really compatible with the current needs of a hyper - diverse society, especially when it comes to deprived areas.

This project aims to contribute and fill some gaps on how to design for different social groups and take into consideration their multiple identities and relations between one another, so that it can become clear that traditional one-size-fits-all policies, can no longer ensure a successful result. The outcomes of this project could function as a case study, or even better as a new vocabulary on how to create inclusive public spaces for all those groups of people to co-exist.

Societal Relevance

From a societal point of view, this project could, through design, answer on multiplicity and create opportunities for people from different social groups to interact and communicate, thus creating a more inclusive and resilient environment, in places where conflicting interests and gentrification processes occur, at the expense of the most vulnerable. Those traditional processes of “regenerating” an area, have tried to prove that forcing social mixing is a bottom - up approach, which will benefit both the gentrified and non - gentrified communities of an area and create opportunities for all. The reality, however, has proven to be different, as in most cases these experiments end up failing.

Thus, this thesis, through spatial interventions, and taking into account the needs and identities of different social groups, aims at enabling the participation of people from different socio-economic statuses, lifestyles, attitudes and activities to interact and communicate, consequently steering the city towards fairer opportunity distribution and a more harmonious and co- existential urban environment.

2.1 | Theoretical Framework

As stated during the introductory chapters of the current thesis project, Rotterdam South and more specifically Afrikaanderwijk, cannot be identified as the “typical Dutch neighbourhood”. It has always been an area of constant change and influence of many different factors, creating a unique identity, which is also visible on the way people behave in space.

Although characterized by its highly diverse and multicultural environment, the past but also very recent approaches in dealing with issues related to space, have always taken a very “traditional” and outdated route, which is not compatible with the needs of an evolving society. Thus contributing to a number of socio - spatial related challenges to emerge.

Segregation, deprivation and most recently gentrification, are some of the current problems that this area has to deal with and which have shaped the behavioral patterns of people in it and the way dynamics has evolved.

Starting from the very definition of what is perceived as public space, this project aims at approaching public space through the lens of its given urgencies.

Public Space

"Peter Marcuse highlights the fact that public space cannot be adequately qualified by differentiating between public and private ownership: '... "public space" for most policy purposes cannot be delimited simply to that space that is publicly owned. Ownership is itself a complex category, and ... I use publicly usable, rather than publicly owned, as the relevant category for analysis'"(Marcuse 2003, as stated in Nissen, 2008).

As society progresses and cities become more and more complex, the boundaries between public and private become blurry. Public space loses its traditional meaning of publicly owned and publicly used because of privatization tendencies (Crawford, 2021; Nissen, 2008) and on the other hand, the dominance of buildings in urban space, creates opportunities for “interior public space” (Harteveld, 2014).

Some argue that these new spaces are a sort of “hybrid” (Nissen, 2008), or “collective” (de Sola Morales), or “third places” (Oldenburg). Generally, it could be argued that public space is the space that people appropriate at large and where there is a common tendency



Figure 47. Community
(Image by www.aucklandcouncil.govt.nz; Adapted by the Author)

for people to choose to be. “These spaces are public by their social meaning and value” (Harteveld, 2014, p. 66).

“The city is the very place where the private domain can be, and often is, a social domain, just as much as or indeed even more than the public domain. Private buildings as public elements, radiating social meaning and value that extend beyond the actual buildings embody their urban character. Collective spaces are not strictly public or private, but both simultaneously. These are public spaces that are used for private activities, or private spaces that allow for collective use, and they include the whole spectrum in between.” (de Solà-Morales, 1992, p. 5)

Socio - Spatial Segregation

“Urban segregation is an inherent feature of cities and becomes a problem when excluding or hindering certain groups from accessing services, activities and spaces”,(Luisa Maffini & Maraschin, 2018), or according to Madanipour, “segregation is the spatial expression of social polarization”, affecting the most vulnerable social groups, who are exposed to social exclusion. These groups are found gathered in deprived neighbourhoods, lacking shared experiences and narratives(2004). Having to deal with limited access to resources, the competition about the dominance of the public space is very prominent. Conflicting interests and tensions emerge, which reflect the fragmentation of the area.

“The public space then becomes a display of incompatibility between these groups, who, in the absence of some supporting mechanisms, may find it hard to live together within the means that are available and the conditions that prevail. As most are preoccupied with sorting out some of the basic problems of life, their

capacity to deal with others becomes more limited.”(Madanipour, 2004)

However segregation is not only how a person occupies a space in respect to the identities of ones neighbours in residential space, but also “in respect to the structure of a person’s daily activity spaces” (Izhak & Yoav, 1999).

On the other hand, it can also be argued that no place can fit all. "... public spaces take on different flavours as a result of the different groups of interests that create them and the particular range of uses they accommodate. It follows that just like rooms in a house or buildings in a city, it would be foolish to try and design all public spaces according to some idealised cloned blueprint in order that each is equally appealing to all"(Carmona, 2019). This suggests that segregation is positive to some degree, when it happens in respect to the people's needs and choices about personal space and it should be taken into consideration when designing such places.

Deprivation

Deprivation is the relatively low physical (e.g. houses for sale, graffiti), social (e.g. unemployment, non-voter) and economical position (income, education level) of a neighbourhood, which as shown before, characterizes Afrikaanderwijk to some degree (van Vuuren et al., 2014). The existence of big, uniform green spaces or of amenities in close proximity to residencies does not seem to necessarily improve the situation. This implies that neighbourhood deprivation can be associated not only with physical neighbourhood characteristics, but also with perceived neighbourhood qualities and satisfaction (Mouratidis, 2020).

Authorities usually believe that by introducing better housing or regenerating

neighbourhoods, all kinds of social problems will be solved. Although, certainly different physical environments can instigate different opportunities for interaction and behavior, “it could be that the social effects of physical plans are more intense than the social effects of social measures” (Wassenberg et al., 2010). In these situations, citizen empowerment and the ability to see and be seen can prove important in altering the stigma of an area.

Gentrification

Gentrification has been a central strategy for the neoliberal remaking of urban space (Paton, 2016), framed as necessary against the decay of neighbourhoods. It has been linked to regeneration (Atkinson, 2003) and is considered by a lot of political circles to be the sole solution to decline and deprivation. This is also the case in Afrikaanderwijk, where the multicultural, low-income working class of the area, is being replaced by a more upmarket clientele. This process, however, has long been critiqued as “false choice urbanism” both for the gentrified and the non-gentrified social groups of the area (Slater, 2006).

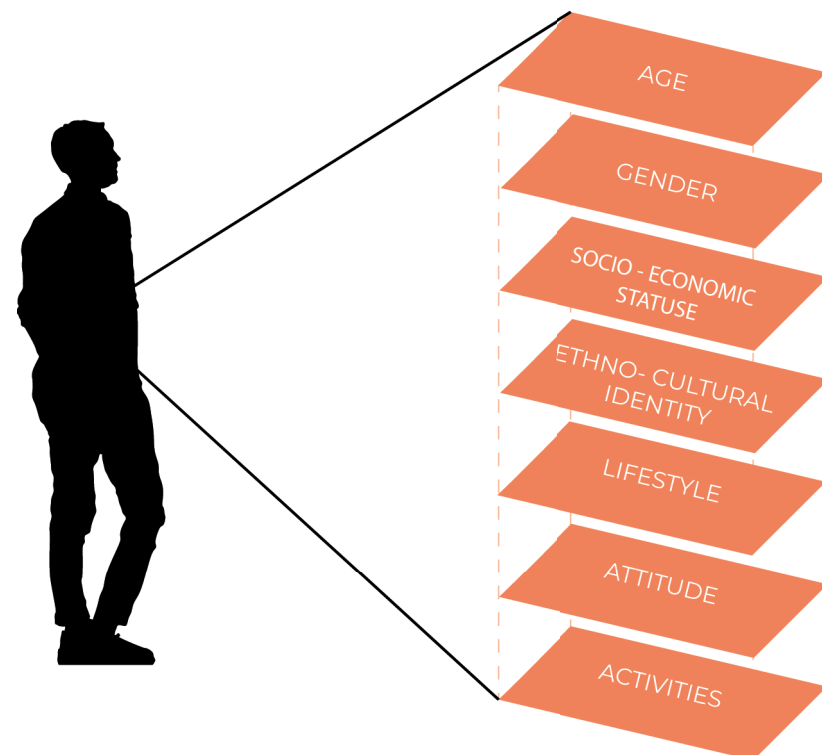


Figure 48. Hyper Diversity
(Diagram the Author)

From “Super” to “Hyper” Diversity

“A dynamic interplay of variables among an increased number of new, small and scattered, multiple-origin, trans-nationally connected, socio-economically differentiated and legally stratified immigrants” (Vertovec, 2007).

In 2007, when Vertovec first introduced the term “super-diversity” to describe the situation in London, he considered migration to be the most important driver of growing diversity, making a distinction between different social groups, but not within them. This however, although partly true, cannot grasp the actual complexity and multiplicity of contemporary societies. “Urban society becomes so dynamic that some of the most used concepts to describe growing urban diversity do not suffice anymore” (Tasan-Kok et al., 2013). Taking this into account, a paradigm shift from super to hyper diversity should take place.

“Hyper-diversity thus refers to an intense diversification of the population in socio-economic, social and ethnic terms, but also with respect to lifestyles, attitudes and activities” (2013). In this context, traditional ways of planning and designing are very likely to fail, because they only focus on specific groups, not taking into account the real societal conditions. Through the scope of hyper-diversity, the multi-layered character of cities becomes more apparent and the spatial implications of it, escape the strictly residential space of people, but follow them on all daily activities.

2.2 | Design Aims

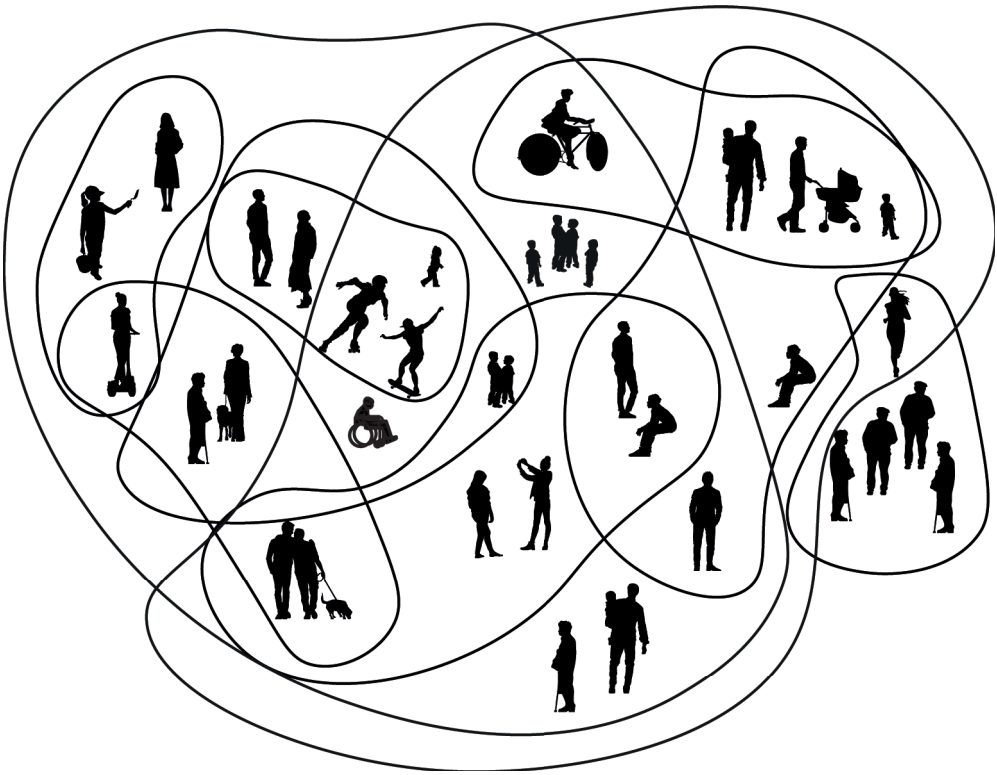


Figure 49. Principles for designing a spontaneous city
(Diagram by Tess Broekmans, Catja Edens, Urhahn Urban Design (Amsterdam); Adapted by the Author)

Inclusivity in Design

Inclusive in a broader sense means that something contains elements that do not exclude any part of the society. Inclusive public space, therefore, means that all different social groups or parts of them can be accommodated in them.(Landman, 2020) Although, as already mentioned before, designing a space for everyone is probably quiet utopian and possibly a failure, trying to create encounters and instigate interaction, is what could make a neighbourhood or city more inclusive to its core.

Especially after the rapid changes that Coivid-19 has caused to our societies, the need for public spaces and more specifically for inclusive, multigenerational design has increased more than ever(Peinhardt & Storrington, 2019). Even more important than not excluding anyone, the design should build a sense of belonging and attachment for everyone. In this way equity and social justice can also be achieved. And to do so, it is imperative to first define the attributes of the groups of people, so that their needs can be met.

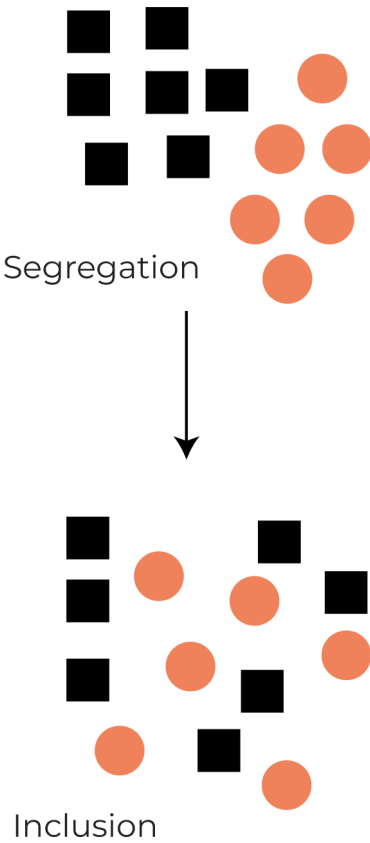


Figure 51. From Segregation to Inclusion
(Diagram by www.uxplanet.org; Adapted by the Author)

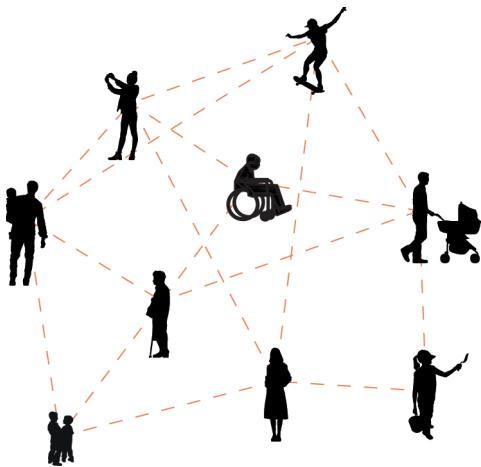


Figure 50. Connecting People
(Diagram by the Author)

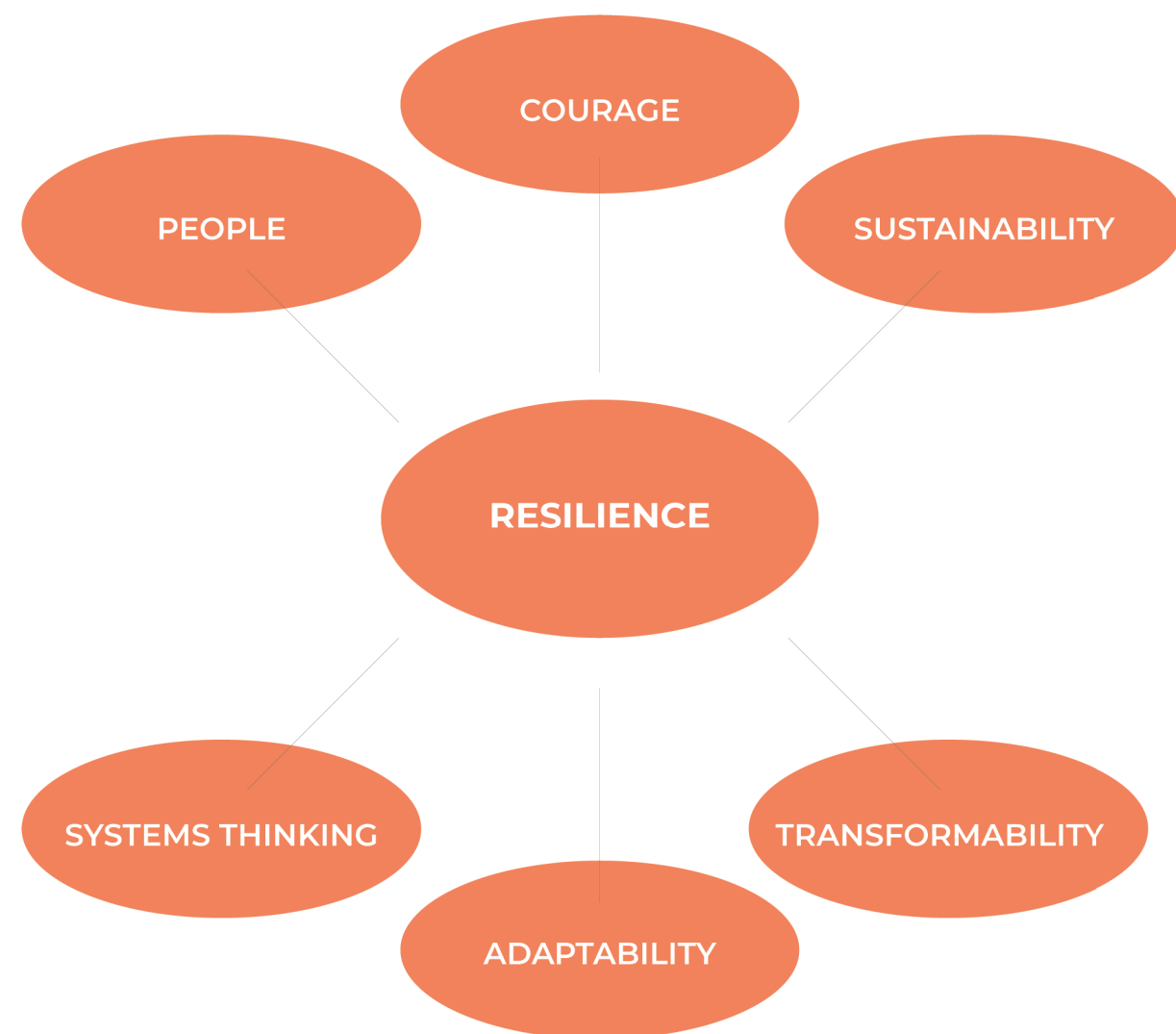


Figure 52. Six Foundations for Community Resilience
(Diagram by the Author; inspired by www.resilience.org)

Resilience

“Efforts to build community resilience often focus on growing the capacity to “bounce back” from disruptions, like those caused by climate change. But climate change is not the only crisis we face, nor is preparing for disruption the only way to build resilience. Truly robust community resilience should do more. It should engage and benefit all community members, and consider all the challenges the community faces.”(Lerch, 2017)

In this sense, spaces and people can contribute to the level of resilience(Harteveld & Asadollahi Asl Zarkhah, 2021) and this can happen, again as previously mentioned, only if we stop taking into consideration the dipoles between public and private.

In a community, identity is essentially determined by what people value about where they live. However, what a community of people collectively values is open to interpretation and subject to disagreement. This suggests that people and the ways they come to rough consensus are necessarily at the centre of community resilience building.

Having this in mind, when striving for resilience, people and their needs and beliefs play again the most important role, as well as keeping in mind that resilient means automatically to be flexible and adaptable to the changes that are going to emerge in the future.

What Makes a Great Place?

Project
for Public
Spaces

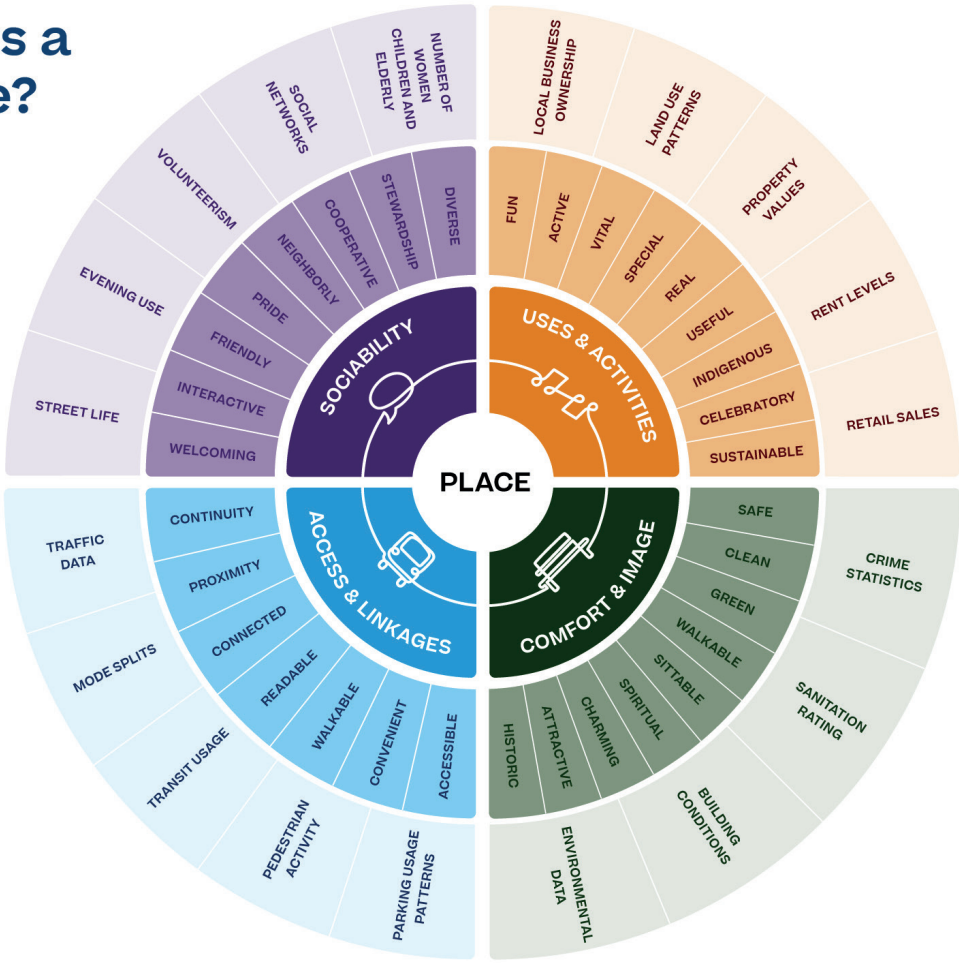


Figure 53. What makes a Great Place
(Diagram by www.pps.com)

Co - Existence in Public Space

Summing up, when designing for inclusivity and resilience, we are ultimately designing for coexistence. Again this means that traditional norms and practises about for whom and how we design should be questioned. Public space in its traditional meaning has been predominantly designed by white male professionals that prioritized a certain type of user; the “white able-bodied man” (Huttenhoff, 2021). However, in order to be able to build more inclusive and resilient communities, it is imperative to reach the goal of coexistence – “designing and managing spaces to allow for people of all backgrounds to find joy and belonging within a shared space while feeling safe and secure”(Huttenhoff, 2021).

In this attempt, SPUR partnered with Gehl Institute, to create a Coexistence Toolkit, to address homelessness in Guadalupe River Park, California. Although the situation there is very specific, their findings could be adjusted to fit more cases. By putting dialogue in the middle of all procedures they ensure the understanding between different actors, but most importantly that by collaboratively shaping a place, its sustenance and maintenance would be prolonged.

The non-profit organization Project for Public Spaces (PPS), on the other hand, has identified four similar qualities to what makes a public space great: they are accessible; people are engaged in activities there; the space is comfortable and has a good image; and finally, it is a sociable place: one where people meet each other and take people when they come to visit.



Figure 54. Facets of Coexistence
(Diagram by www.gehlpeople.com; Adapted by the Author)

2.3 | Design Values

In order for this project to contribute to inclusivity and resilience and respond to the needs of the hyper – diverse community of Afrikaanderwijk for coexistence, design values should be set to approach the problem spatially. These values are recognition, encounter and flexibility.

Recognition – Define the attributes of the groups of people so that their needs can be met

According to Fincher and Iveson(2008), treating citizens as homogeneous and simply part of traditional social groups, while making policies and urban plans, deeply undermine the hyper – diverse environment of contemporary cities. Overcoming cultural diversity and creating shared values for the “ill-defined public interest”, only seem to privilege certain groups over others. Recognizing heterogeneity, however and defining the attributes of the groups of people, outside common norms and labels, by distinguishing between just and unjust forms of diversity within this context, “just diversity” can be promoted. The answer therefore is not to categorize people to maintain boundaries between them, but understand that in social life, there is an overlapping of different identities of groups, which cannot be defined by a set of values, shared for all. Instead the interrelations between those groups can give the answer to what is needed from a design perspective.

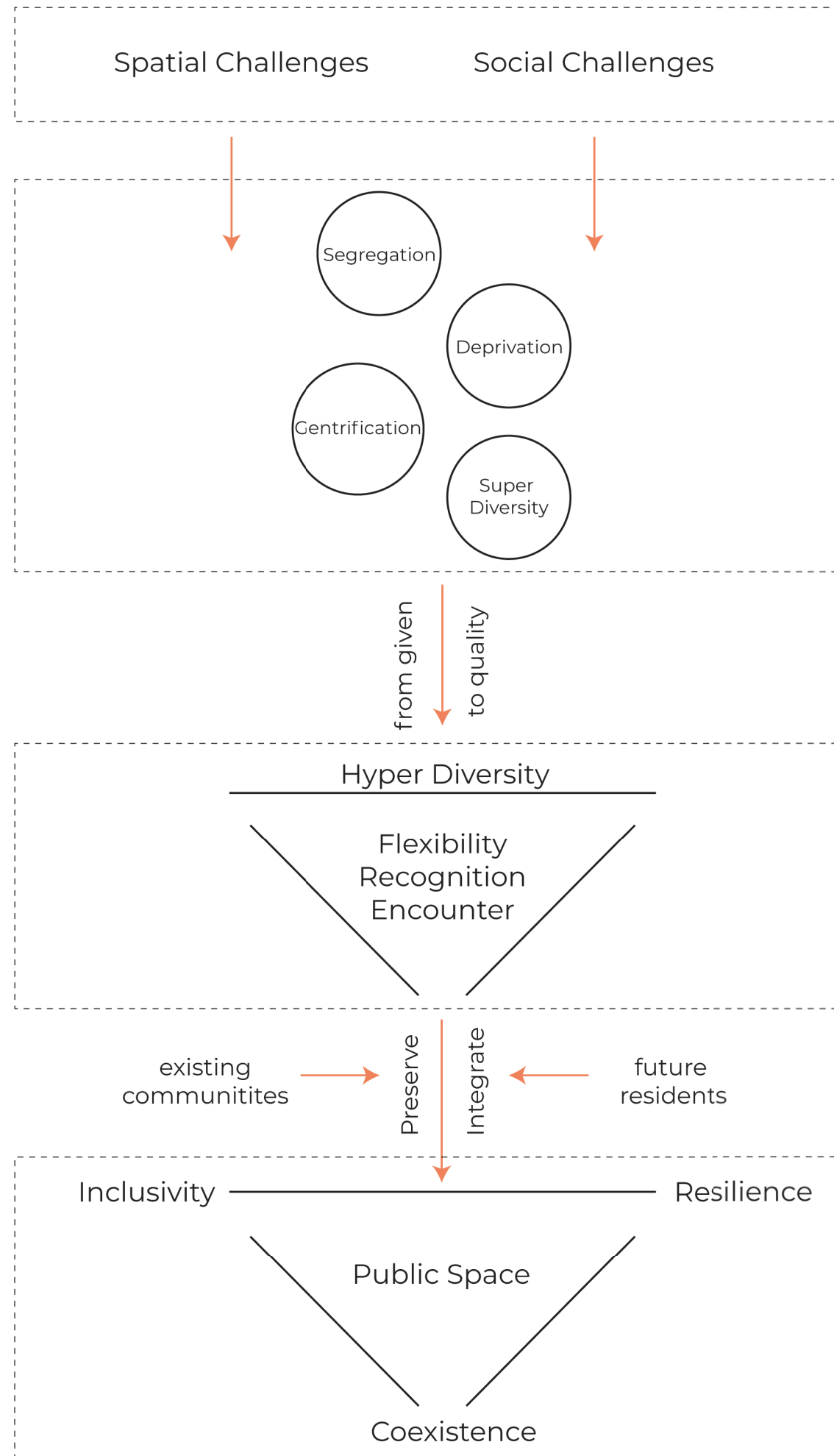
Encounter – The interaction of individuals is planned for in order to offer opportunities for increased sociality

The planned interaction of “like or unlike” individuals can provide citizens an opportunity to create their own identifications and explore different parts of theirs, understanding better each other’s needs and rights. Whether or not all groups will seek to participate in this process and provide input on the decision making, does not mean that they do not seek some sort of encounter with the city and its inhabitants(Fincher & Iveson, 2008). Thus according to them, by attributing to people their own spatiality, spaces, places and structures within the city, this can lead to the “right to the city”. In this process, designing small spaces of compulsory daily interaction and conversation are the ones that can foster diversity better, instead of the notion of large open public spaces for all, which most of the times end up becoming places of transit rather than destination.

Flexibility – To be able to transform and adapt to the changing needs of people and situations

Flexibility is a very important aspect when designing for resilience and inclusivity as it can enhance the ability of more residents to appropriate public space through the provision of a wider range of possibilities in terms of use. As stated before, the complexity and constant change of modern societies makes it imperative also for spaces to be able to adapt and change their organization in order to achieve new conditions, solutions and applications(Sanei et al., 2018). Sennet also stresses the need for adaptability of the city while one’s identity constantly changes. Through this process, the possibilities for encounter and social interaction increase.

“The possibility of diversity and change in the public space makes people involve more in space”(Sanei et al., 2018). In this context, public space should contain enough space for people’s interpretation of it in order to create different experiences and thus a greater feeling of belonging, as well as a robust program of things to do that is rooted in the assets and needs of the surrounding community, in order to ensure safety and social cohesion.



2.4 | Conceptual Framework

The Conceptual Framework illustrates the way in which this graduation project aspires to answer to the previously mentioned research question of how to create inclusive and resilient public spaces. To achieve these goals and improve the current situation of socio-spatial segregation in the area, firstly, a shift from characterizing cities from "super-diverse" to "hyper-diverse" should happen, in order to understand the real complexity of the situation and define as many probable interactions between different variables as possible (Tasan-Kok, 2014a).

What is more, the research should investigate theories for design values that can contribute to inclusivity and resilience and form the basis of the design principles that are going to be used for the formation of the spatial interventions that are going to be implemented in Afrikaanderwijk.

Figure 55. Conceptual Framework
(Diagram by the Author)

3.1 | Research Methods

During this graduation project, different types of methods are used to answer the previously mentioned research questions.

Literature Review

Literature review forms the basis of this graduation project and helps to get a grip on key concepts used within the scope of this thesis. Literature review is therefore conducted on the concepts of hyper-diversity, socio-spatial segregation, inclusivity, resilience and coexistence. The acquired knowledge and insights allow determining the direction of the research and forming the context for the spatial analysis.

Mixed Media Analysis

News articles, documentaries, blogs and social media posts help understand the current and past situation of the area, the life histories and the people's daily routine, activities and challenges regarding the environment they live in, as well as process information from interviews conducted before this study.

Socio – Spatial Analysis

The socio-spatial analysis includes a broad demographic study on the population background income range and educational level of people, as their consideration was essential for the design propositions. In this way the different needs and requirements of the different social groups, regarding the built environment, could be measured.

Network Analysis

Using Geographical Information System (GIS) and Place Syntax Tool (PST), the mobility network in two scales are analysed – the scale of the city and the local scale –, in order to extract results about the accessibility of

the streets, the likelihood of people to use them under different circumstances and if the available public amenities are enough to cover the needs of the area.

Observational Research

Observing human behaviour in the public realm is a very important tool in understanding the multiplicity of the area, the different groups that are formed and how they interact and the ways that people appropriate the space or not. This method is one of the most valuable in order to know the study area and its needs better.

Ethnographic Mapping

Information collected during the observation of human behaviour concluded to a series of ethnographic maps, containing information about how people interact with a place and with each other, or how particular spatial features interact with cultural practices (Peltó, 2016). More specifically, the maps include the spatial and social qualities of the area, the movement and activities of people during specific hours of the day, as well as the way people behave in specific places.

Spatial Mapping

GIS data, demographic and statistical data helped understand the area and its socio – spatial challenges. The current urban form, the function of buildings and public facilities, the networks, the low – income, low – educated areas, etc, are analyzed in this study. Their conclusions provide an input for the design proposal of the public space.

Research by Design

This project, as it is design oriented, uses research by design as a tool to generate conclusions and proposals for the area.

Design values and principles are used in this sense, to create the context and guidelines for the interventions that are going to take place in area, based both in the qualitative and quantitative analysis.

Design

Designing spatial interventions on various scales will be the result of all the aforementioned analysis in order to produce concrete outcomes for the redefinition and transformation of the public space that could function as a new vocabulary on how to integrate theoretical concepts such as hyper-diversity into physical open spaces. Key locations will be chosen to implement the interventions inside the neighbourhood, which based on their results, will help form a general vision for the whole area.

3.2 | Methodological Summary

| Sub - Questions | Objectives | Methods | Outcomes |
|--|---|--|--|
| What can be defined as public space and space of co - existence? | To define the two terms in the context of the thesis project. | - Literature Review | Design approach analysis. |
| What are the urgencies, associated with the lack of socio - spatial cohesion in deprived, hyper-diverse communities? | To obtain a better understanding about the current urgencies of hyper-diverse communities and create the context of the thesis project. | - Literature Review - Mixed Media Analysis - Socio - Spatial Analysis - Spatial Mapping | A series of maps and diagrams which will frame the context analysis. |
| How can hyper - diversity transform from a given to a quality, in the context of socially deprived neighbourhoods? | To define the term hyper-diversity and associate it with the context of the research. | - Literature Review - Research by Design | Context analysis on a paradigm shift from “super” to “hyper” diversity. |
| In what way could we design for inclusivity and resilience? | To determine how to approach these issues in the design process and collect design values and principles to apply in the proposed design. | - Literature Review - Research by Design | Design approach analysis and a set of design values that will form the basis of the design principles for the spatial interventions. |
| What are the socio-spatial characteristics of Rotterdam South and more specifically of Afrikaanderwijk, at different spatial scales? | To obtain a critical perspective of the project area and create a series of spatial maps with the findings. | - Mixed Media Analysis - Socio - Spatial Analysis - Network Analysis - Spatial Mapping | A series of maps and diagrams which will frame the socio - spatial quantitative and qualitative analysis. |
| Which groups of people and in what ways, appropriate the public space in Rotterdam South? Which ones face the most challenges? | To determine people's needs regarding public space and create a multi-layer approach of design solutions. | - Observational Research - Ethnographic Mapping | A series of maps, diagrams and sketches which will frame the human behaviour analysis in space and determine the design goals. |
| How can the needs of the current and future residents of the area be answered, through spatial interventions in the public space? | To apply the results of the analysis into concrete design vision and interventions. | - Research by Design - Design | A set of design principles, strategies and design interventions. |

Figure 56. Methodological Summary
(Table by the Author)

3.3 | Methodological Framework

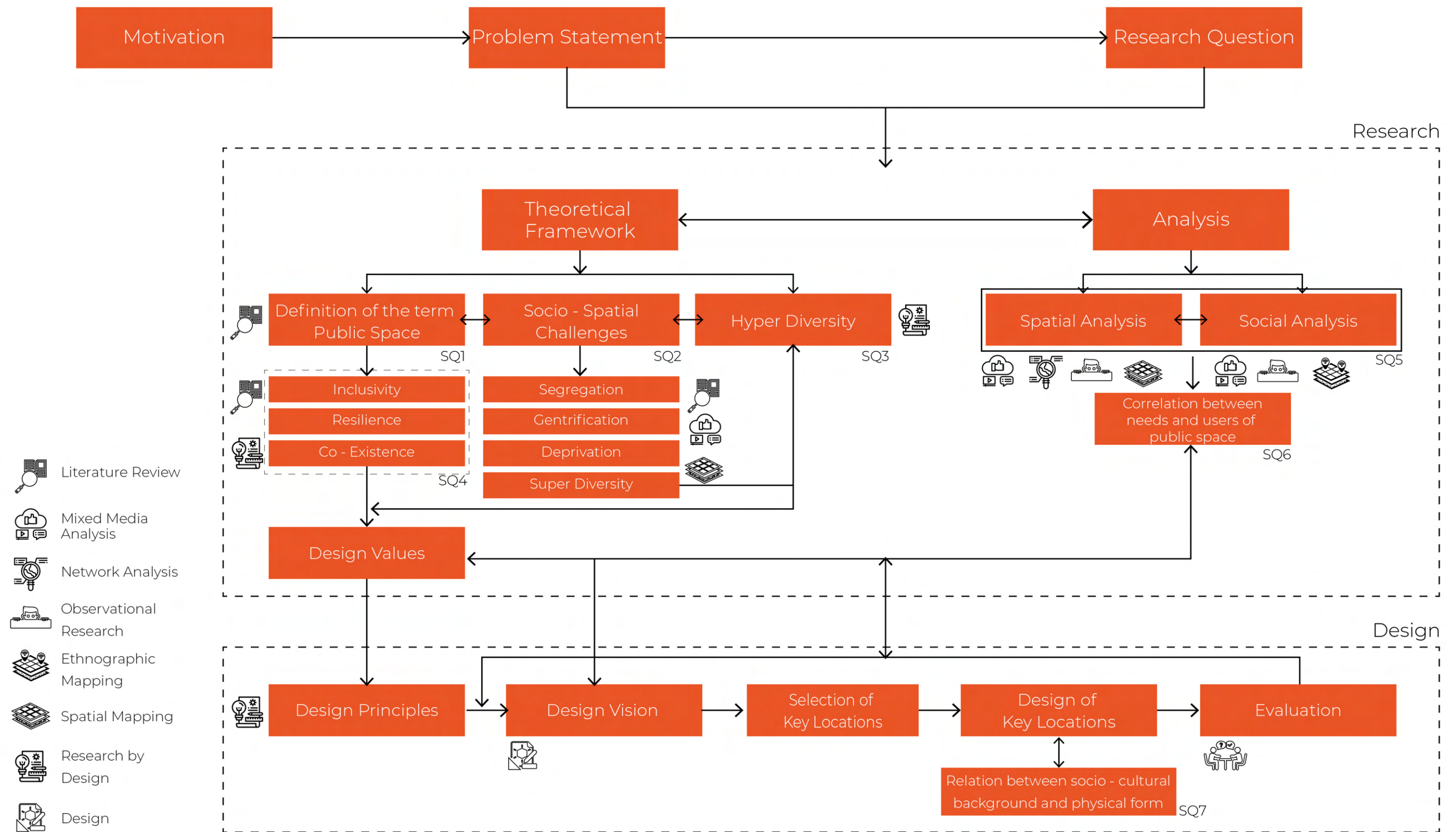


Figure 57. Methodological Framework
(Diagram by the Author, Icons by <https://thenounproject.com/>)



4.1 | Spatial Analysis

Landuse

The area now is characterized by a very distinct differentiation between different land uses. Most of it is mainly residential with few industrial zones left on the ports.

Most of the former industrial heritage of the area has turned either to commercial or to office spaces. Few low quality green spaces can be also found scattered around, lacking connection between them, with some of them even functioning as barriers between the different neighbourhoods.

Two things can be really distinguished from the map. Firstly, the fact that there is an obvious disconnection between the water and the land area, also due to the fact that because of the risk of flooding, heavy infrastructural developments had to be realized in the ports, basically cutting any activity that took place there before.

The second very distinct characteristic of the area, and more specifically of the neighbourhoods closer to the bridges that connect the northern with the southern part, is the fact that a lot of construction is taking place. As mentioned before, the area is currently under transformation, in order

for the two parts to become more “cohesive”.

Working towards this direction, the municipality is focusing on both demolishing old building blocks, most of which are part of the social housing stock, as well as transforming former de - industrialized plots, to increase the amount of dwellings.

- Residential
- Commercial
- Industrial
- Retail
- Recreational
- Park
- Grass
- Construction
- Water

Figure 58. Landuse
(Map generated with QGIS, by the Author)



Connectivity and Mobility

In terms of connectivity, Rotterdam North and Rotterdam South are connected via two bridges, which link the city of Rotterdam directly to the neighbourhoods of Katendrecht and Kop van Zuid.

Both of those have undertaken a huge transformation during the last decades, making them attractive place to live and visit, mostly by means of gentrification.

The heavy highway infrastructure, creates barriers between the different neighbourhoods, that are very hard for pedestrians to cross. Most of the streets, even the more local ones are dominated by cars and only a small amount of bikes.

Accessibility is also possible by means of a metro line that connects parts of the two sides and the railway network, which is clearly much less frequent in the southern part.

The public transport in the area is again not that frequent, having connections only with the primary roads, not really crossing the neighbourhoods.

- Pedestrian
- Residential
- Highway
- Railway
- Bus Stop
- Train Station
- Park
- Water

Figure 59. Connections
(Map generated with QGIS, by the Author)



Public Functions

In terms of connectivity, Rotterdam North and Rotterdam South are connected via two bridges, which link the city of Rotterdam directly to the neighbourhoods of Katendrecht and Kop van Zuid.

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The public transport in the area is again not that frequent, having connections only with the primary roads, not really crossing the neighbourhoods.

- Social Facility
- Religion
- Healthcare
- Education
- Sports
- Playground
- Park
- Retail
- Residential
- Water

Figure 60. Public Functions
(Map generated with QGIS, by the Author)



Accessibility

On Figure 56. the likelihood of choosing a street to use by foot, on a local scale, is depicted. Inside the neighbourhood of Afrikaanderwijk, the most used streets seem to be the one that connects the area to the Rotterdam South train station, as well as the ones that surround the square, where the majority of the economical activity, in terms of local stores, takes place.

The only paths that are used inside the park are mostly the ones where people can really cross it and reach the other side of the area.



Figure 61. Local Accessibility
(Map generated with QGIS, by the Author)

Figure 62. City - Scale Accessibility
(Map generated with QGIS, by the Author)



Proximity to Open Public Spaces

On Figure 58. the proximity of residential buildings to open public spaces can be measured. It is very clear, that the southern it gets, people can access way less public spaces in a walking distance.

Interesting is the case of Afrikaanderplein, where the surrounding buildings do not seem to have a direct access to it. This can be explained by the fact that although a very big public space, it is not open and accessible from all parts. More specifically, is a fenced place, with only a few of the entrances open, which makes it quiet difficult to use on a daily basis.

On the other hand, other public spaces which seem to be open and accessible from everywhere and thus making the nearby buildings to score pretty high in terms of proximity, it is observed that because of the fact that the do not have any form of activity taking place there, they are mostly deserted from people.

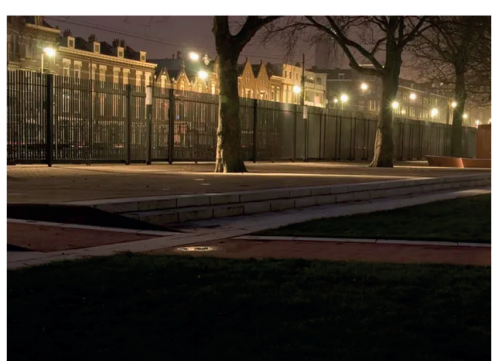
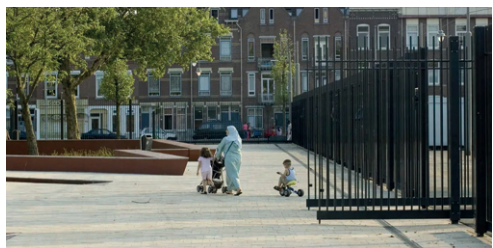


Figure 63. Proximity to Open Public Spaces
(Map generated with QGIS, by the Author)

Figure 64. Proximity to Open Public Spaces
(Map generated with QGIS, by the Author)

Figure 65. Afrikaanderplein at night
(Image by BEN TER MULL)

Figure 66. Afrikaanderplein
(Image by BEN TER MULL)

Outdoor Public Spaces



Figure 68. Park
(Image by the Author)



Figure 69. Playground
(Image by the Author)



Figure 70. Sports Place
(Image by the Author)



Figure 71. Afrikaanderplein
(Image by the Author)



Figure 72. Basketball Field
(Image by the Author)

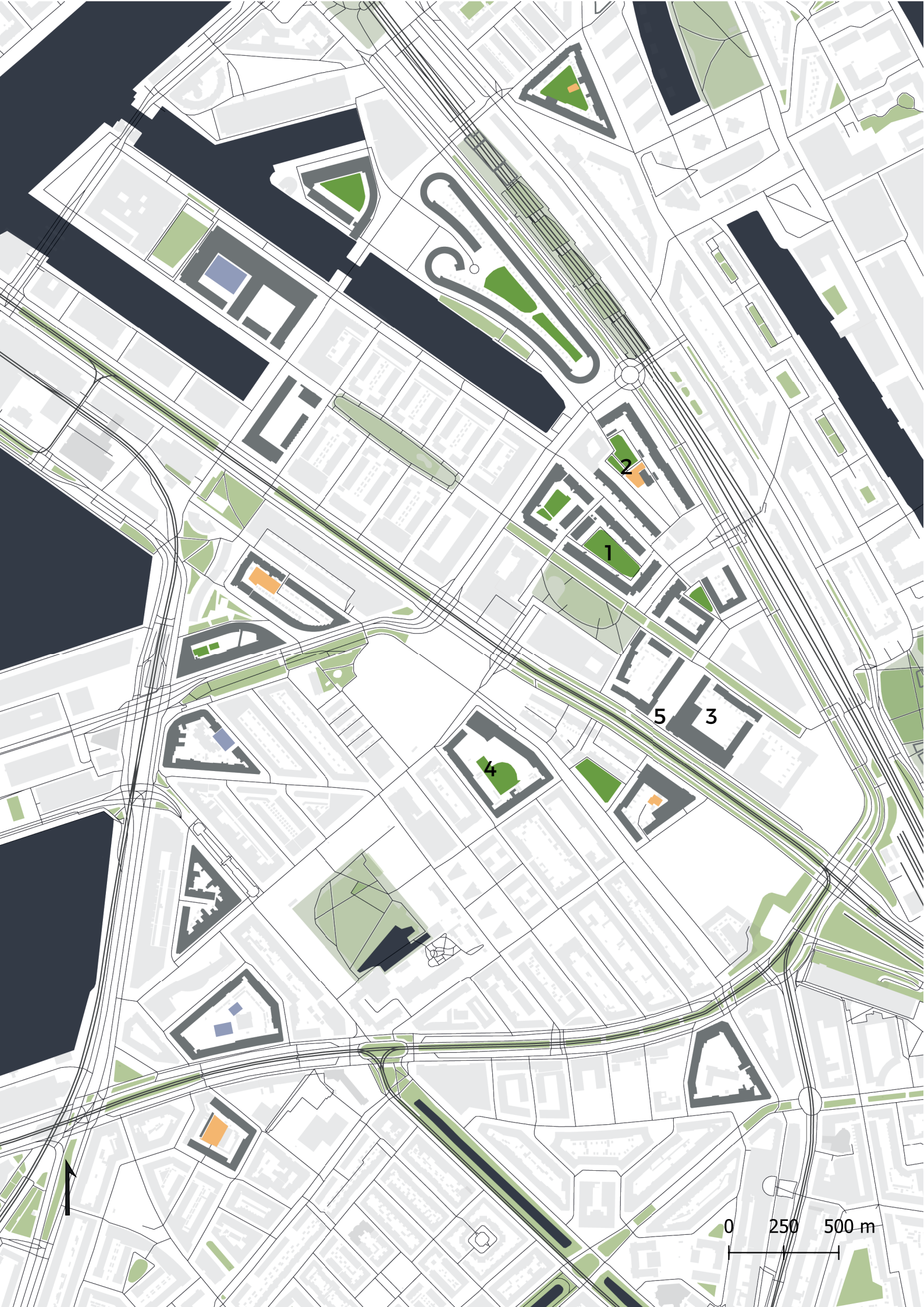


Figure 73. Fenced Playground
(Image by www.googleearth.com)

Looking at the available outdoor public spaces in Afrikaanderwijk and its surrounding blocks, one can understand that there is a very small amount of them. Due to alleged safety issues, most of them are gated or surrounding by dense vegetation, reducing accessibility during certain hours and also visual attraction and the sense of being welcome. As far as the parks are concerned, no program is really there to attract people to use.

- Playground
- Sports Field
- Park
- Grass
- Paved Public Space
- Fenced Public Space
- Buildings
- Water
- Sports Field/ Playground outside of the observational area

Figure 67. Outdoor Public Spaces
(Map generated by QGIS, by the Author)



Inner Courtyards



Figure 75. Inner Courtyard
(Image by the Author)



Figure 76. Playground
(Image by the Author)



Figure 77. Gated Courtyard
(Image by the Author)



Figure 78. Abandoned Courtyard
(Image by the Author)



Figure 79. No Football Here
(Image by the Author)

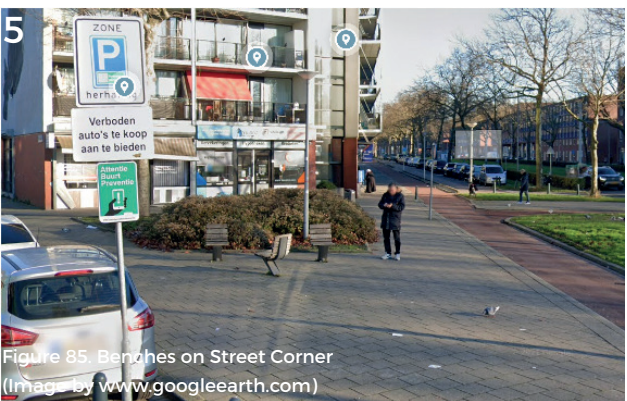
In the area, although a lot of building blocks contain inner courtyards for community gatherings, some also with activities in them, the reality is that basically all of them are underused, with no maintenance and with a variety of them having their gates permanently closed.

In the newly constructed blocks, the courtyards serve as parking places and private gardens, not letting any opportunity for interaction with the outside, whereas everywhere in the neighbourhood, signs prevent kids of playing ball games.

- Playgrounds
- Sports Fields
- Green Spaces
- Park
- Grass
- Buildings
- Water

Figure 74. Inner Courtyards
(Map generated by QGIS, by the Author)

Street Furniture

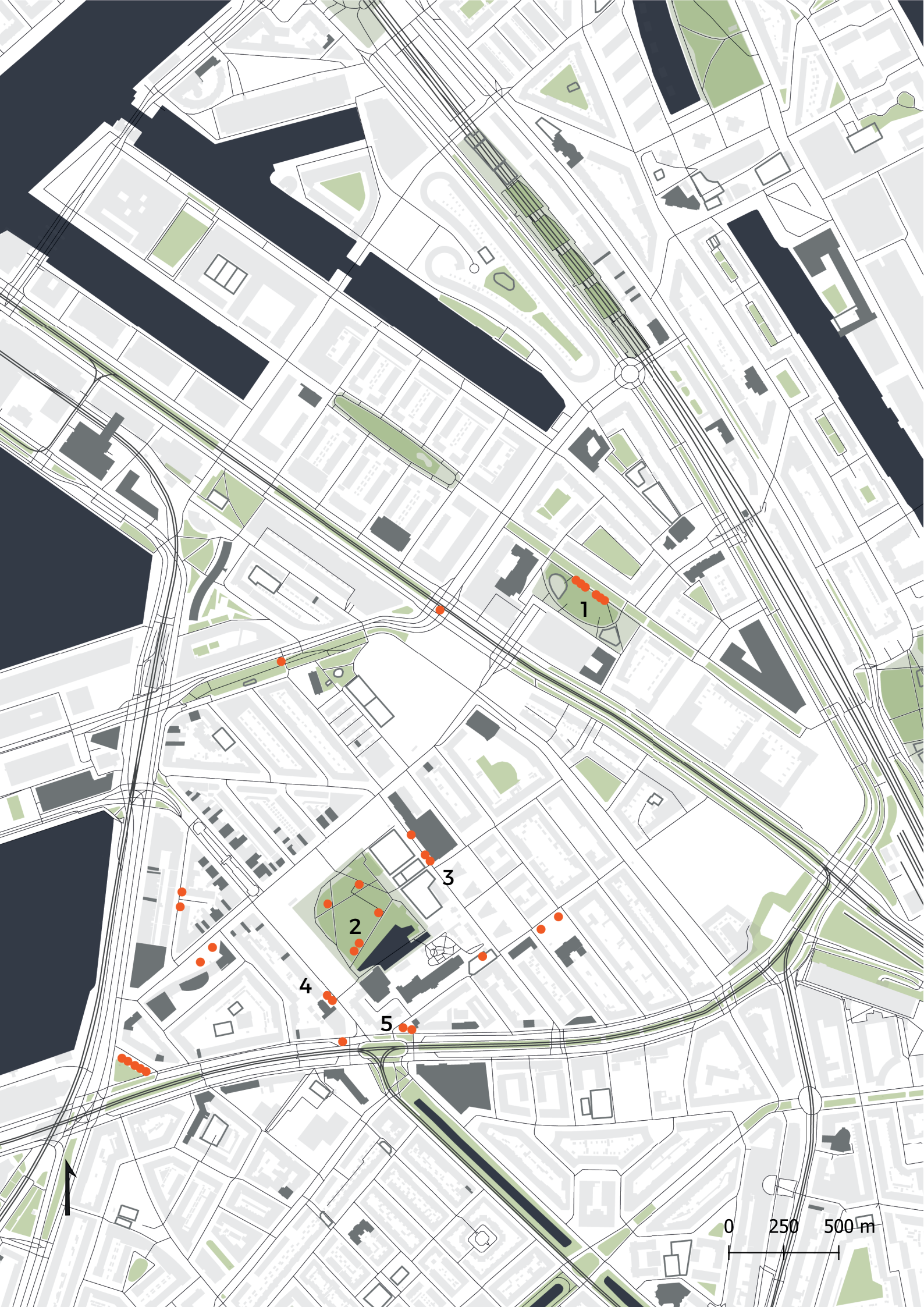


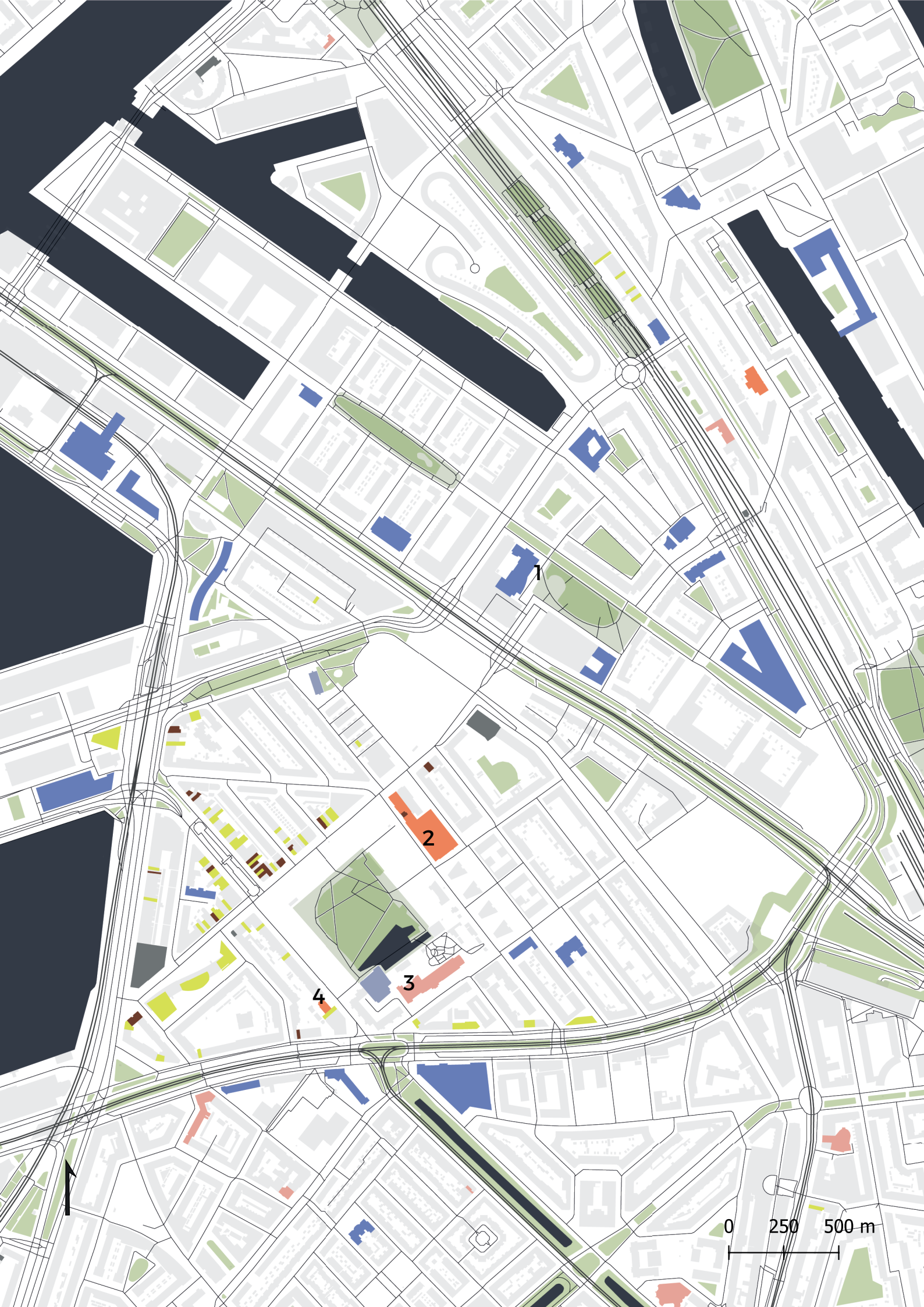
Compared to the other parts of Rotterdam with a higher physical index rate, the number of street furniture per inhabitant is really low and seems insufficient. Almost all benches are concentrated on the southern part of the area, in Afrikaanderplein and the surrounding community centres.

Even in the parks, street furniture is not placed in a way that it could promote real social interaction.



Figure 80. Street Furniture
(Map generated by QGIS, by the Author)





Indoor Public Spaces and Amenities



Figure 87. Interdenominational Elementary School De Wissel
(Image by www.obsdewissel.born.nl)

There are several different local amenities in the area at the moment. The small cafés and restaurants are mainly placed at the streets surrounding Afrikaanderplein, which are also the main shopping streets since the creation of the neighbourhood. These local shops, often become informal places to gather and socialize. However, they are not able to cover the daily needs of the residents who have turned to the new Albert Heijn Supermarket at the other side of Laan op Zuid.



Figure 88. House of the Neighbourhood T' Klooster
(Image by www.elsbe.nl)

Surrounding Afrikaanderplein, Gemaal op Zuid, T' Klooster and the Mosque, function as places for mass gathering of the population, who have found there everything that is missing from the traditional public spaces.



Figure 89. Moskee
(Image by WikiJohan van Oldenbarnevelt HBS)



Figure 90. Gemaal op Zuid
(Image by www.museumrotterdam.nl)

- Community Centres
- Religion
- Cafes/ Restaurants
- Local Shops
- Education
- Indoor Sports Facilities
- Municipality/ Association Buildings
- Park
- Grass
- Buildings
- Water

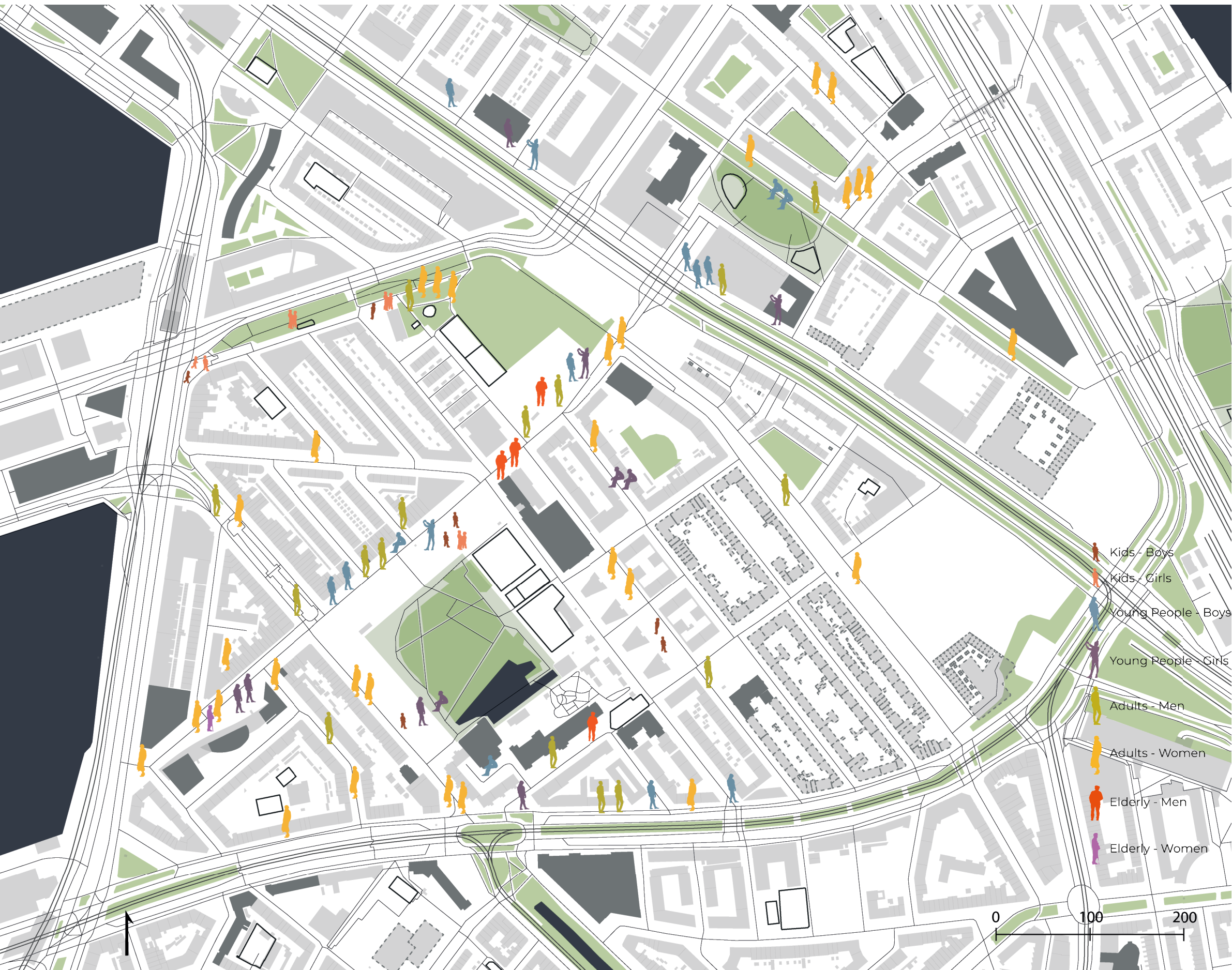
Figure 86. Indoor Public Spaces
(Map generated by QGIS, by the Author)

4.2 | Social Analysis

In order to observe people's behaviour in space and understand the way the different social groups occupy the space and interact with each other, three different days and hours of the week were chosen. In this first set of maps, people are categorized according to their gender and age. For each day, people's movement on the streets, as well as their activities in space were recorded.

For the second set of maps, a closer look was taken on the relation between space and human behaviour, to try and understand more specifically why they choose certain places and how they use them.

People Movement | Wednesday Noon



On a typical Wednesday noon, when the Afrikaandermarkt is in place, in the blocks closer to the train station, only a few people were observed outside. Some of them, mostly dutch middle aged women, were seen gathering on the steps of their front doors, to socialize, because urban street furniture is missing from all area. Few young male people were having their lunch break, sitting on the benches facing the park and some others were clustering in front of the local shops of Laan op Zuid, talking.

On the opposite side of the road, people were observed mainly on the two main shopping streets that surround Afrikaanderplein, while others, mainly women, were seen outside of schools or sports facilities waiting for their children.

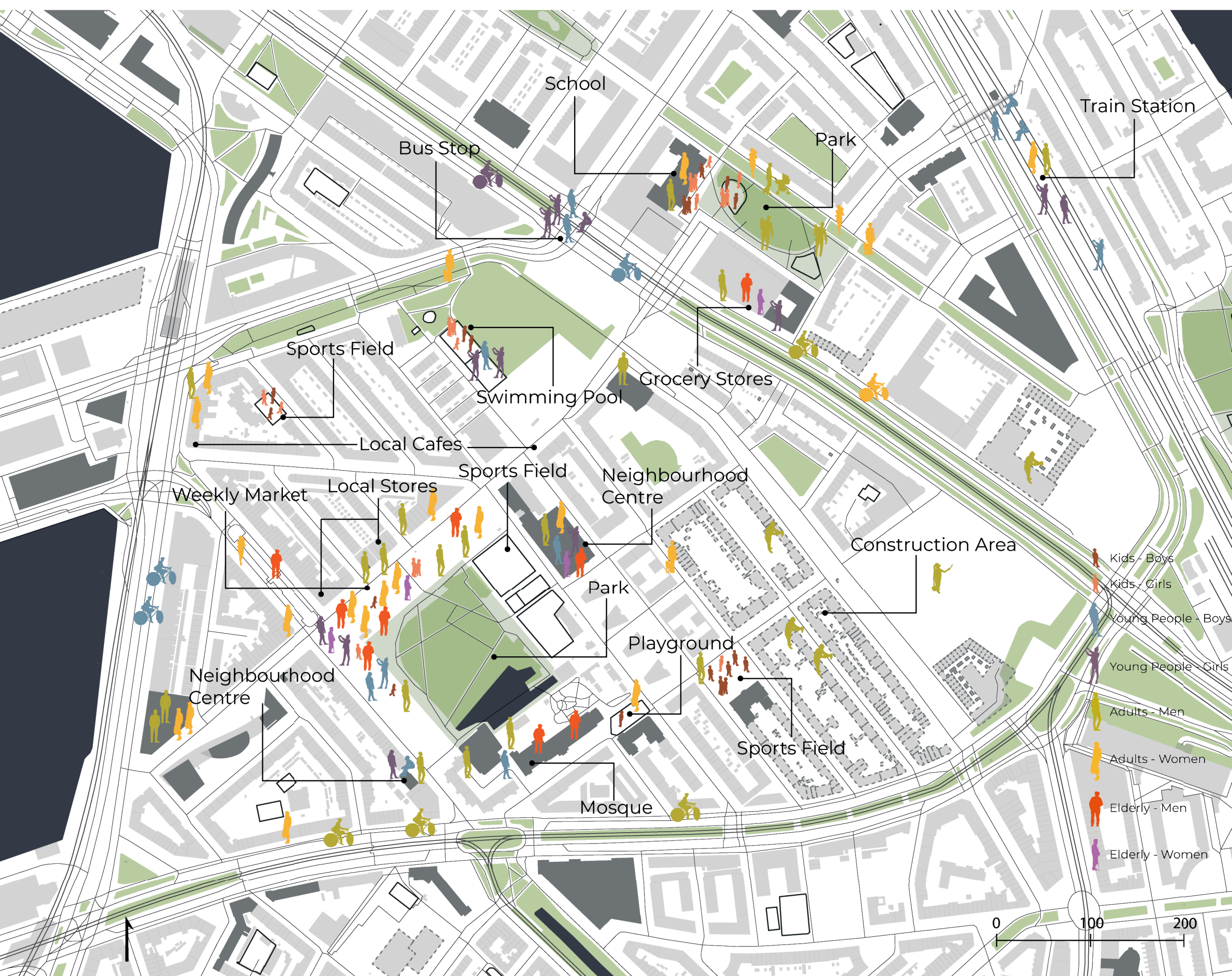
The women in the area were observed mainly walking in pairs or standing to talk on the corners of the streets, before changing routes. Young women and smaller girls chose more secluded and informal spaces for their lunch break, such as the front steps of their houses, or benches away from the main streets.

On the other hand, men of all ages were observed to move more freely in space, not necessarily in pairs and they were the ones mainly seen gathering outside of shops to socialize.

- Construction
- Sports Field/ Playground
- Public Function
- Park
- Grass
- Buildings
- Water

Figure 91. People Movement in Streets - Wednesday Noon
(Map generated by QGIS, by the Author)

People's Activities | Wednesday Noon



As far as people's activities in space are concerned, because of the fact that Wednesday is the weekday that Afrikaandermarkt takes place in Afrikaanderplein and because the time observed was during the lunch break, a lot of people were seen crowding in the market. People of all ages and ethnicities come there to do their weekly grocery shopping and it is one of the most representative examples of how a temporary activity can attract such a large amount of people in one place.

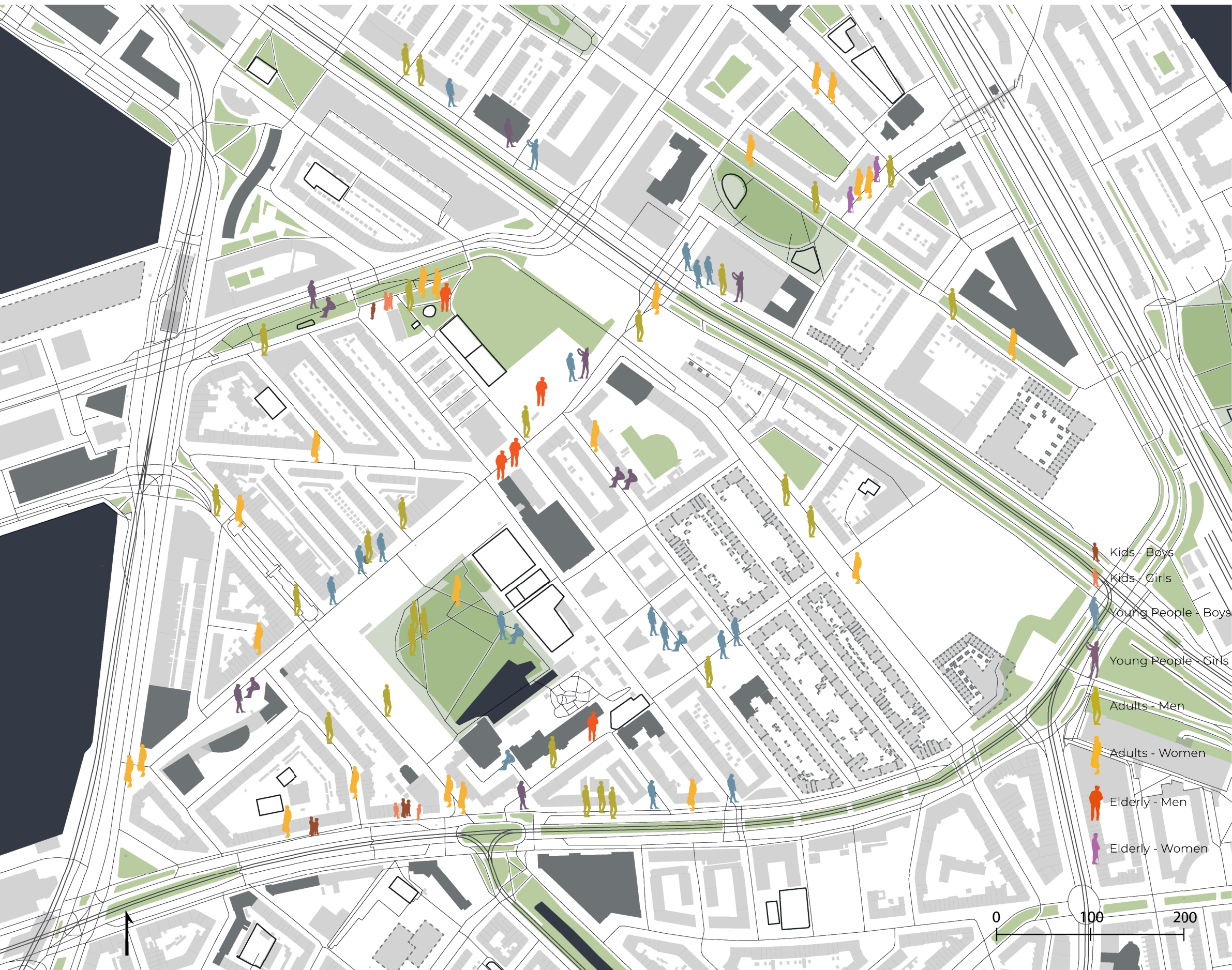
Afrikaanderplein itself was completely empty however, as well as the nearby sports fields, as kids were still at school. A lot of people were also observed inside the Mosque, mostly men, as well as inside the Neighbourhood centre of the area and the old pumping station which also functions as a community centre. When the weather was good, enough people were seen also outside of those buildings, sitting on the provided furniture.

Local shop owners were observed outside of their shops, also socializing with the people outside. At schools, kids gather in the schoolyards to play during their break, with the exception of the school close to the train station, where the park outside functions also as their schoolyard.

- Construction
 - Sports Field/ Playground
 - Public Function
 - Park
 - Grass
 - Buildings
 - Water
- Kids - Boys
 - Kids - Girls
 - Young People - Boys
 - Young People - Girls
 - Adults - Men
 - Adults - Women
 - Elderly - Men
 - Elderly - Women

Figure 92. People's Activities - Wednesday Noon
(Map generated by QGIS, by the Author)

People Movement | Thursday Afternoon



On a typical Thursday afternoon, few people were seen on the streets. Again the same patterns were observed, with people sitting on their front doors or local shops to socialize, or in case of women in Afrikaanderwijk, on the corners of the streets, almost always in groups or with their children.

Very few people were seen on the area under demolition and construction, as well as on the new apartment buildings.

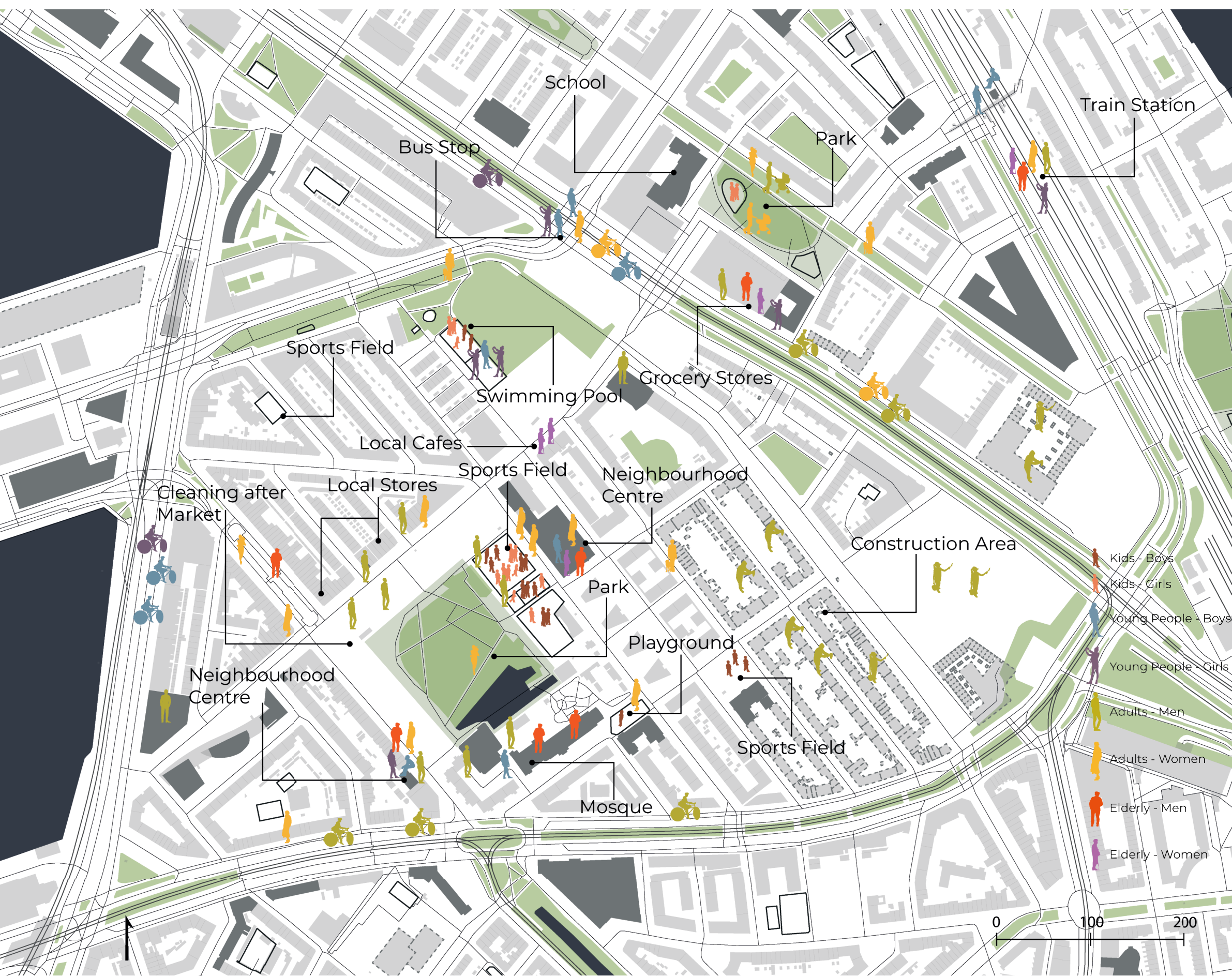
Only a few kids were outside, most of them observed in Putselaan, the road that divides Afrikaanderwijk from the other neighbourhoods, a street where a lot of traffic can be found, but also wide walkways with street furniture in the corners.

Very few people, all of which men, were seen inside Afrikaanderplein at that time. Some standing with their bikes under a tree talking and some other young adult men, gathered next to one of the closed gates of the park, in a more secluded part of it.

- Construction
- Sports Field/ Playground
- Public Function
- Park
- Grass
- Buildings
- Water
- Kids - Boys
- Kids - Girls
- Young People - Boys
- Young People - Girls
- Adults - Men
- Adults - Women
- Elderly - Men
- Elderly - Women

Figure 93. People Movement in Streets - Thursday Afternoon (Map generated by QCIS, by the Author)

People's Activities | Thursday Afternoon



As far as people's activities in space are concerned, a lot of people were again observed inside the two neighbourhood centres and the Mosque, with a big percent of those, elderly. The playgrounds and sports facilities around Afrikaanderplein were also full of kids with their instructors.

In other smaller playgrounds, mostly fenced, in the neighbourhood, a pattern of one or two parents with their kids was observed. On the school yards the majority of kids still there, were boys, who in most cases played basketball.

In the parks, few people were seen jogging, walking pets or taking their babies for a walk. Inside the few cafes, only a very small number of people was observed.

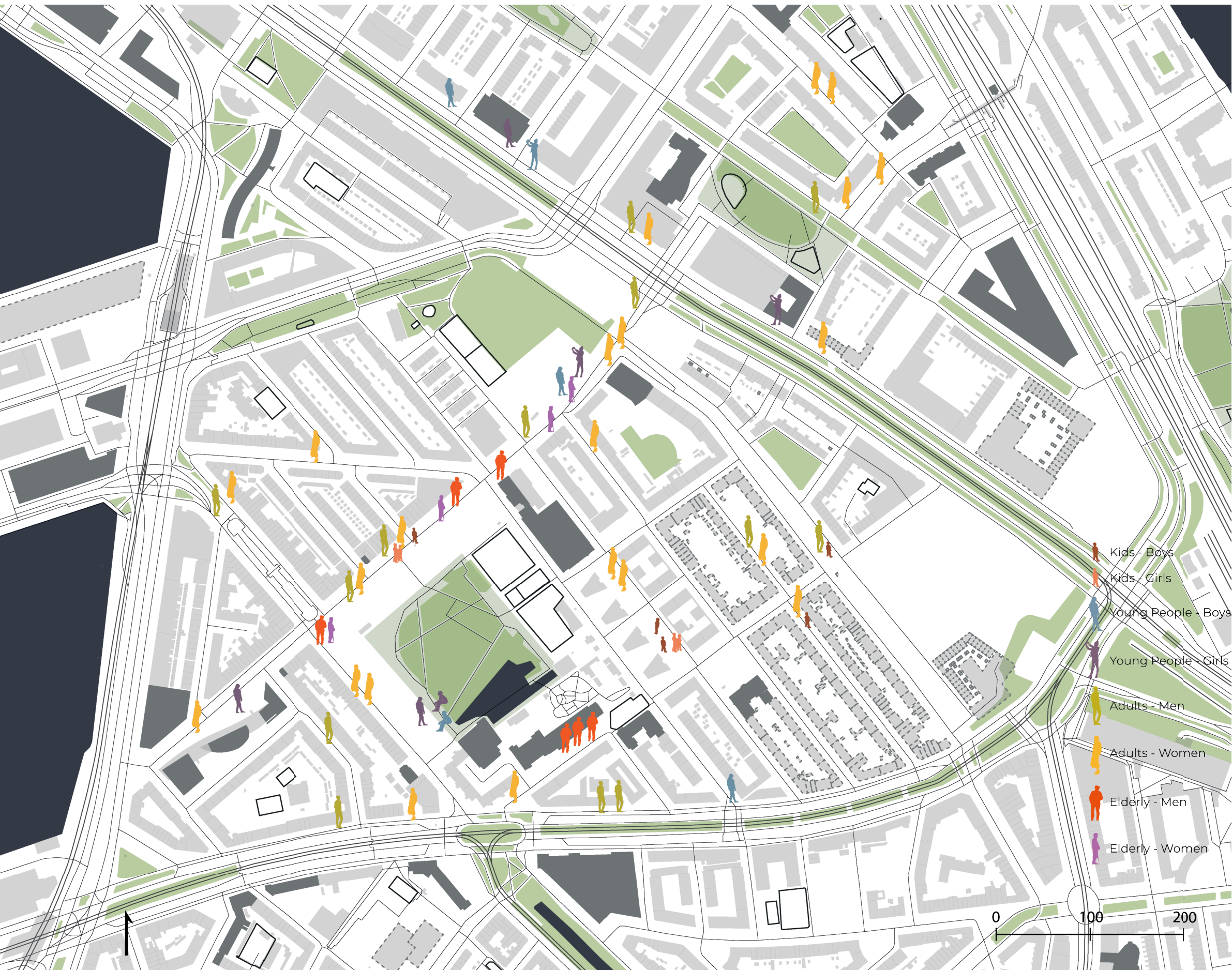
Again, both the train station and the bus station had a lot of people, mostly young people waiting. Characteristic is that some young men were seen inside the now closed cafe of the station smoking.

In the construction area, only construction workers were observed, with local people avoiding to pass by.

- Construction
- Sports Field/ Playground
- Public Function
- Park
- Grass
- Buildings
- Water
- Kids - Boys
- Kids - Girls
- Young People - Boys
- Young People - Girls
- Adults - Men
- Adults - Women
- Elderly - Men
- Elderly - Women

Figure 94. People's Activities - Thursday Afternoon
(Map generated by QCIS, by the Author)

People Movement | Saturday Morning



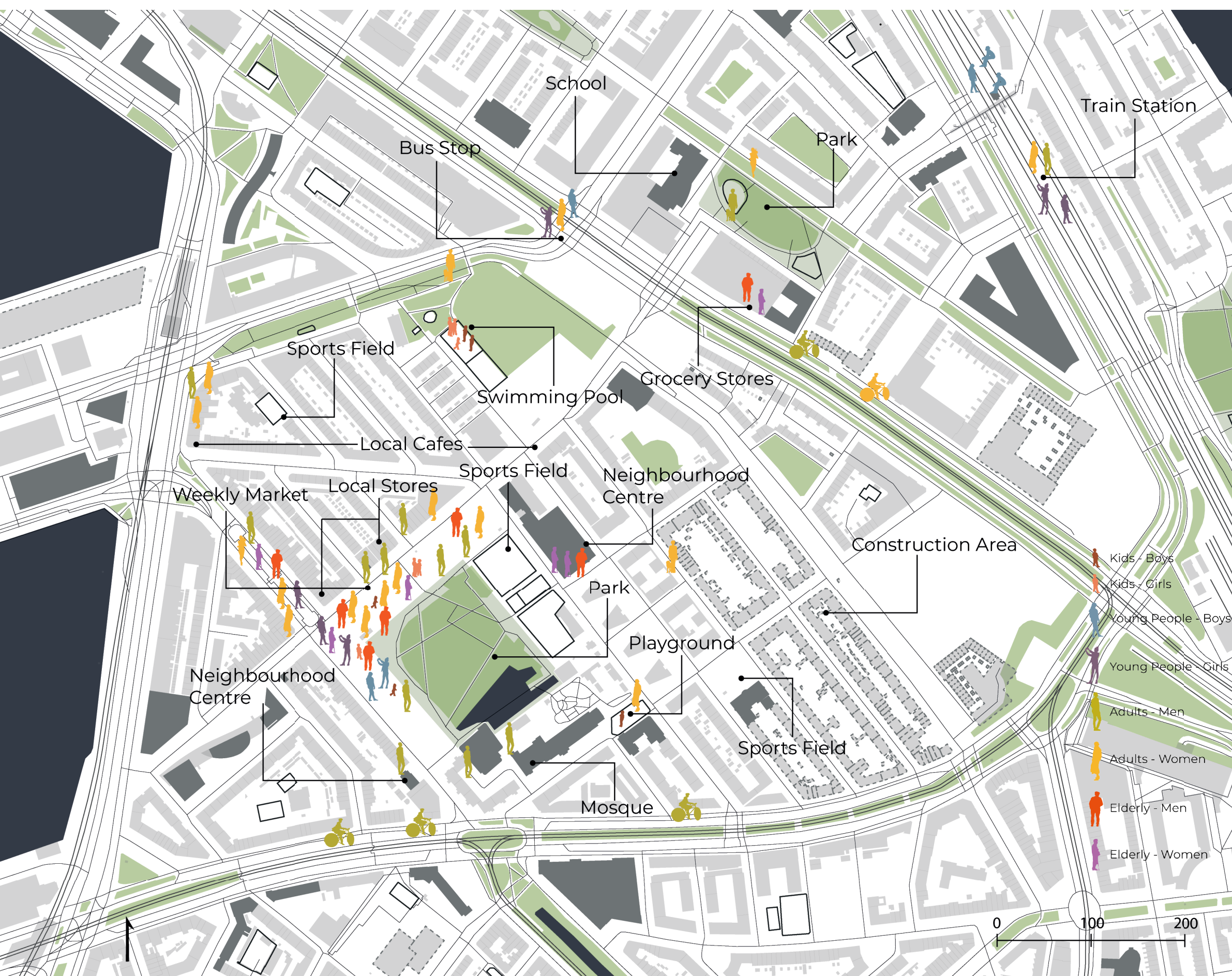
On a typical Saturday morning, when the Afrikaandermarkt is in place again, fewer people were observed outside than during the weekdays. Again most of them were on the shopping street next to Afrikaanderplein, and some others scattered on the smaller streets of the neighbourhood.

Again the parks were empty, with only a few passerby. Some kids were seen playing in the pedestrian streets between their houses and some people again gathering outside of the local shops.

- Construction
- Sports Field/ Playground
- Public Function
- Park
- Grass
- Buildings
- Water
- Kids - Boys
- Kids - Girls
- Young People - Boys
- Young People - Girls
- Adults - Men
- Adults - Women
- Elderly - Men
- Elderly - Women

Figure 95. People Movement in Streets - Saturday Morning
(Map generated by QCIS, by the Author)

People's Activities | Saturday Morning



As far as people's activities in space are concerned, again most of the people were gathered in the Afrikaandermarkt to shop. The parks were almost empty as well as the playgrounds and the sports fields.

Conclusions

Summing up the observations, there is a clear distinction between how men and women occupy the space, with the men generally walking more freely everywhere, whereas the women prefer the quieter and smaller spots, where very little furniture exists, such as the stairs of their homes or the corners of the streets.

As far as the younger people are concerned, they prefer more hidden and secluded places to gather, mostly the boys, or the outside of local shops for socialization.

The kids apart from some playgrounds and sports facilities, do not really have a significant presence in the area, although they are a big part of the population.

Lastly, the elderly again prefer either indoor public spaces, where they are offered more amenities or the weekly market.

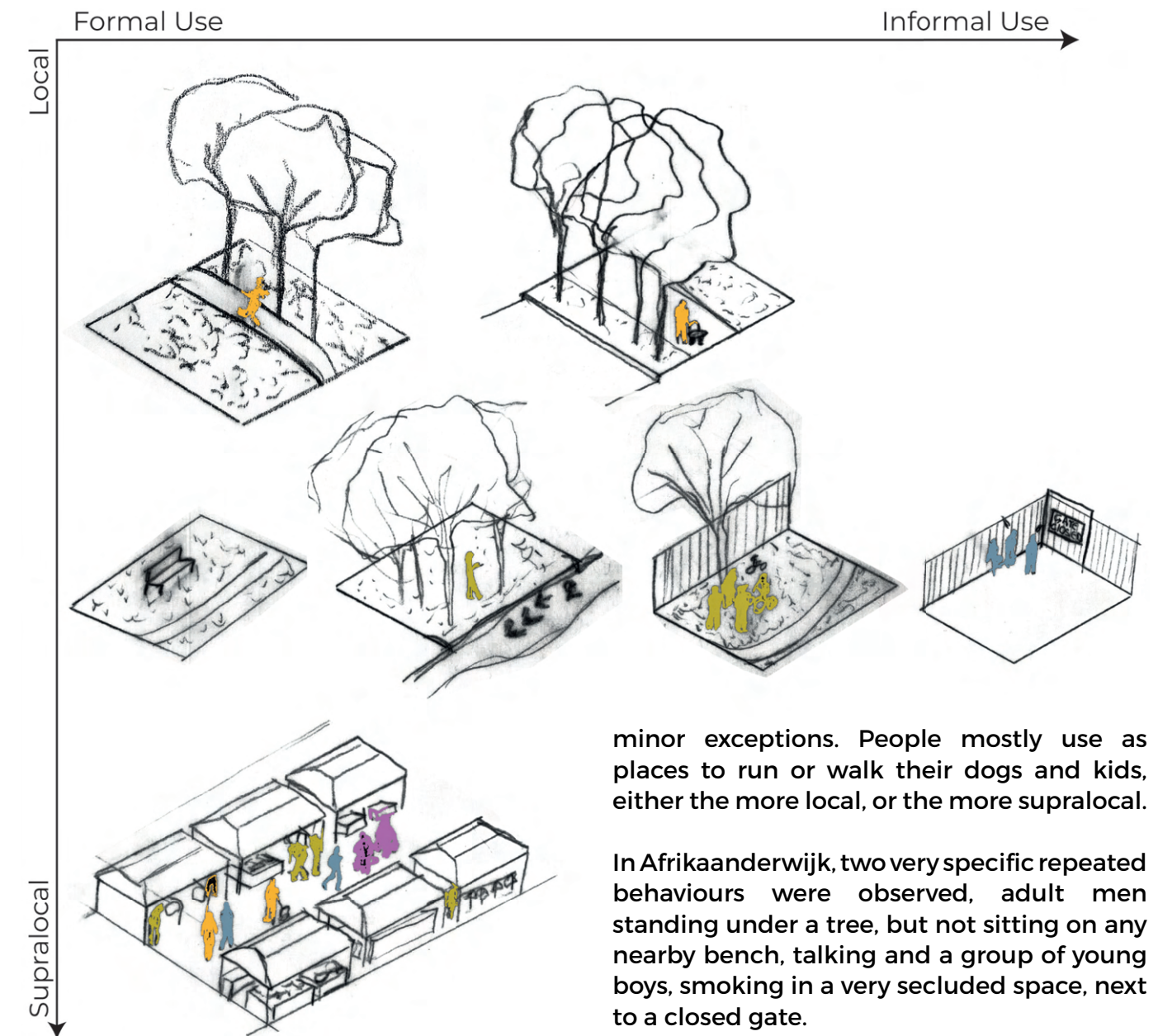
All in all, public spaces with their traditional means, like the squares and parks are very little appropriated.

- Construction
- Sports Field/ Playground
- Public Function
- Park
- Grass
- Buildings
- Water
- Kids - Boys
- Kids - Girls
- Young People - Boys
- Young People - Girls
- Adults - Men
- Adults - Women
- Elderly - Men
- Elderly - Women

Figure 96. People's Activities - Saturday Morning
(Map generated by QCIS, by the Author)



Green Public Spaces



Taking a closer look at the green public spaces, the parks, which are also the most traditional means of gathering, it was observed, that due to lack of proper activation, these places basically remain empty for the most part of the day. Because of their size and the lack of program, they mostly serve as places of transit and not as places to stay, with some

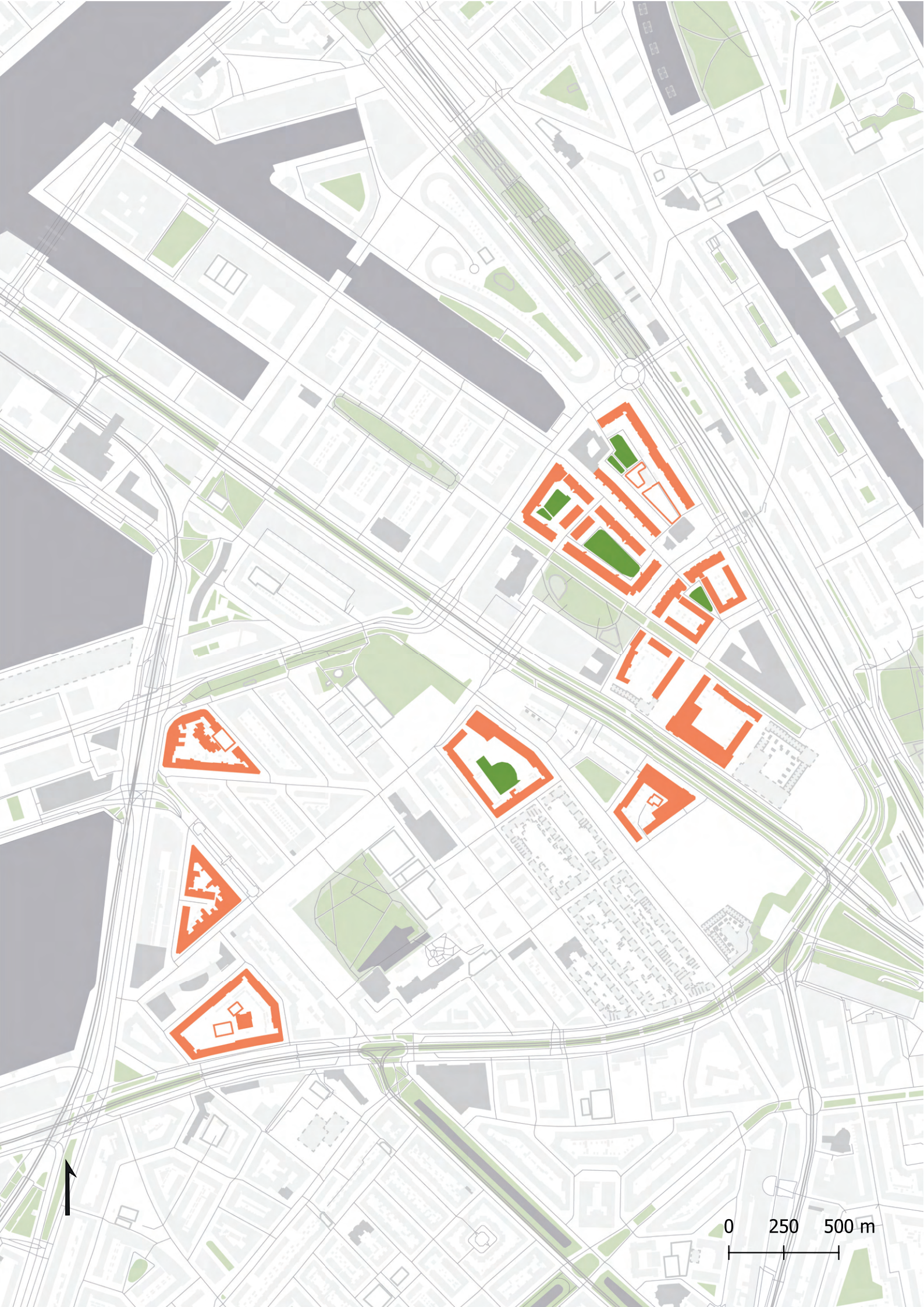
minor exceptions. People mostly use as places to run or walk their dogs and kids, either the more local, or the more supralocal.

In Afrikaanderwijk, two very specific repeated behaviours were observed, adult men standing under a tree, but not sitting on any nearby bench, talking and a group of young boys, smoking in a very secluded space, next to a closed gate.

The situation changes during the Afrikaandermarkt hours, when the paved space surrounding the square, becomes full of people, both residents and visitors, of different ages, who come together to shop and socialize.

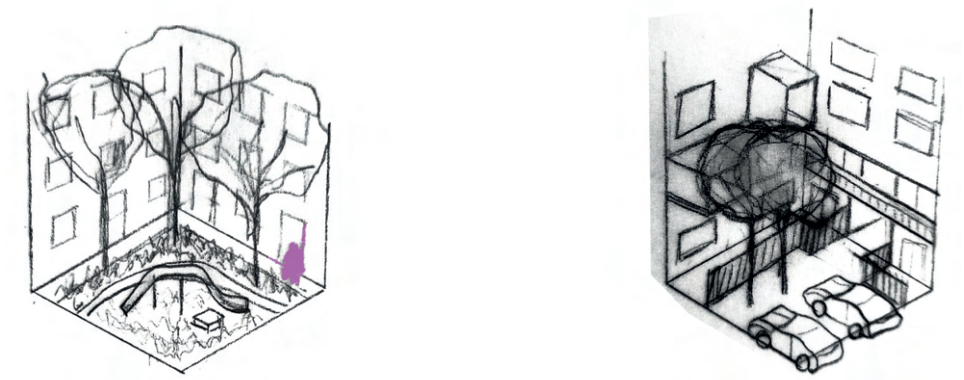
Figure 97. Parks
(Map generated by QGIS, by the Author)

Figure 98. People's Activities in Green Public Spaces
(Sketches by the Author)



Inner Courtyards

Low Income → Middle Income



As stated before, the situation in the inner courtyards is pretty much the same, whether it comes to the older low - income blocks, or the new middle - income ones. All lack any kind of human activity.

In the old building blocks, although there seems to have been an effort for more inclusive and welcoming collective spaces, due to unknown reasons, most of them are very poorly maintained, almost feeling unsafe with the way grass has grown to cover everything.

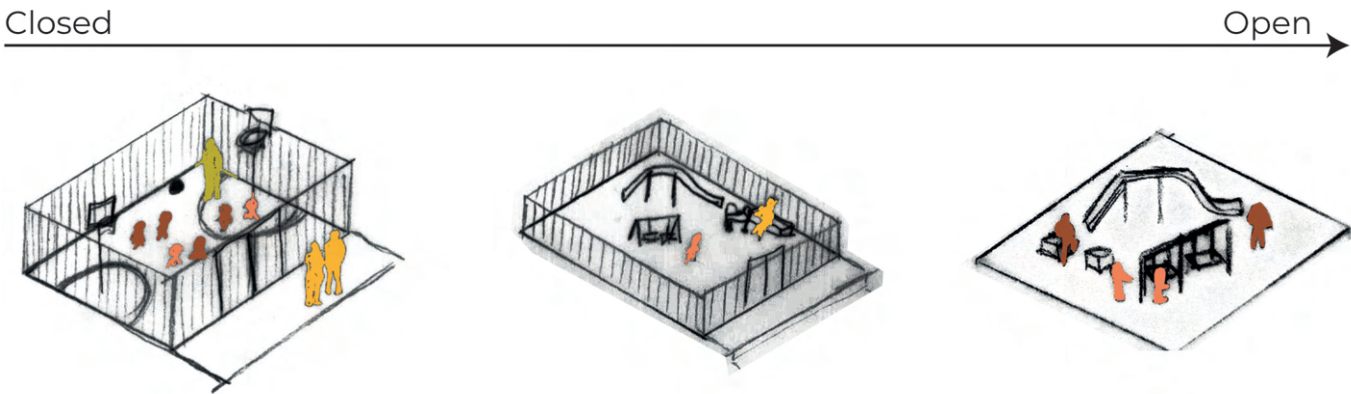
In the new building blocks, there seems to be no effort for communal activities from the begging. They comprise of private gardens, with parking spots in the middle, allowing for minimum to no interaction.

Figure 99. Inner Courtyards
(Map generated by QGIS, by the Author)

Figure 100. People's Activities in Inner Courtyards
(Sketches by the Author)



Outdoor Children's Spaces



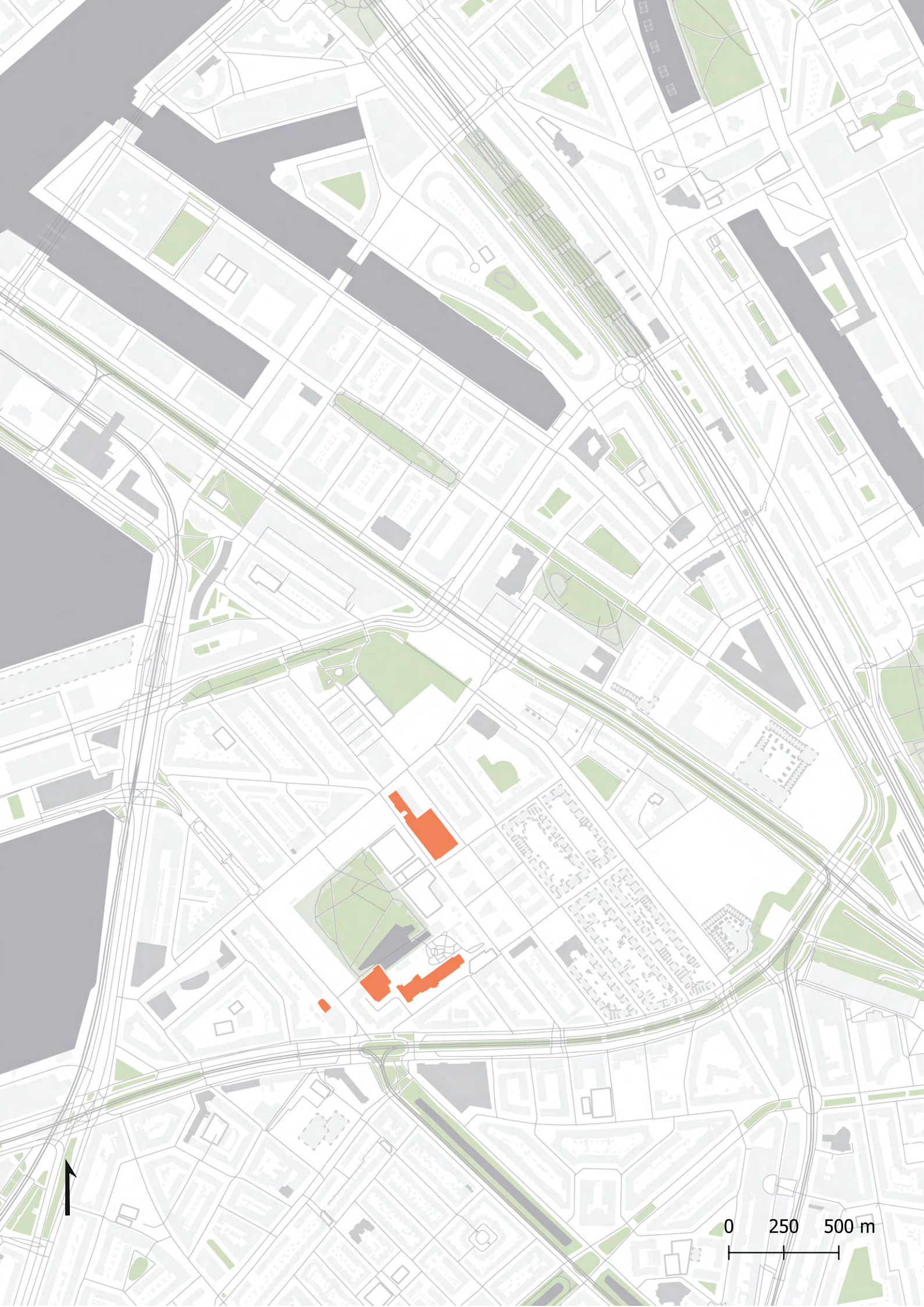
The children's spaces can be divided into two categories; the sports fields and the playground, with a distinction between gated and open ones.

Most of the sports fields are fenced, being either a part of schools or of the municipality. During most hours of the day, most of these fields were used, either in a formal manner with an instructor to guide them, or in a more informal, after school activity between friends. In these spaces, boys were the predominant group. During the hours of their formal use, parents, mostly mothers, were observed to also socialize outside of the fields.

The playgrounds of the area are relatively small, with the exception of the one in Afrikaanderplein. The pattern in the fenced ones, is that a maximum of two different families were observed there simultaneously, with the kids being very young. The open ones were also occupied by older kids, alone, mostly girls. However, none of them seemed to be used a fair amount of hours.

Figure 101. Outdoor Children's Spaces
(Map generated by QGIS, by the Author)

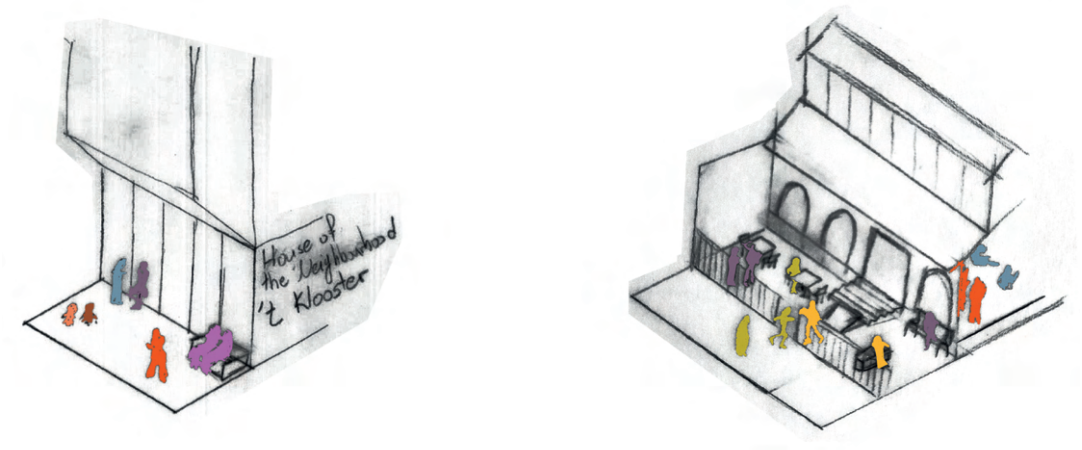
Figure 102. People's Activities in Outdoor Children's Spaces
(Sketches by the Author)



Indoor Public Spaces

Neighbourhood

Community



The indoor public spaces where most human behaviour was observed, were the ones surrounding Afrikaanderplein. The old pumping station turned community and cultural centre Gemaal oz Zuid, the T' Klooster neighbourhood centre which also contains the public library and the Mosque.

As far as the community centres are concerned, a lot of people where observed there, either staying for a little time or for more. Interesting is the fact that these places have managed to create an environment, where people of different ages and backgrounds feel welcomed, with a variety of activities inside, with many initiatives that concern the neighbourhood having started from there.

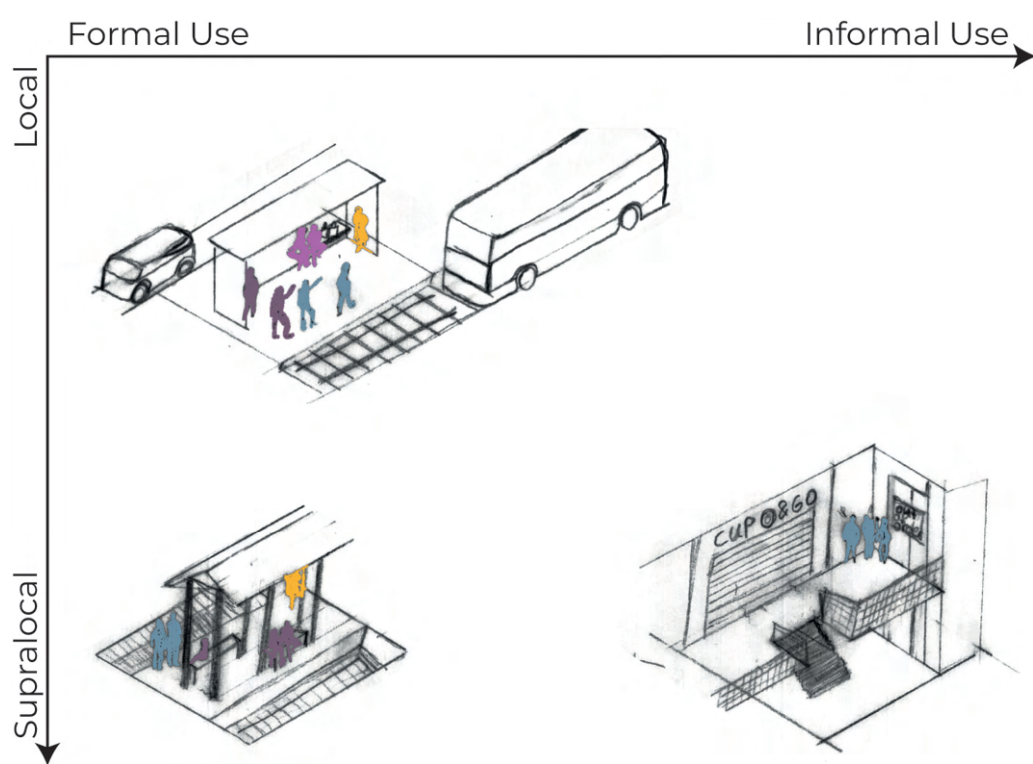
As far as the Mosque is concerned, because of its religious character, it attracts people of a very specific background, mostly men, but is serves however, also as a very important meeting place for the residents.

Figure 103. Indoor Public Spaces
(Map generated by QGIS, by the Author)

Figure 104. People's Activities in Indoor Public Spaces
(Sketches by the Author)



Stops and Stations



The nearest train station to the area is the Rotterdam Zuid station, which seems to attract a lot of people during the whole day, as it is one of the easiest ways to travel to any nearby city, as well as to the other side of Rotterdam. Young people after school are one of the biggest target groups that use it, as well as entrepreneurs who travel between their home and their work. The abandoned shops in there, serve as informal meeting places for mostly young men, who use the roofed space as a shelter where they can gather.

The bus stations of the area, which are all situated at the edges of the district, are also of great use, especially from young people again, some of which do not use them only as a waiting place, but again as an informal roofed meeting place.

Figure 105. Stops and Stations
(Map generated by QGIS, by the Author)

Figure 106. People's Activities in Stops and Stations
(Sketches by the Author)



Streetscape

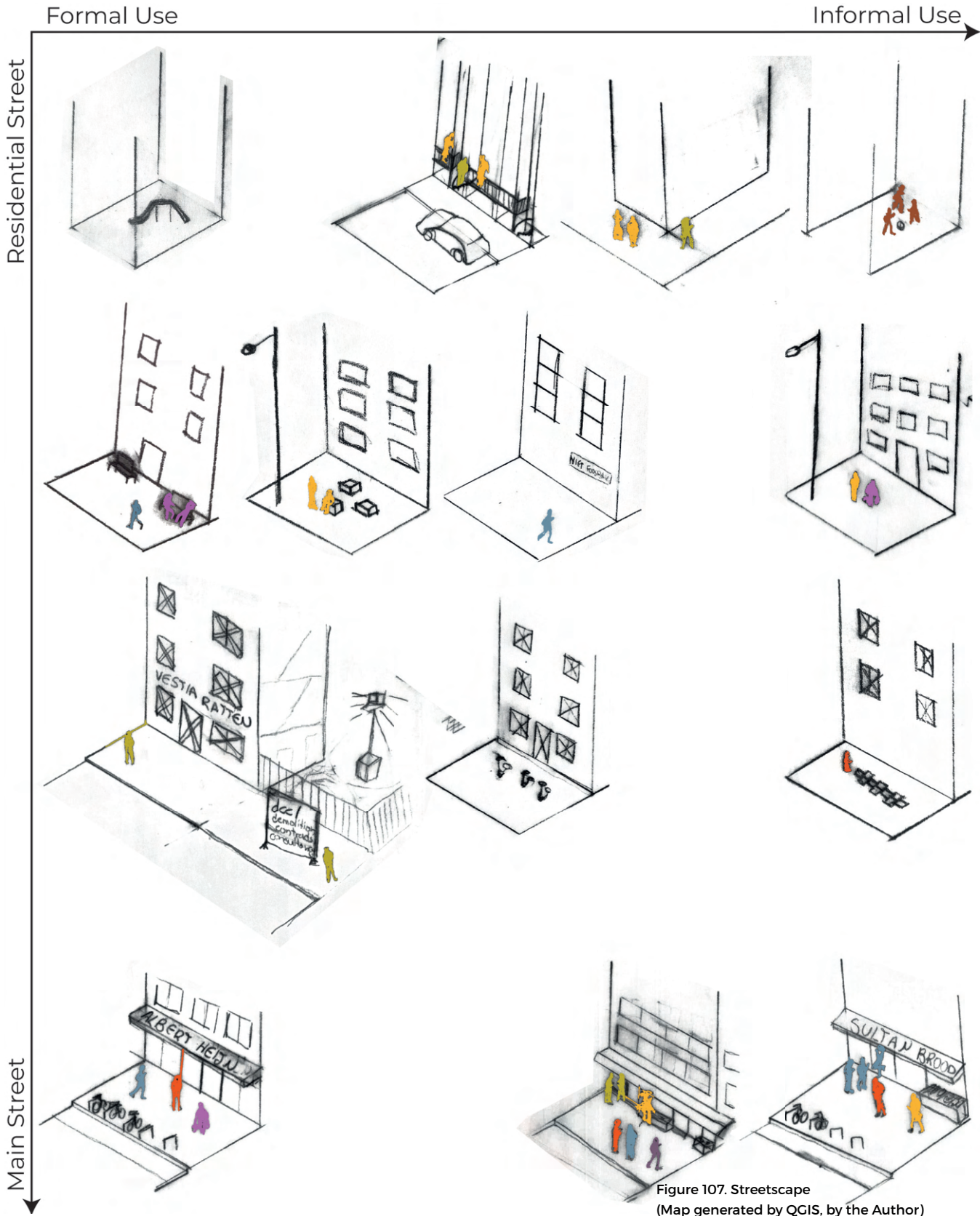


Figure 107. Streetscape
(Map generated by QCIS, by the Author)

Figure 108. People's Activities in Streets
(Sketches by the Author)

The streets, as stated before and as shown in the previous observational maps, are places that people of the area really use as informal meeting places.

Especially in the residential streets, some of which give priority to the pedestrians and cars, it is very usual for people to gather. Especially in the case of women, of practically all ages, who tend to meet their friends and neighbours in front of their front doors. When there are steps, these are used as seating places, in other circumstances people just stand there. Kids also seem to find those spaces more safe for them to use and they can be seen playing football, when that is allowed from the regulations of the Vestia housing association.

The corners of the streets also serve as good meeting places, again especially for women and especially when benches are involved, there seems to be great interest for these spots.

Along the main streets with the local shops, again a different pattern of informal appropriation of space has been observed, people, young adult boys more specifically, or older men, gather outside talking and smoking, usually together with the shop owner.

Lastly, in the construction and demolition areas, only workers were observed, with only a few people passing by quickly, especially when there were cameras attached to the walls.

Conclusions

Summing up the findings of the spatial analysis of the area, it is quiet clear that it has to deal with a lot of challenges, with the most imminent of all being the gentrification plans, which are already in place and which are basically going to create a completely new neighbourhood, if they are to be implemented, by relocating the people and their problems somewhere else, not really defined where. On the other hand, there were problems there, way before the gentrification plans, which have probably led to it and have been the case for the low scoring of the physical index of the neighbourhood.

The public spaces are, in their majority, of very low quality, underused, lacking even the minimum amount of furniture and activities to make them more approachable and easily appropriated by the users, with inner courtyards being in the same situation. The heavy infrastructure does not make it easy for the people to move in space and interact and thus, people tend to gather in informal places, where they feel more welcomed.

With the so far observations and analysis about the place, it can be argued that traditional public spaces, such as Afrikaanderplein and the nearby parks, do not have an important role in people's everyday life. They present an image of low quality spaces, lacking program, activities and urban furniture, while at the same time, they are not always easily accessible and not appropriated, because of their fences or tall vegetation, size and absence of temporary or permanent site programming. The same goes for the so-called semi - public or collective spaces, which definitely do not function as such.

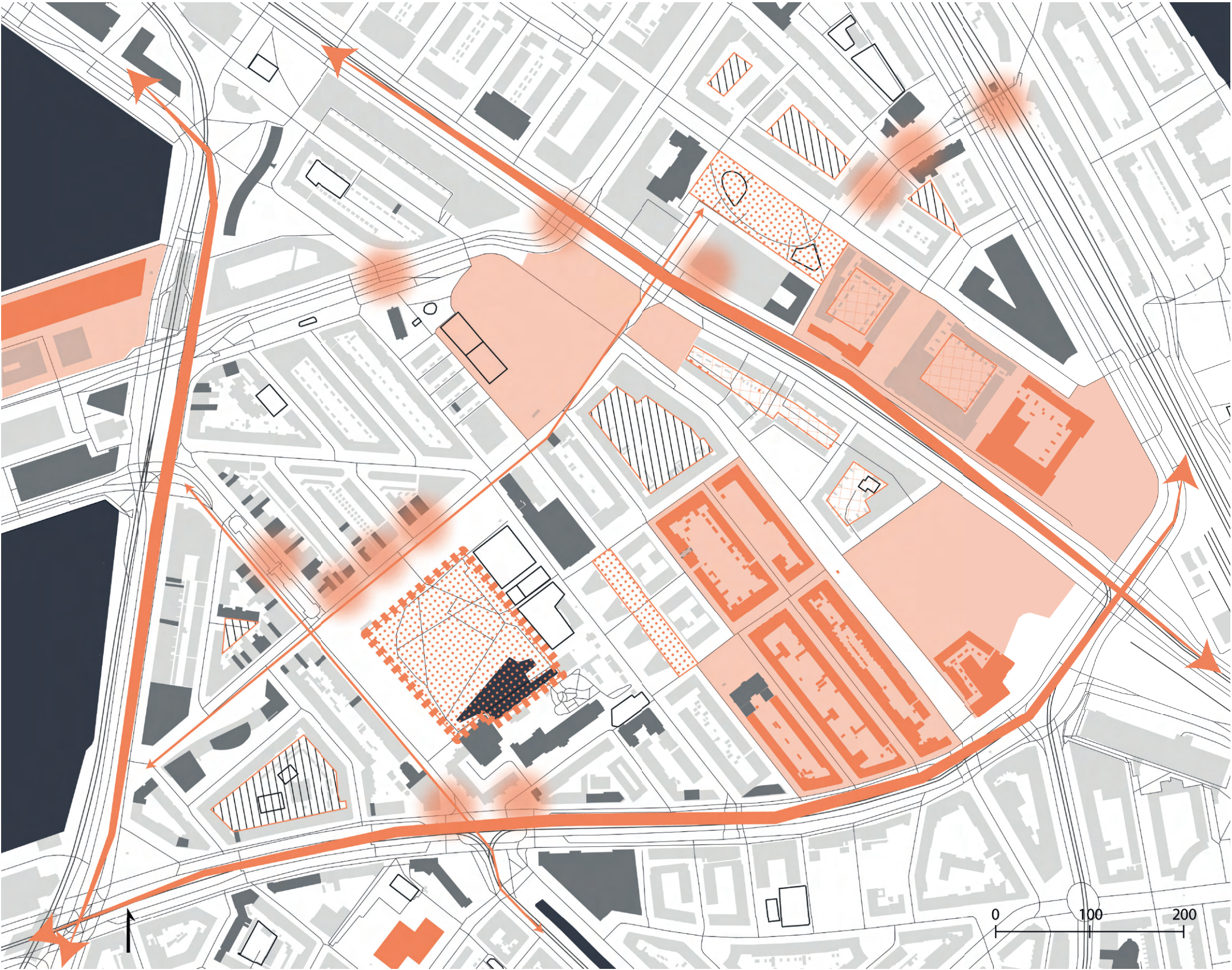
In these circumstances, people tend to stay mostly connected to the social groups that they know, making it hard for recognition and encounter to happen and thus why segregation was observed. Women and men

seem to have their own different spots for socializing and the same can also be argued for the different ethnic groups, which do not seem to find common ground anywhere in the city, with the exception of the indoor public spaces, which seem to have managed what the open ones have not.

The area and its inhabitants seem to be somewhat disconnected from the rest of Rotterdam, only knowing their place, which however also opposes to the fact that a collective identity is also missing.

All in all, it can be argued that the activities of people in the public space, are directly linked to the quality of them, whether they promote social interaction and a cohesive social life, or whether they are just for fast passing by. That is why streets, although not having the same value as a park for example, sometimes can offer more opportunities for intermingling than any green space, with the same applying to indoor spaces, which as stated before, are not always considered really public but nevertheless manage to attract and unify people.

Socio - Spatial Challenges



- Heavy Infrastructure/ Barriers
- Most Used Streets
- Informal Gathering Areas
- Gated Public Space
- Inaccessible Inner Courtyards
- Underused Inner Courtyards
- Underused Public Spaces
- Buildings under Demolition
- Construction Area
- Outdoor Children's Facilities
- Public Function
- Buildings
- Water

Figure 109. Socio - Spatial Challenges
(Map generated by QGIS, by the Author)

5.1 | Identifying the Users and their Needs

Having identified the challenges, spatial and social, that this neighbourhood and its people face and in order to conclude to a final design proposal, a set of design principles were developed, linked to the values that were discussed earlier. These principles however, are also directly linked to the different users of the space.

Thus, a categorization according to gender and age, was made, but also according to current people's activities and cultural backgrounds and their needs in space, emerging from the understanding that designing neutral spaces for everyone cannot be a proper solution anymore in a complex urban environment. By categorizing the users in such way, it can also be ensured that proper attention will be given to the most underprivileged right now, in this case women and children.

Children

The children of the area, although they comprise a big part of the overall population and one could imagine that they would be seen everywhere in the city, the reality is that the spaces dedicated to them, or at least spaces where they can really feel secure, are lacking from the neighbourhood.

At these ages, they cannot claim their space in the city yet, they are mostly on the sidelines, observing and copying behaviours. Interior spaces, like their home environment or a daycare, are places where they feel more comfortable, or where the parents feel more comfortable, as they are the ones that regulate how their children use public space.

Since the age of 11 - 12, they mostly seem to need a space where they can discover the world safely and search for knowledge (Piaget, 2013), thus spaces, whether indoor or outdoor, where they can interact with children of the same age and share experiences would be useful for their development. These spaces could be either of educational character or of activities and play where they could develop their creative skills.

Interactive spaces, with different age groups, however, could also be considered useful, as they could lay the foundations for a smoother integration in the community, but also benefit the adults and especially the elderly, who also need the interaction with younger ages.

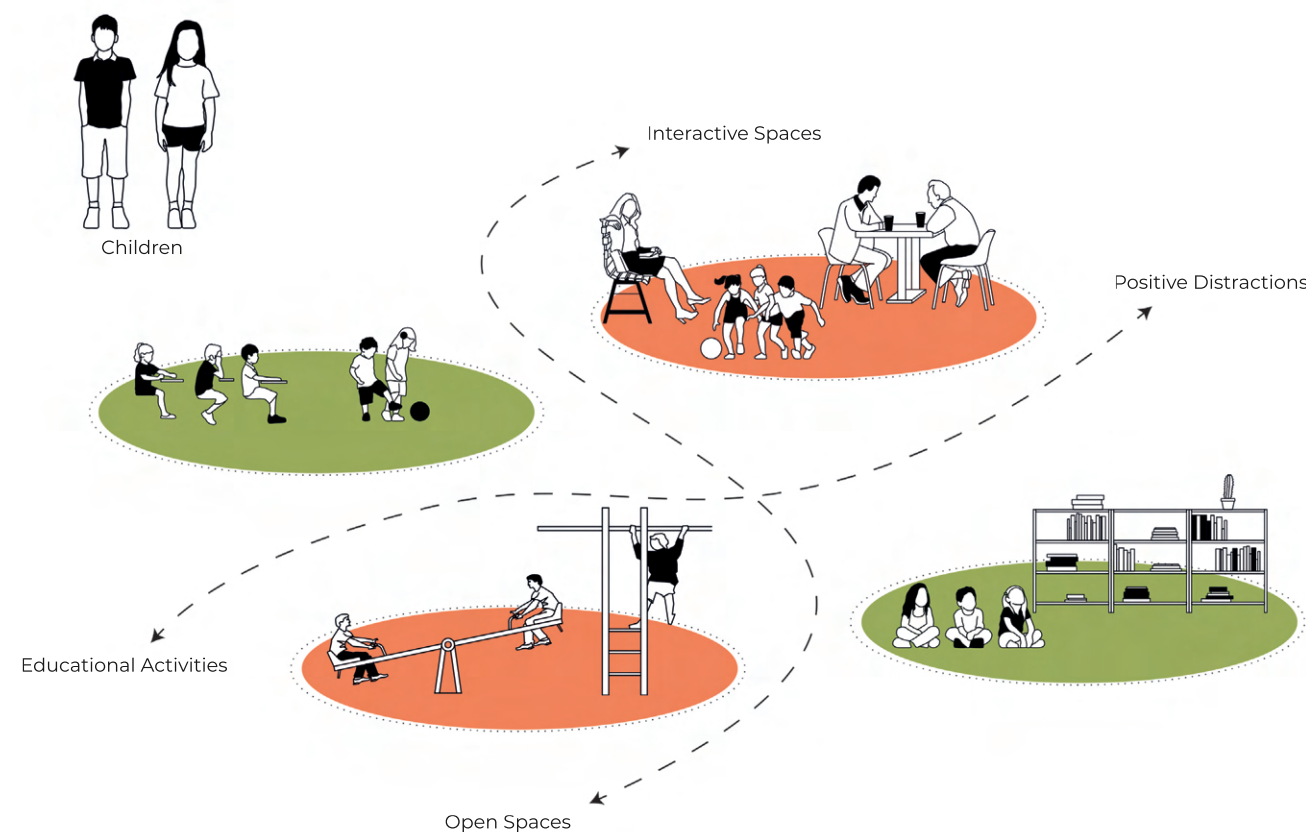


Figure 110. Children
(Diagram by the Author)

Teenagers

Teenage kids, after the age of 12, although still not confident enough to claim their own space in the public, need spaces where they can express themselves and start discovering who they want to become. At these ages, their relationship with other age groups and especially with their parents, is quite tentative, thus starting to prefer places where they are surrounded by their peers and can decompress themselves from the stress that society causes them, starting hobbies or discovering new interests.

This age group is, as in the case of smaller children, not properly represented in the area, however, their presence started becoming more visible. They could be seen in groups, strolling around the neighbourhood, both boys and girls, when they were not engaged in some kind of educational activity, or sitting on the sidelines of a basketball court, for example, while older young people were playing. This was more often in the case of boys, whom seemed, even at that age, to feel more comfortable than girls to be seen in more open and public environments.

Girls were observed to primarily prefer places where they felt more comfortable, like the steps in front of their homes, or benches in more secluded parts of the city, or on the edges of it, where they could however inspect the situation in the public space. Such an instance was the fact that they were often observed sitting somewhere along the dike.

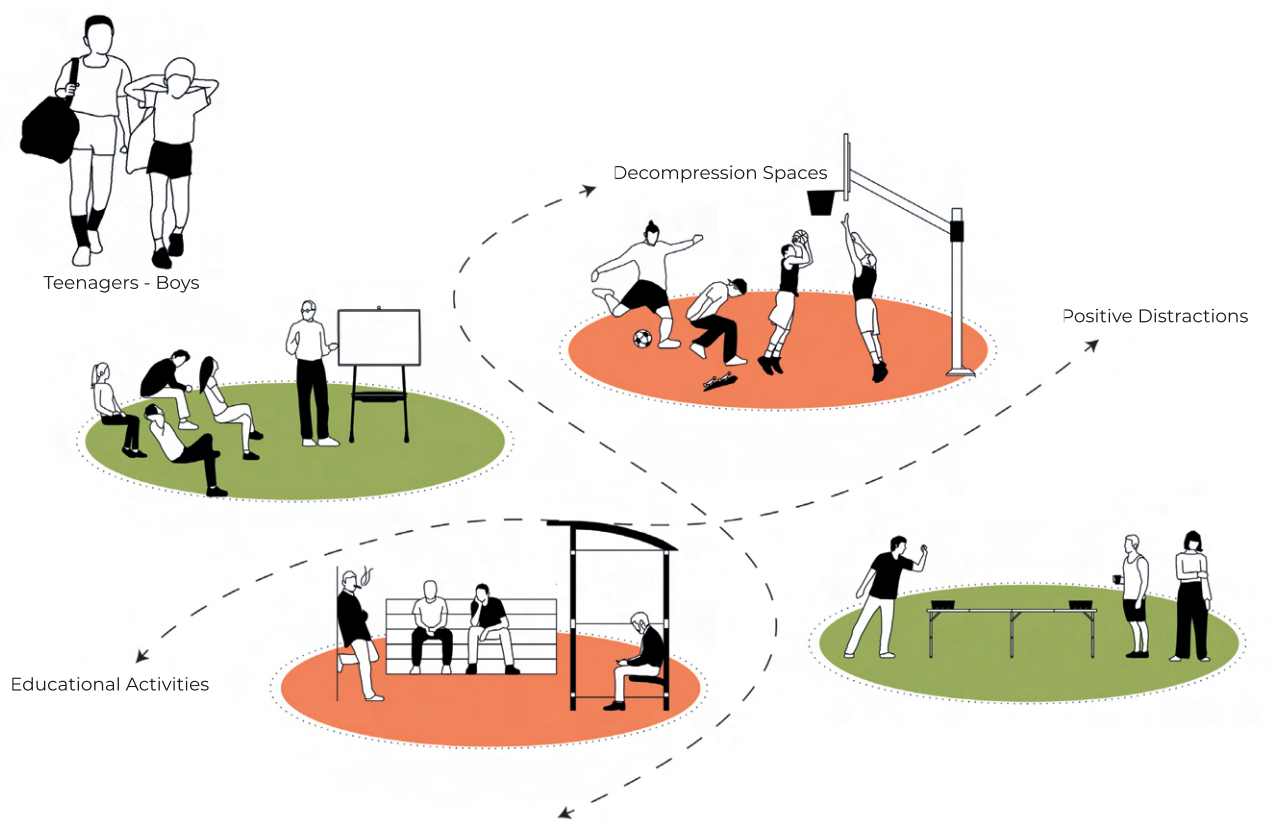


Figure 111. Teenagers - Boys
(Diagram by the Author)

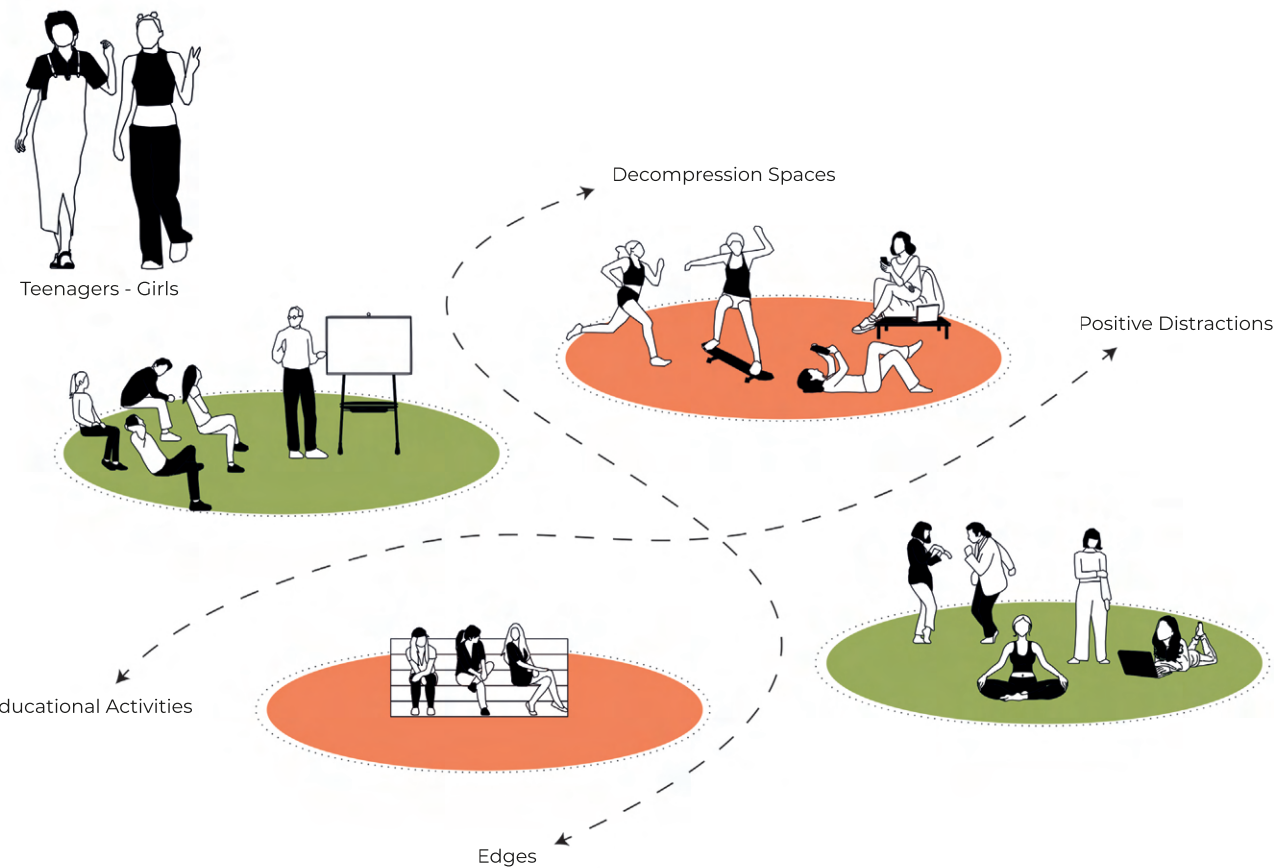


Figure 112. Teenagers - Girls
(Diagram by the Author)

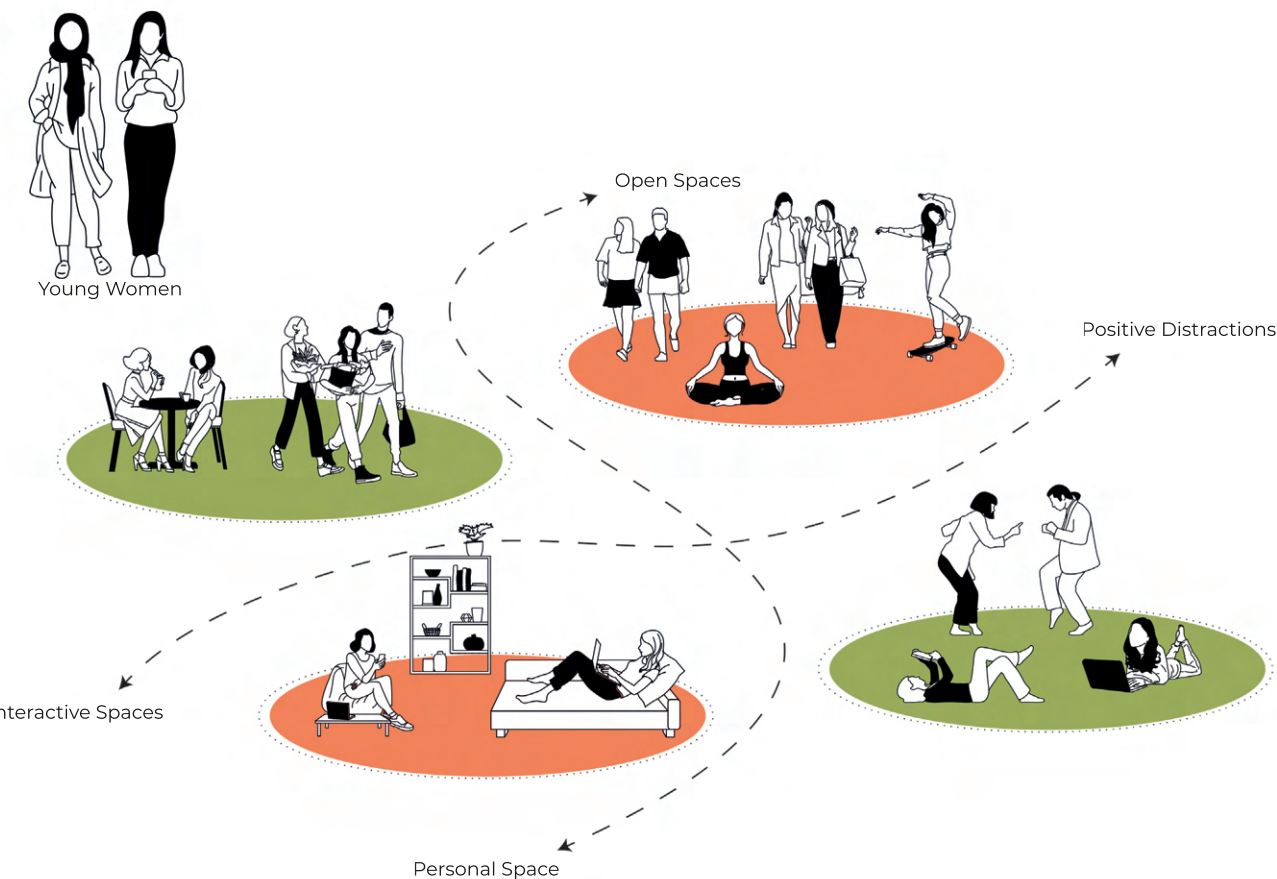
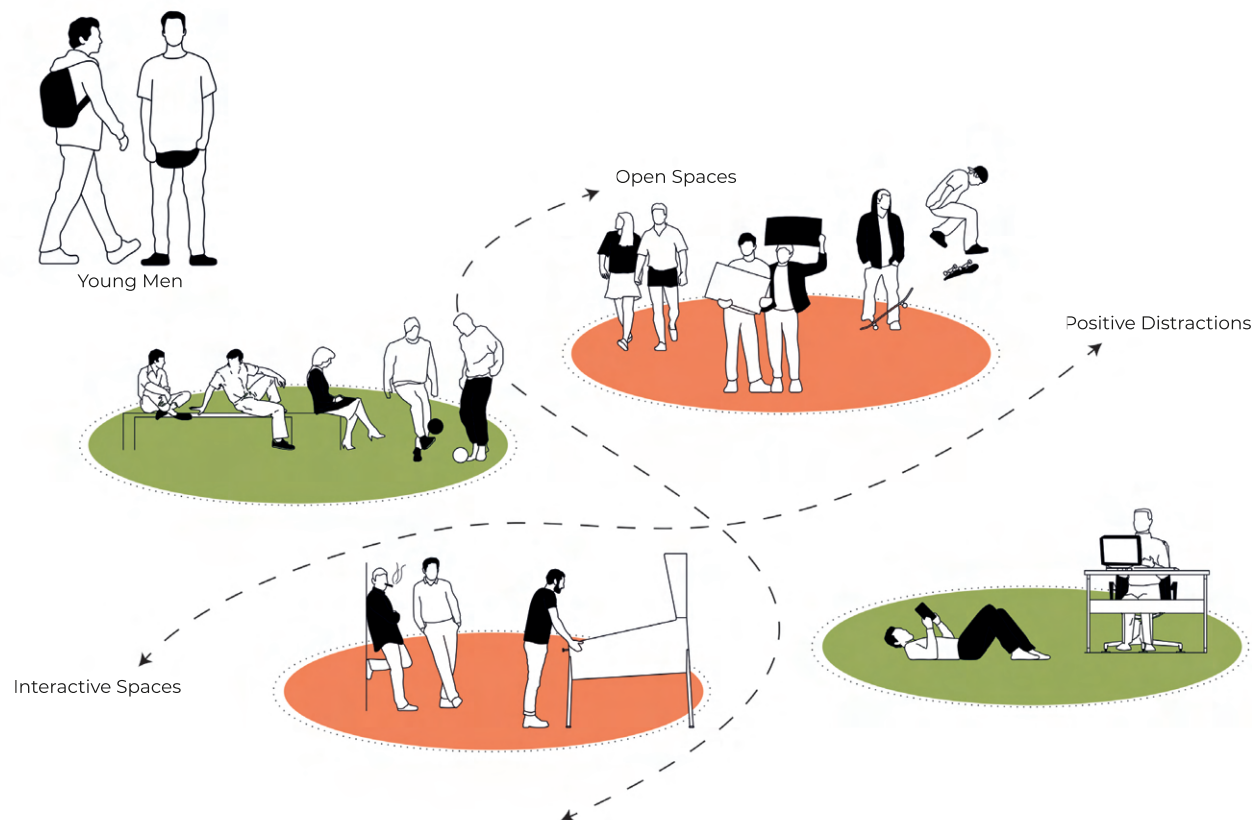


Figure 113. Young Men
(Diagram by the Author)

Figure 114. Young Women
(Diagram by the Author)

Young Adults

Generally, young people of 18+ years, seem to finally want to make their presence known and express themselves more openly. In Afrikaanderwijk, however, this is also the age where a clear differentiation between men and women starts to occur. Although both groups were observed pursuing different activities, the presence of young women in public was really minimized, with them not having adequate opportunities to cover their needs for interaction and public expression.

Both groups seemed to prefer more secluded, personal spaces to gather, with the difference being that in the case of women these spaces were most often a domestic space and in the case of men, a hidden alley or corner, where they could talk and smoke without other people noticing them.

The cultural background also starts playing a role on how they behave. Especially the young men were observed participating in various cultural and religious events in the mosque, or gathering outside of local shops of the same ethnic background to spend their afternoons.

In this context, both personal but also open spaces seem to be of great value for this age group, which needs to not only see, but also be seen, while at the same also be provided with adequate space to feel comfortable into expressing themselves.

Adults

At this age, people are at this stage where they have already found their way in the city and where they belong; with the groups that they want to interact and how they want spend their time. Cultural activities play a very important role, both for men and women, as they help them reconnect with their roots and find people with common interests to socialize and interact.

Equally important is for them to be able to be in places where they can observe and inspect their children, while at the same time however not missing the opportunity of socializing with same interest peers.

This was especially visible in the case of women, who were frequently observed gathering in informal places, like outside the fences of a school or a sports facility, waiting for their kids while talking with one another. Or again in the case of women, using the street corners, the entrances of their homes, or the large pavements, as a means of informally interacting with one another, while following their usual everyday routines.

While women seemed to have a tendency to occupy and domesticate smaller, more secluded corners, men in the area were more confident about their actions and their presence outside. They were observed in many instances occupying the big open spaces, claiming their presence there, not really allowing other groups to easily co - exist.

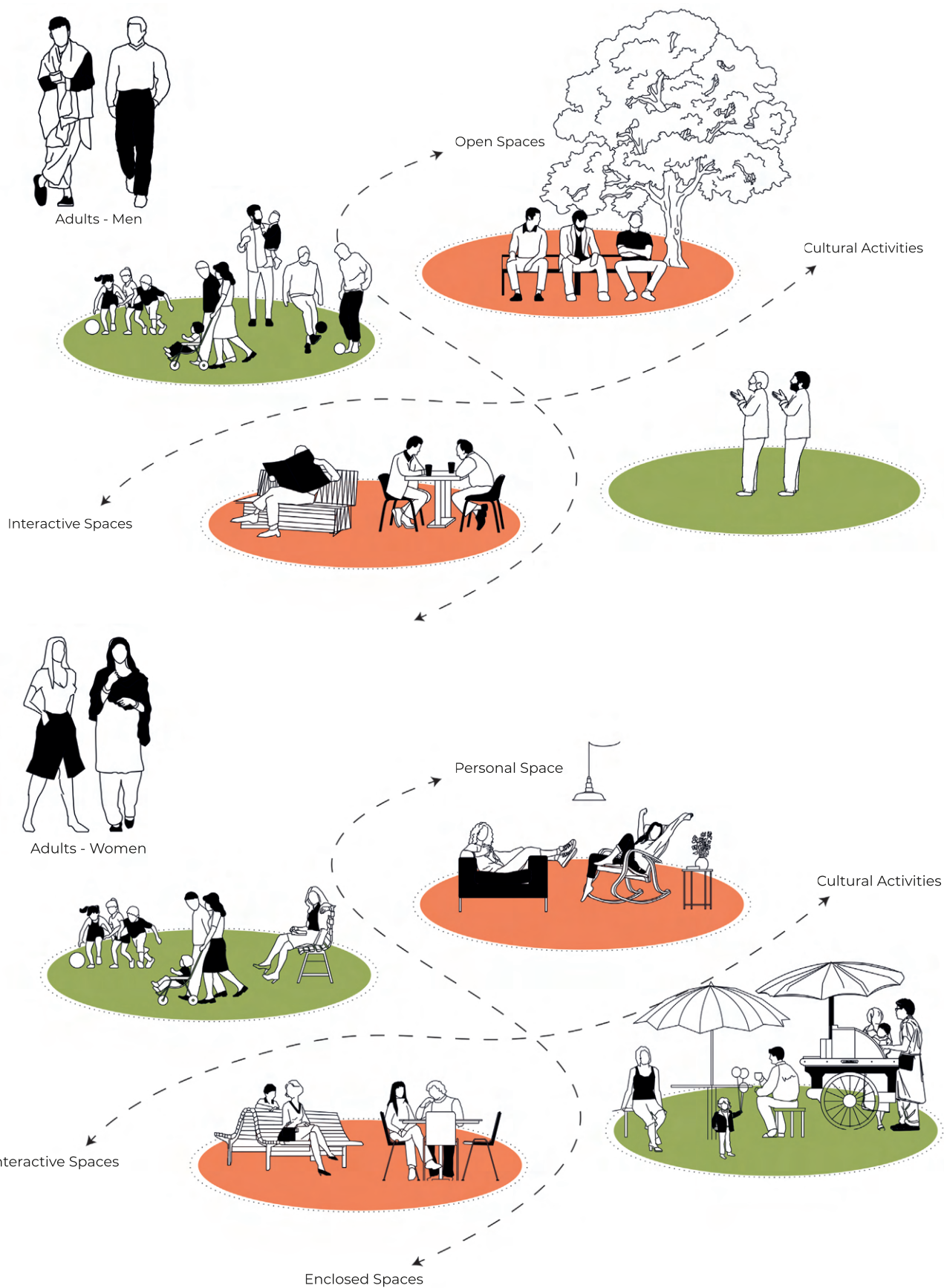


Figure 115. Adults - Men
(Diagram by the Author)

Figure 116. Adults - Women
(Diagram by the Author)

Elderly

Elderly, or rather retired people, are at this stage, where they have to reintroduce themselves and feel again part of the community. They have the need to be closer to younger generations and feel useful again, while for instance looking after their grandchildren, or kids in the neighbourhood, or doing communal activities, where they can develop new and old skills.

In this specific area, they seem to lack such opportunities in the public space, either indoor or outdoor, with the exception of the neighbourhood and community centers, where they were observed to gather a lot, during all hours of the day, to socialize and interact with one another. A lack of supporting services and facilities was also visible, hindering the development of their social life.

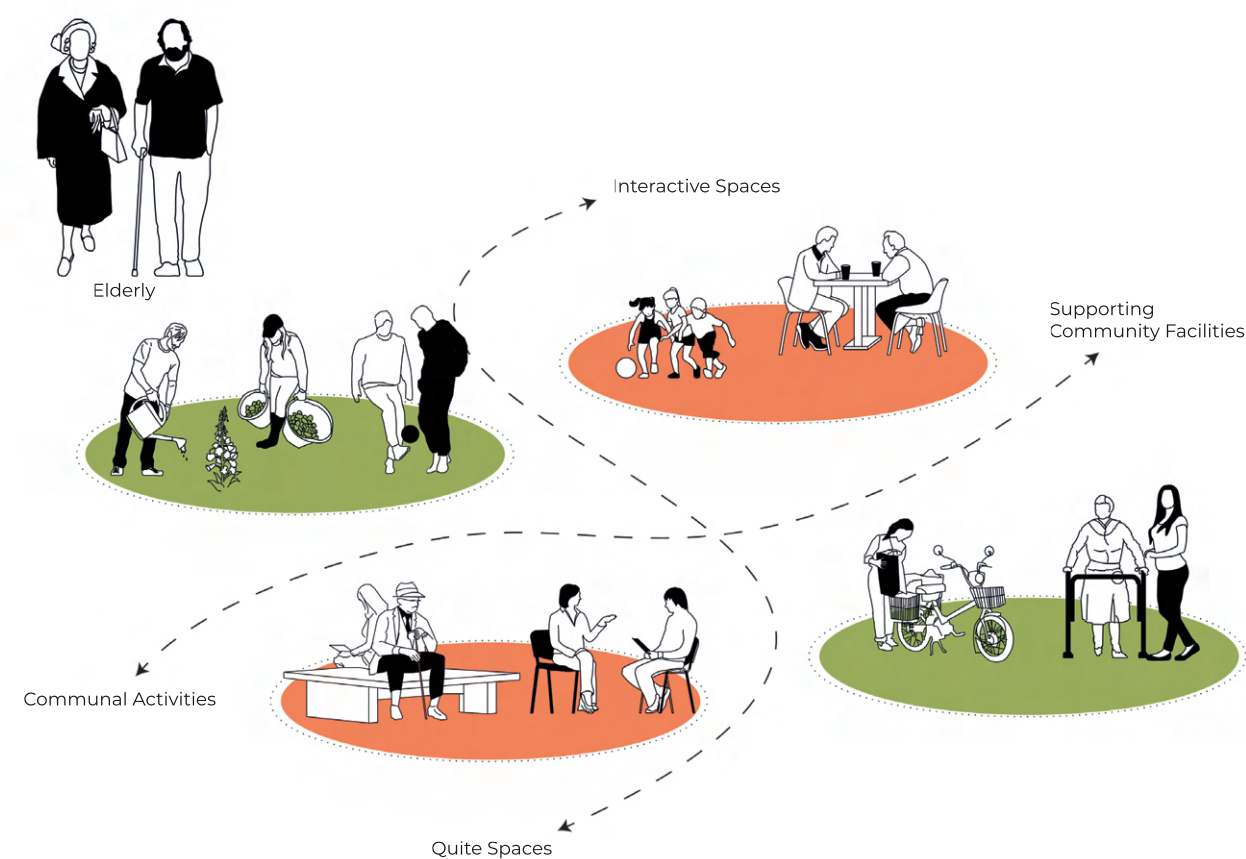


Figure 117. Elderly
(Diagram by the Author)

5.2 | Design Principles

In this section, several design principles are proposed for Afrikaanderwijk and the surrounding neighbourhoods, based on the different users of the area and their needs. These principles are divided into five main concepts, based on the theory and the observations made, with some overlapping between several concepts.

Main Concepts

Together Apart

Different levels of privacy often benefit a hyper-diverse community, as they take account of the people's needs and choices about personal space and give them room to feel comfortable outside the comfort zone of their houses.

The Social Glue

Places in the neighbourhood should promote interaction between different social groups. Although staying separate and in a distance from each other is very valuable, providing space for encounter is as important to increase the sense of inclusivity.

Room for the People

Safety and walkability are two very basic elements that a good public space should have in order for the living quality to be improved. In that sense, reclaiming the streetscape for the people, can prove to be an important asset in the area as it was observed that a lot of formal and informal activities take place there and that it is used as a means of interaction.

For illustration purposes, the principles are presented in five categories starting from the built environment, according to their level of publicness and scale, thus residential space, communal space, public space, streetscape and lastly urban furniture.

Blurring the Lines

Public and private are often examined as two separate things that do not or should not be merged. However, as already discussed, the reality today is different and public can be found even in the most private spaces. In this sense, the boundaries should become softer.

Added Value

Mixed use, mixed function urban blocks, with emphasis on the common space should be investigated, with a direct connection with the urban fabric, in order to provide both the needed amount of new housing units, but also better living conditions and more opportunities for interaction.

Explanation of how the Concepts are displayed:

- Principle that fits in one Concept
- Principle that fits in multiple Concepts

Implementation

The approach of the design principles has been used to translate the findings from literature, empirical and design research into comprehensible spatial interventions not only to practitioners in the field of architecture or urbanism, but also to people outside the academic practice.

Especially significant for these principles to function properly in each case, was to define the group of users to which they referred to. Some principles were introduced so that all users can benefit from them, however others were made having in mind a specific social group and thus the emphasis should be given in creating the right circumstances for them specifically, so that tensions and conflicts can be prevented. For instance, when a principle refers to elderly, it should be questioned and examined if and under which circumstances it can be combined with one that has to do with young people, because the loud noise could pose a problem and discourage this group from occupying the space.

Essential for the principles was the research in order to find the most crucial problems of the area. However, the implementation of them is just as essential. Therefore, the principles have been implemented in the design interventions for the neighbourhood of Afrikaanderwijk. This method, although produced generic results that can work in similar contexts of hyper-diverse, deprived neighbourhoods, becomes specific in its application, when it is implemented in a location-related and flexible way. Therefore, these design principles should not be considered as a fixed set of rules, but more as a growing and versatile reference guide that can follow the ever-changing socio-spatial conditions of an area.

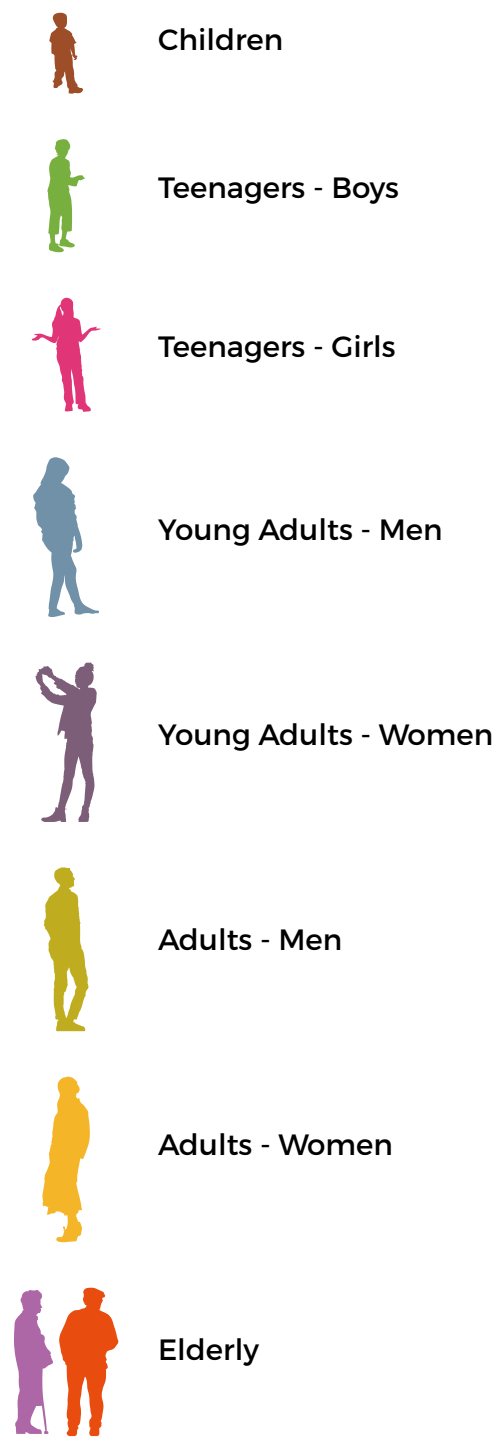
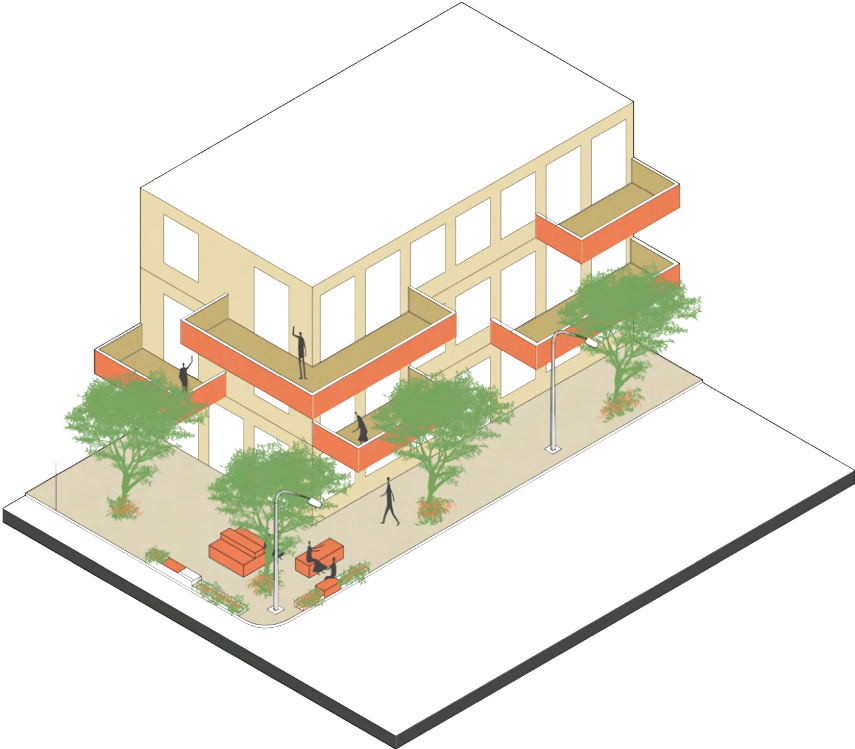


Figure 118. Age and Gender Groups
(Diagram by the Author)

Residential Space



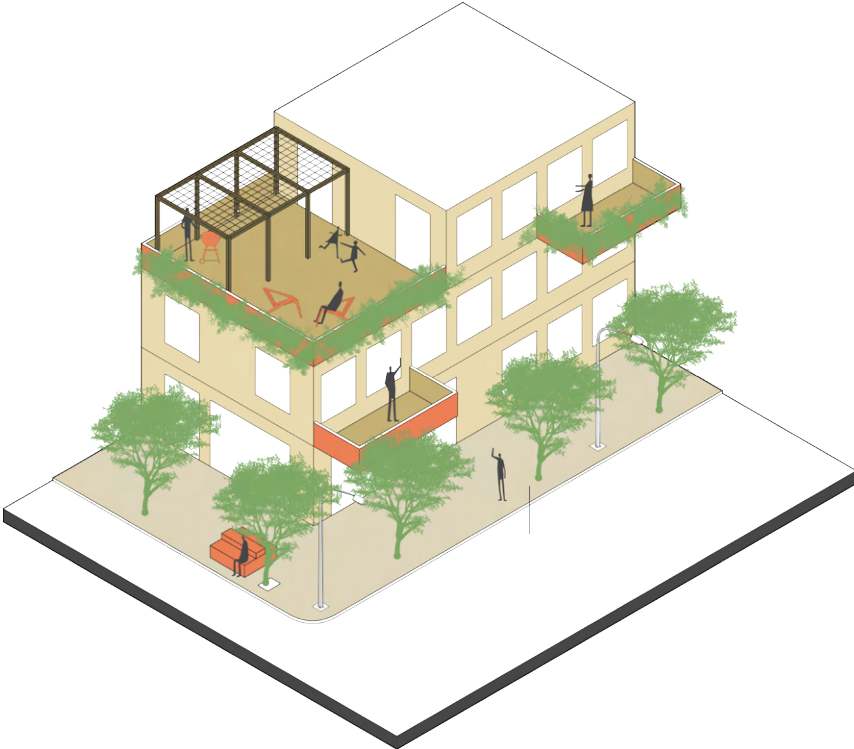
Balconies



Balconies on different levels of new and old building blocks provide both a view on the streetscape or inner courtyard respectively, but most importantly help bring the domestic life closer to the public one.

Being an extension of the living space, but at the same time having a direct connection to the environment of the street, a balcony can provide opportunities for interaction, while at the same time also sense of a more secure and safe environment, especially for women and elderly.

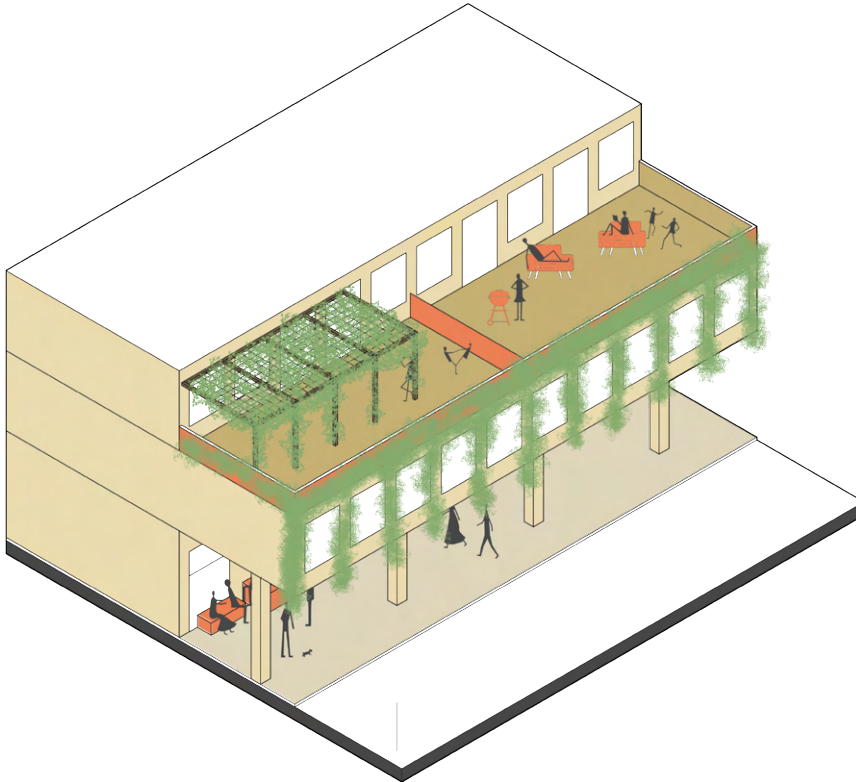
Figure 119. Balconies
(Diagram by the Author, Icons by <https://thenounproject.com/>)



Rooftop Common Spaces

Rooftop common spaces can be used as places for interaction between the different residents of a building block, or as green roofs, for the installation of solar panels, in order to make the buildings more energy efficient and autonomous, for a more resilient neighbourhood.

Figure 120. Rooftop Common Spaces
(Diagram by the Author, Icons by <https://thenounproject.com/>)



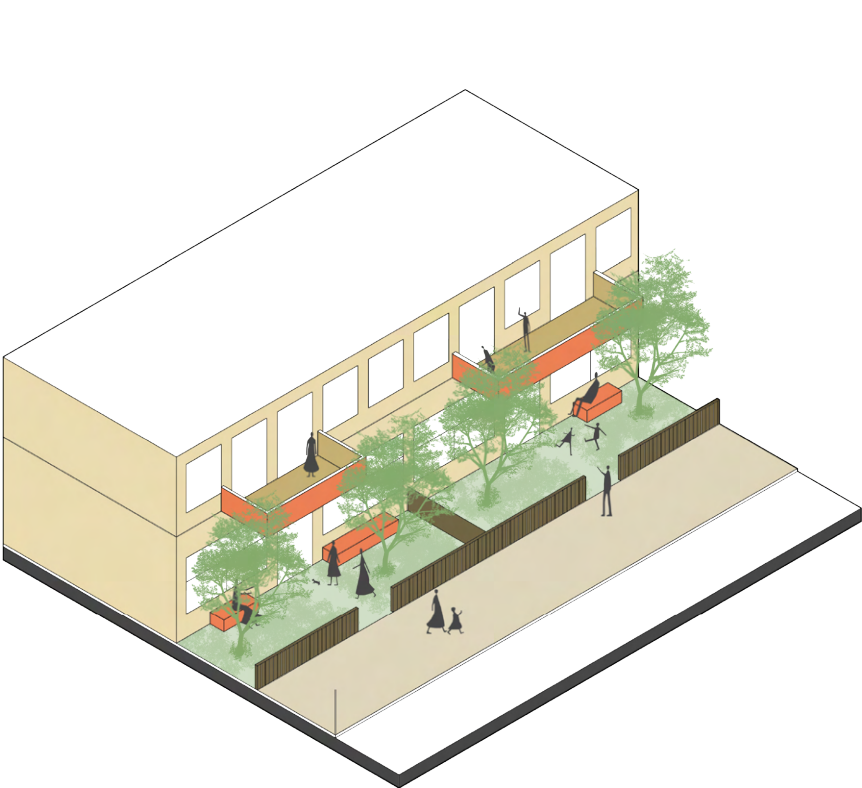
Common Spaces

Common spaces on different levels of a block, with different programs, both indoor and outdoor, can provide different opportunities for encounter and socializing when designed properly.

They function as an alternative to the more “private” balconies, which usually refer to one or two apartments, creating a variation of public levels inside a block, allowing for the users to appropriate them according to their personal preferences.

Figure 121. Common Spaces
(Diagram by the Author, Icons by <https://thenounproject.com/>)

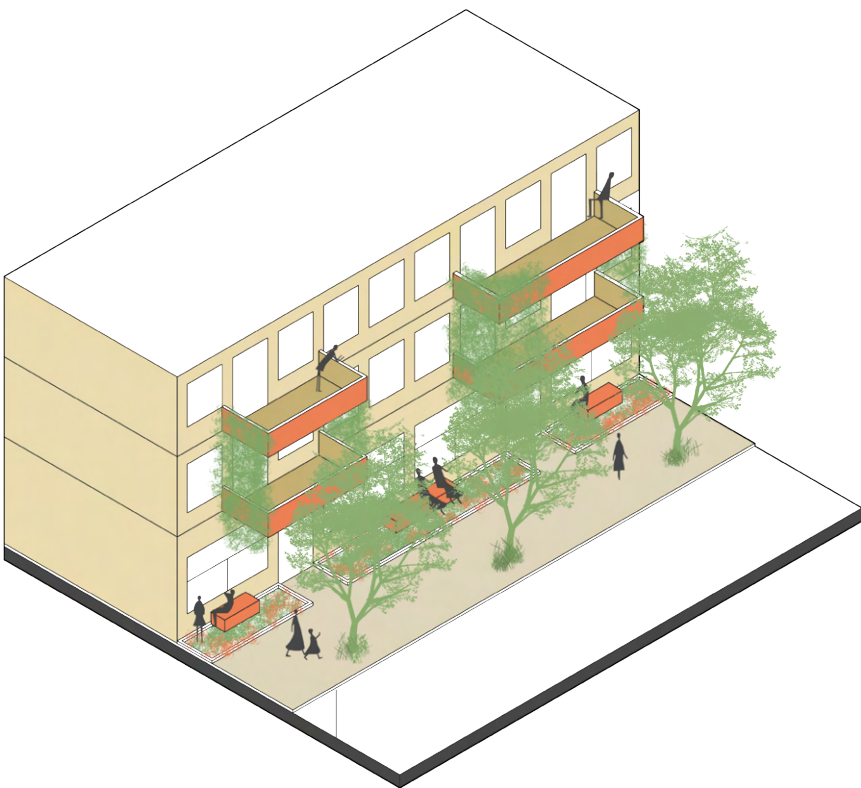
Residential Space



Front Yards

Front yards provide an alternative outside space for people living on the ground floors of buildings. While facing the front, these yards contribute to increasing the overall safety feeling of the street, as well as to creating a better living environment and a safe space for the residents.

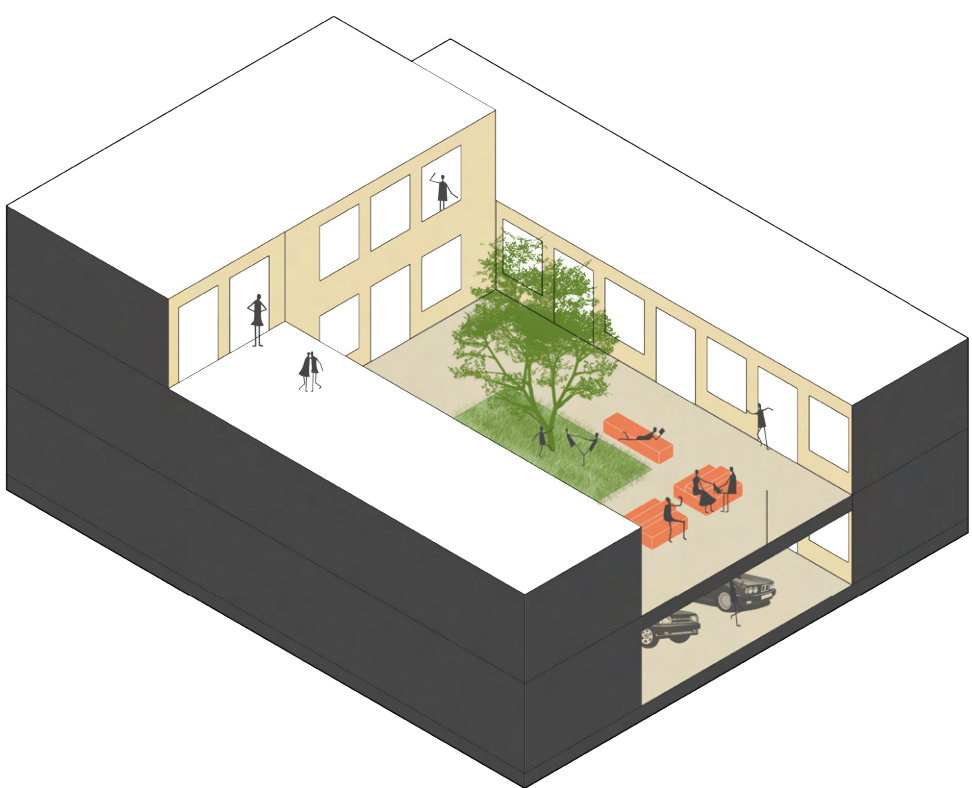
Figure 122. Front Yards
(Diagram by the Author, Icons by <https://thenounproject.com/>)



Facade Gardens

Facade gardens can soften the edges between public and private, while at the same time they create a safer environment for the people who live directly next to the street. They provide opportunities for encounter and interaction, while also creating a more interesting and enjoyable environment for pedestrians.

Figure 123. Facade Gardens
(Diagram by the Author, Icons by <https://thenounproject.com/>)



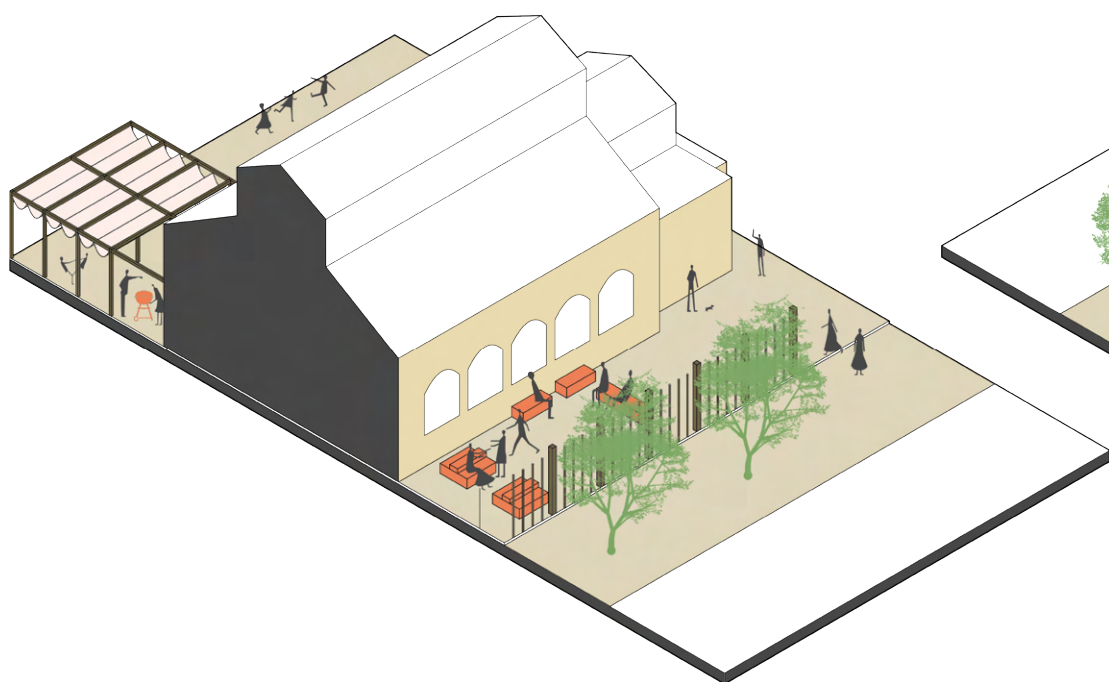
Collective Spaces

Collective spaces, either elevated or on the ground level, instead of a typical inner yard, with functions that can attract also people not residing the block to visit, can provide many opportunities for encounter and interaction.

They help bring the residents closer and they create a safer environment, especially for children to play, as they are enclosed. When they are elevated, the ground floor space can function as a parking lot, so that streets become more pedestrian friendly.

Figure 124. Collective Spaces
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Communal Space

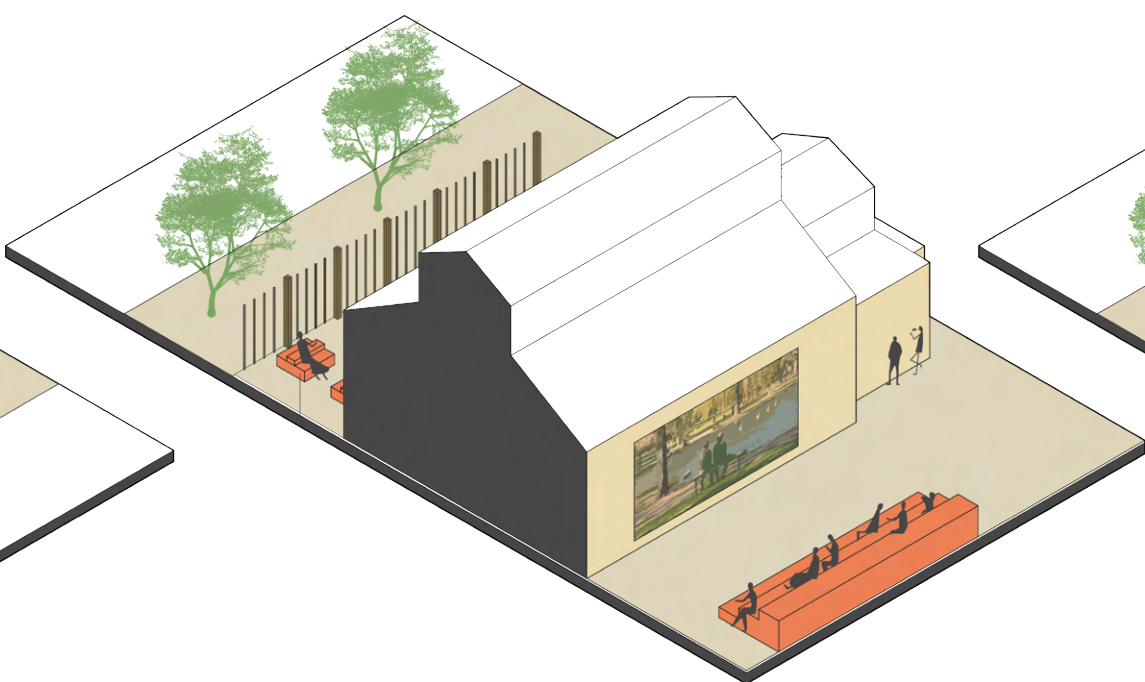


Gathering Spaces

Expanding the activities of the community centers of the area, so that they have a direct connection and a dialogue with the public space, can provide different opportunities for different groups of people to appropriate space according to their own preferences.

Outside gathering areas for example, create the feeling of a safe domesticated public space, easily appropriated by groups that do not have such a strong presence outside now.

Figure 125. Gathering Spaces
(Diagram by the Author, Icons by <https://thenounproject.com/>)

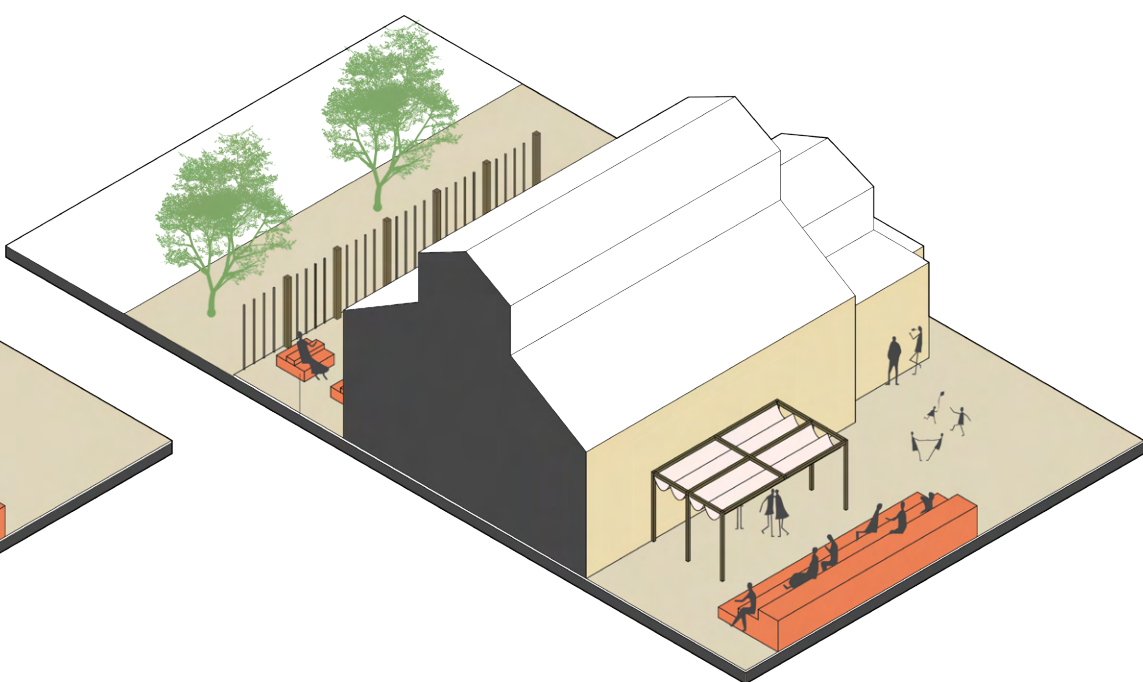


Open Air Cinema

The design of organized gathering spaces which serve specific functions in the city life can attract different people together and contribute to social interaction, as well.

Taking advantage of the sunny days, these kind of spaces, like a small open air cinema, can contribute to making people physically and psychologically more comfortable.

Figure 126. Open Air Cinema
(Diagram by the Author, Icons by <https://thenounproject.com/>)



Cultural Events

Cultural events inside community spaces, such as a wedding or a religious gathering, can contribute to making certain social groups to connect more easily with their neighbourhood and create a common experiences.

Figure 127. Cultural Events
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Communal Space

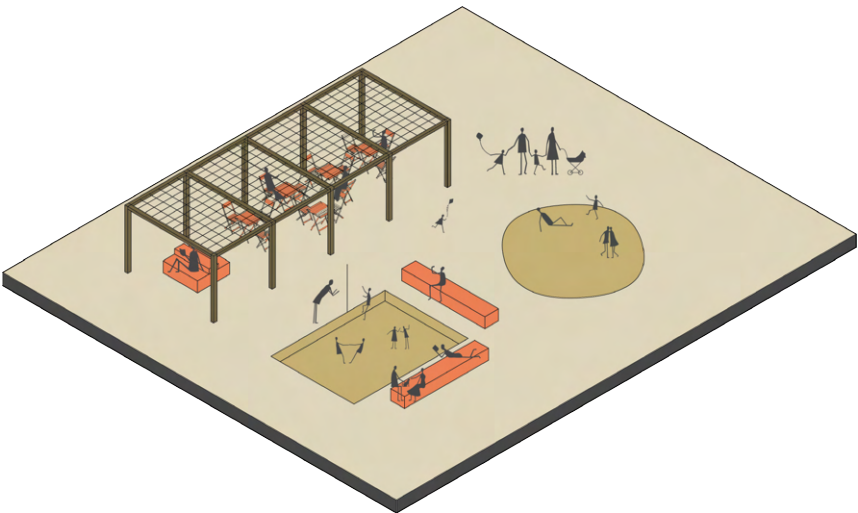


Courts - Seating Areas



Providing places in the neighbourhood which can function as both spaces for interaction, but also as spaces for encounter, could help a hyper - diverse community. In this case, a basketball court, with bleachers on the side, can work both as a place for people to play together and socialize, but also as a place for observation, especially important in the case of smaller children or girls.

Figure 128. Courts - Seating Areas
(Diagram by the Author, Icons by <https://thenounproject.com/>)



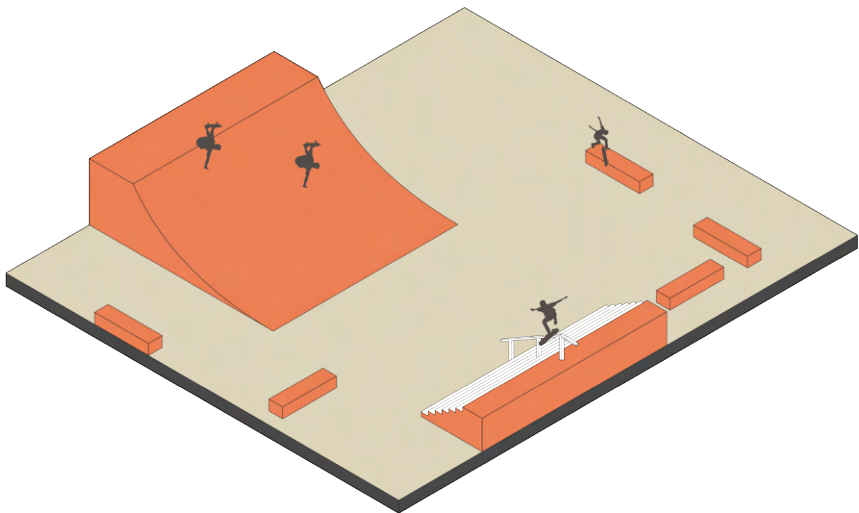
Playgrounds - Seating Areas



Another example in the same logic, could be to create playground spaces for children next to cafes and restaurants with outside spaces, or to add canopies and furniture in playgrounds.

In this way, adults can inspect kids while playing, giving them also the opportunity to socialize in a pleasant environment.

Figure 129. Playgrounds - Seating Areas
(Diagram by the Author, Icons by <https://thenounproject.com/>)



Skate Parks

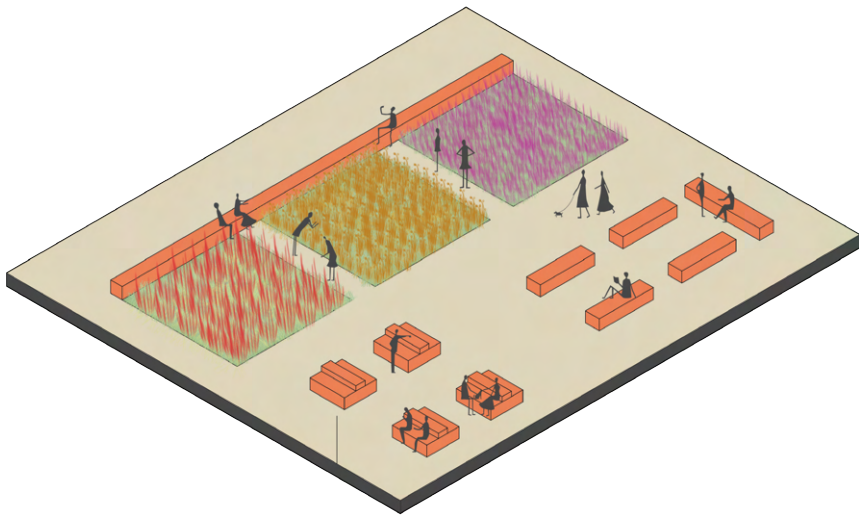


Spaces for teenagers are really missing from the neighbourhood, not giving them many opportunities for coming together.

In this sense, places dedicated to them, like skate parks, where they can express themselves more openly, could help them engage more in the community.

Figure 130. Skate Parks
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Communal Space



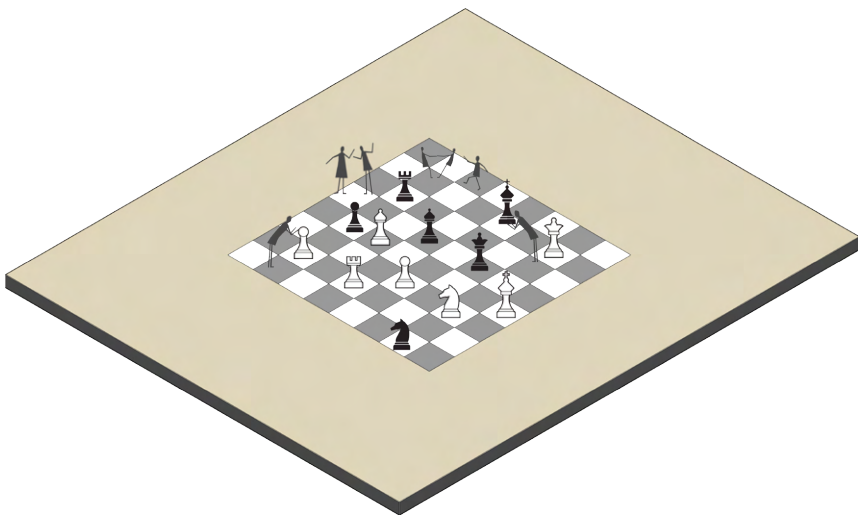
Community Gardens



Community gardens help bring people of different age groups together, as they can help fulfill different needs.

In the case of elderly specifically, they can function both as a healing process, but also as an activity that can keep them preoccupied and energized, while in the case of children, they can function as part of the education process.

Figure 131. Community Gardens
(Diagram by the Author, Icons by <https://thenounproject.com/>)

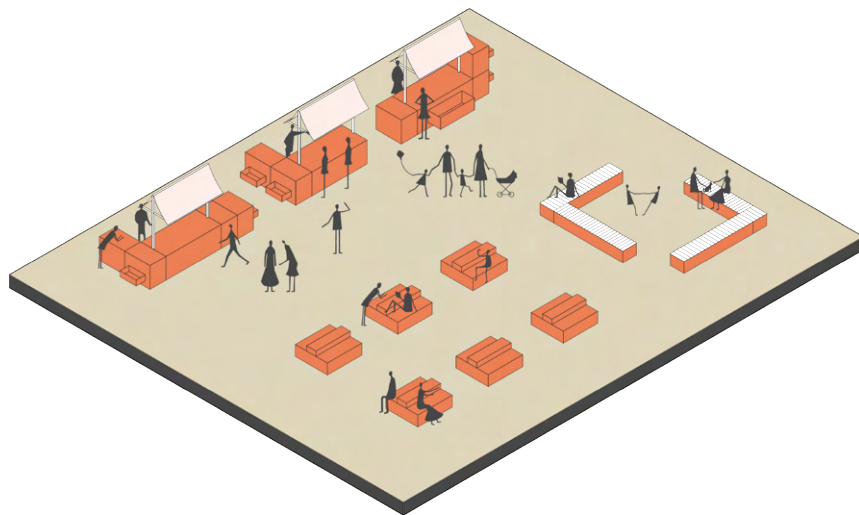


Games



Giant board games can function as a means of alternative playground, especially popular amongst children and elderly. They are interactive and they provide the opportunity for many people to use at the same time and in multiple ways, even using the pieces as seating places.

Figure 132. Games
(Diagram by the Author, Icons by <https://thenounproject.com/>)



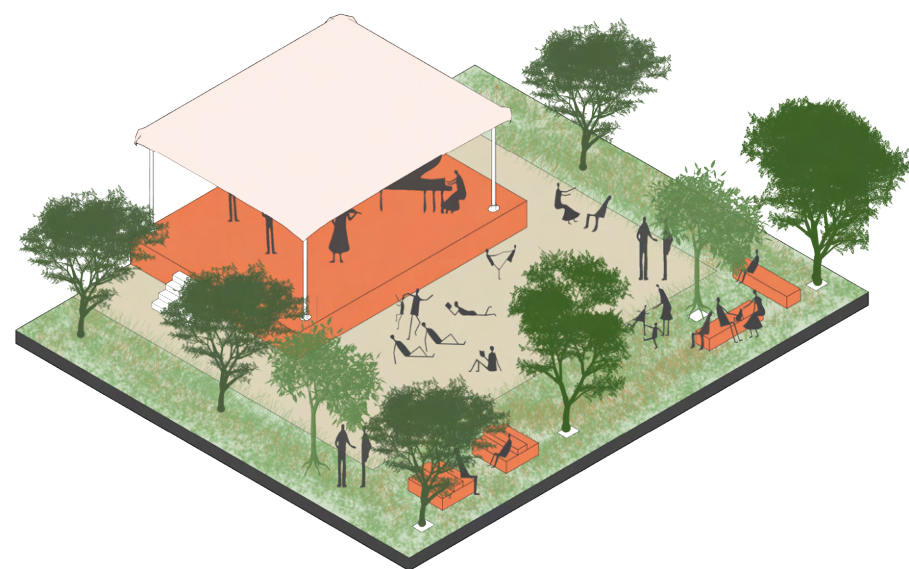
Cultural - Neighbourhood Events

Cultural events or funfairs in the neighbourhood scale, that the residents themselves can organize and build, can create a sense of belonging and strengthen the community feeling.

At the same time inclusivity can be promoted and locals and newcomers with different backgrounds can find a way to come together and learn each other.

Figure 133. Cultural - Neighbourhood Events
(Diagram by the Author, Icons by <https://thenounproject.com/>)

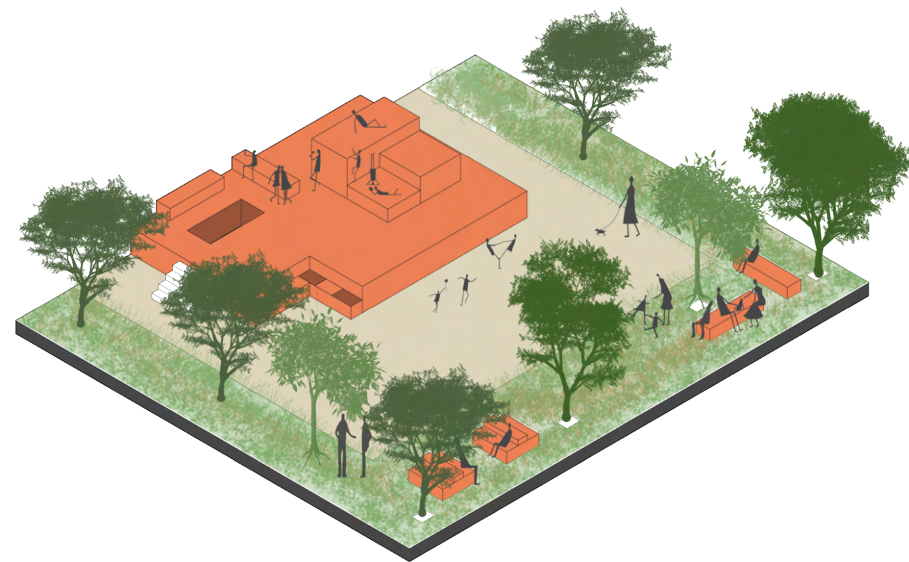
Public Space



Stages inside public spaces can give the opportunity for the organization of festivals, smaller or bigger and can be used for celebrations, ceremonies and generally in all community related events. In this way, citizen engagement can again be promoted.



Events Stage



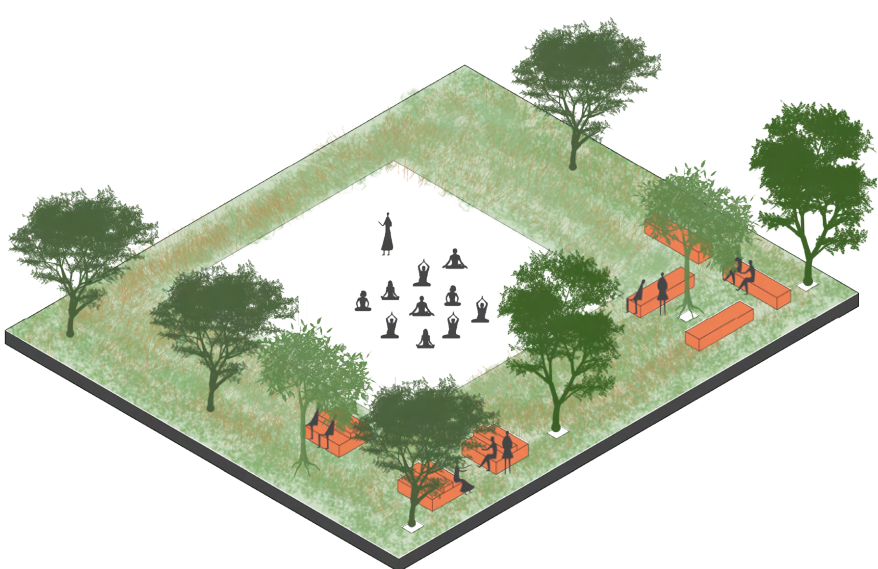
Multifunctional surfaces can be adapted all year long according to the needs and requirements of people and create many opportunities for usage.



Multifunctional Surfaces

Figure 134. Events Stage
(Diagram by the Author, Icons by <https://thenounproject.com/>)

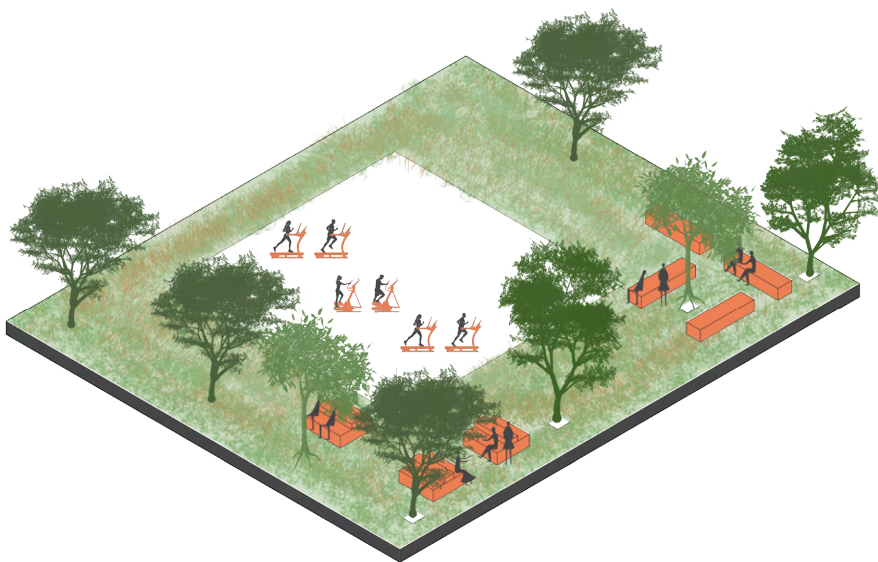
Figure 135. Multifunctional Surfaces
(Diagram by the Author, Icons by <https://thenounproject.com/>)



Outdoor Sports



Dedicating spaces for outdoor sports meetings can improve both the physical and psychological health of residents, while at the same time serving as a social connector.



Sports Equipment

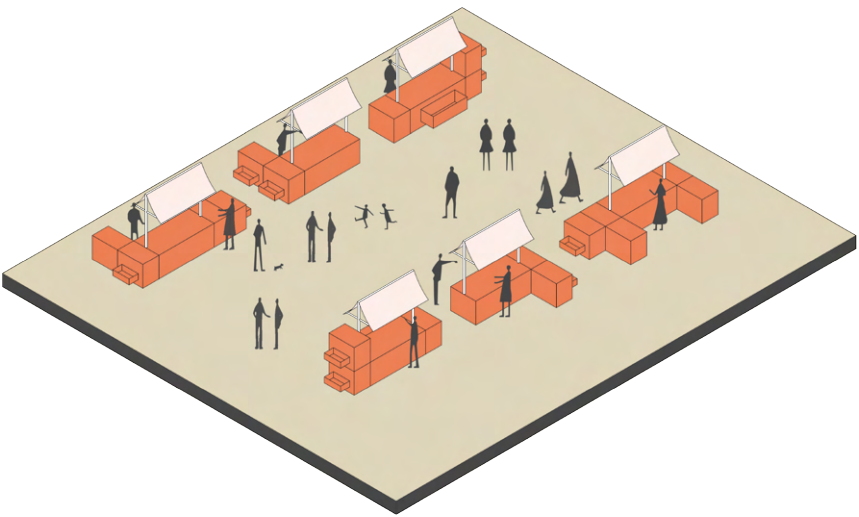


Providing the appropriate equipment for people to be able to do activities outside, without any cost, can help minimize the differences and create equal opportunities for everyone to discover different hobbies.

Figure 136. Outdoor Sports
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 137. Sports Equipment
(Diagram by the Author, Icons by <https://thenounproject.com/>)

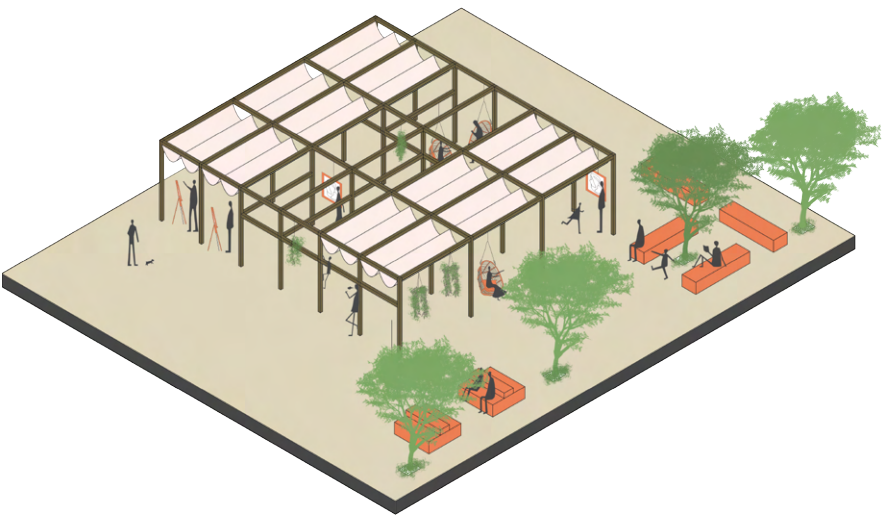
Public Space



 Market

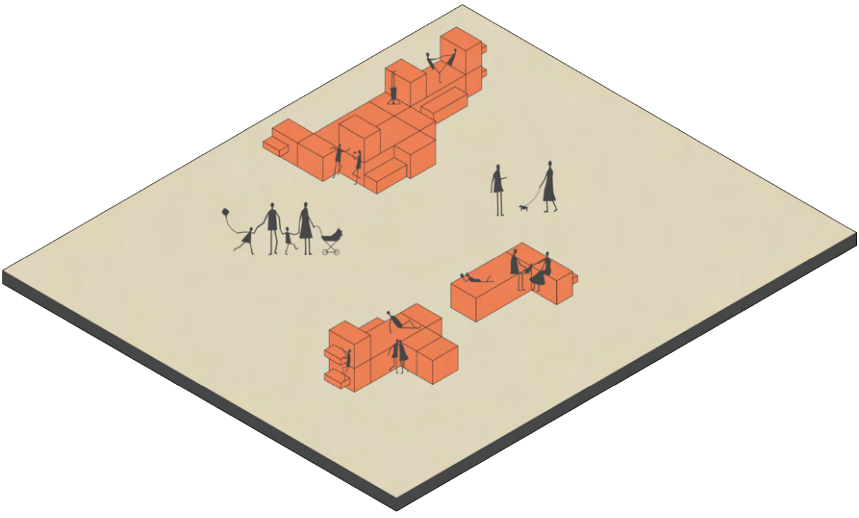
The market area is a very important space in Afrikaanderwijk. However it remains empty all the other days and times.

The creation of a more permanent space, with movable stalls that people can use according to their needs, could create a more opportunities for use.



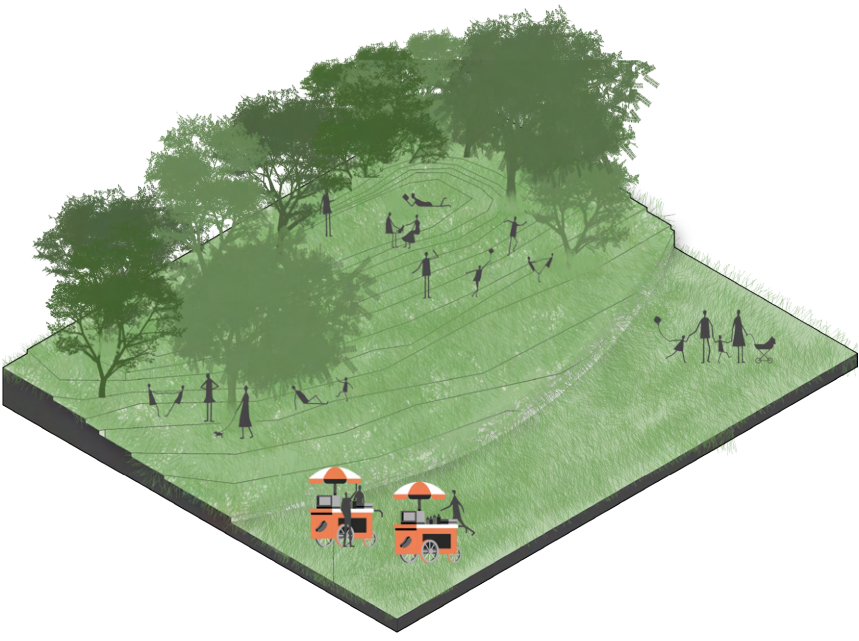
 Canopies

Canopies constructed either from metal or wood, movable and flexible in taking parts off, can be placed basically everywhere needed to provide shelter from the bad weather conditions, or create different opportunities for use.



 Modular Furniture

Movable furniture can be provided in order to create more comfort for people and more options for sitting. This type of furniture provides maximum flexibility and can enhance the sense of ownership and thus responsibility about the public space.



 Slopes

Slopes and elevations in the public green space can provide different opportunities for sitting and interacting or not, giving more options on how to appropriate the space.

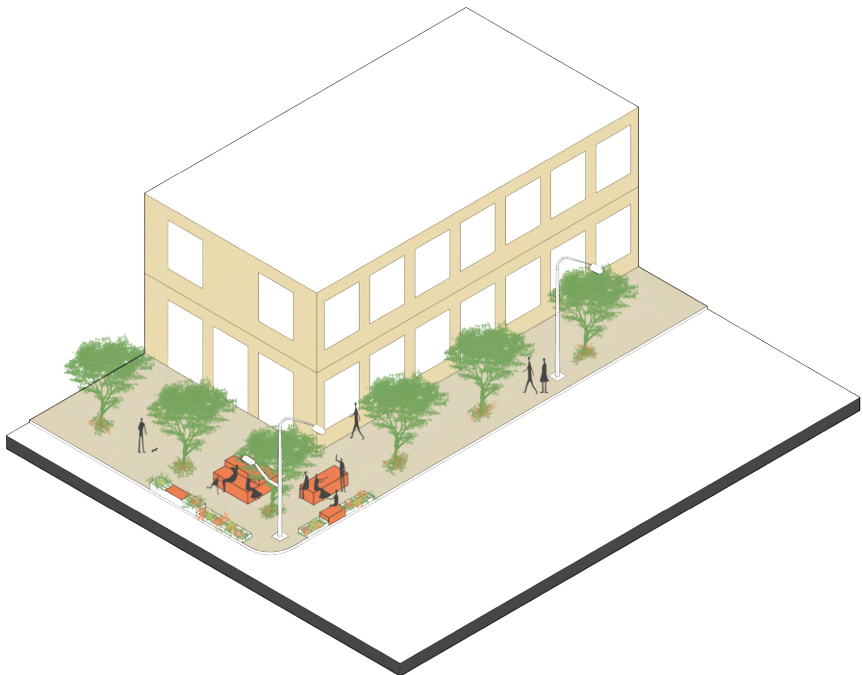
Figure 138. Market
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 139. Modular Furniture
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 140. Canopies
(Diagram by the Author, Icons by <https://thenounproject.com/>)

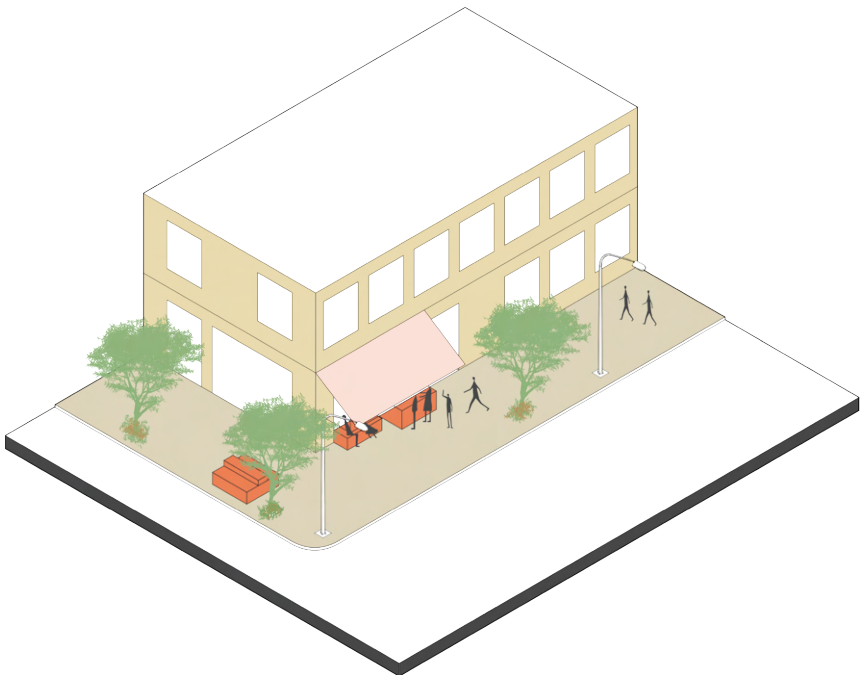
Figure 141. Slopes
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Streetscape



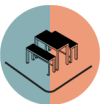
As it was earlier observed, street corners play an important role as informal meeting and gathering places in the city.

The addition of seating areas, like small living rooms can help create a safer environment there, where people and especially women can stay longer and socialize.



Entrances of various local shops but also of residential buildings, often become informal meeting points, for people of all ages, because of the feeling of safety and familiarity that they offer.

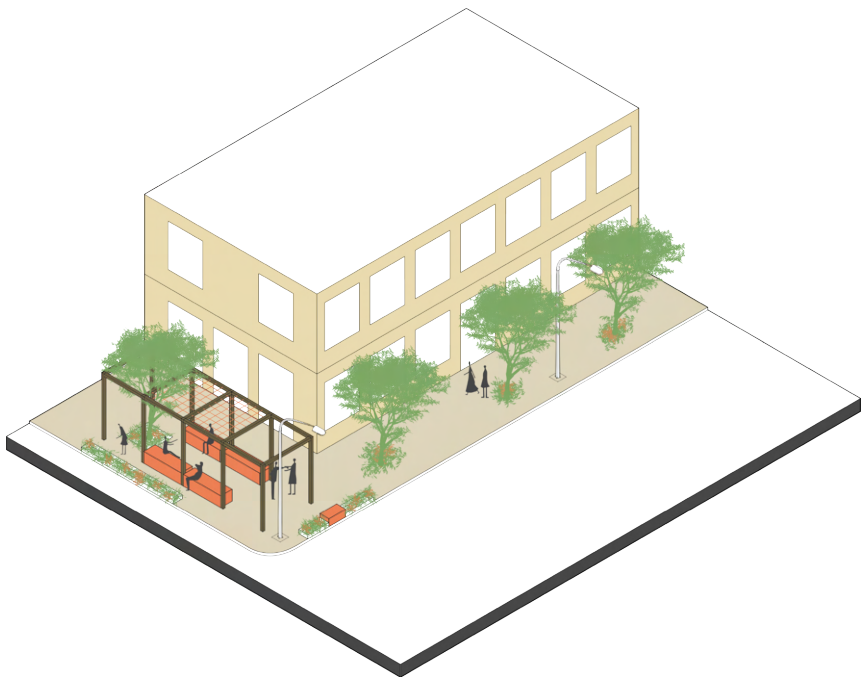
The addition of tents or canopies and street furniture can enhance this experience.



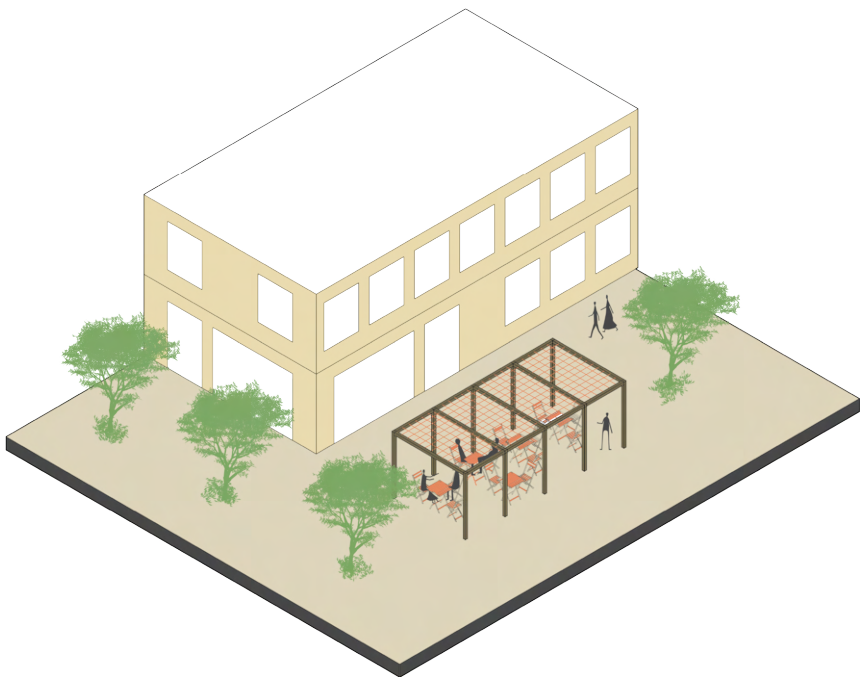
Street Corner Seating Areas



Sheltered Entrances



Canopied street corners, again as stated before, can promote interaction and create a more comfortable and friendly environment for women to gather and interact.



The organized extension of indoor public spaces, like cafes, can improve the sociability of people, while also create different opportunities for relaxation and interaction.



Street Corner Canopies



Outdoor Cafe Extensions

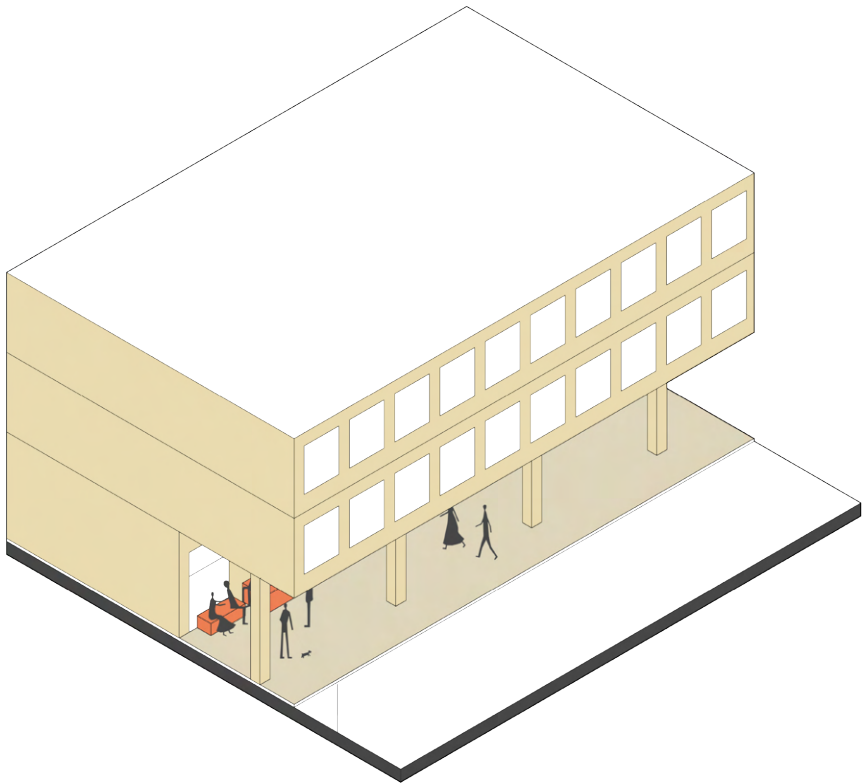
Figure 142. Street Corner Seating Areas
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 143. Street Corner Canopies
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 144. Sheltered Entrances
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 145. Outdoor Cafe Extensions
(Diagram by the Author, Icons by <https://thenounproject.com/>)

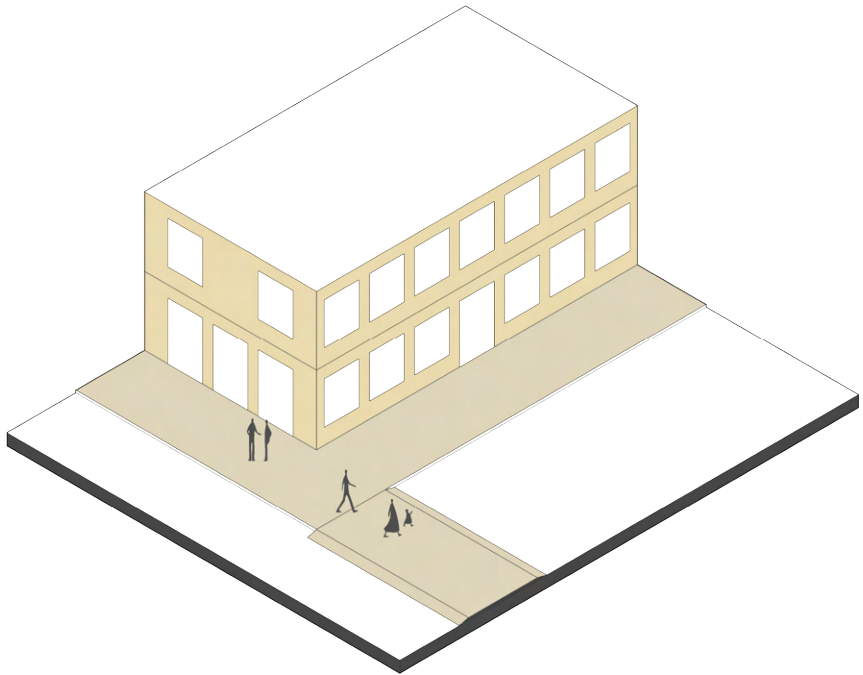
Streetscape



Sheltered sidewalks, either created by the extension of a floor or with the addition of a balcony, can really enhance the walking experience of people and again create places for informal meetings under more comfortable conditions.



Sheltered Sidewalks



Safety and walkability are very important elements of an inclusive and resilient neighbourhood.

In this way, everybody and especially when it comes to elderly and people with disabilities, will feel more comfortable making bigger distances, thus maximizing their chances for socializing and their involvement in the community.

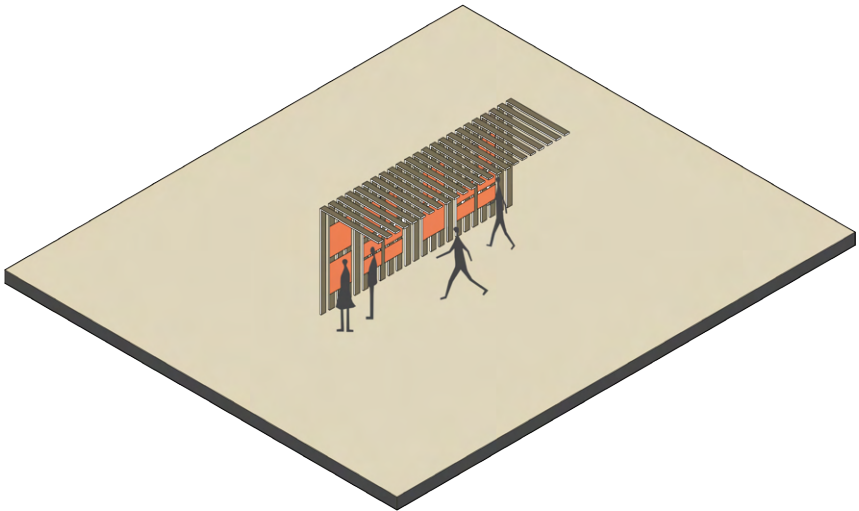


Pedestrian Priority



Figure 146. Sheltered Sidewalks
(Diagram by the Author, Icons by <https://thenounproject.com/>)

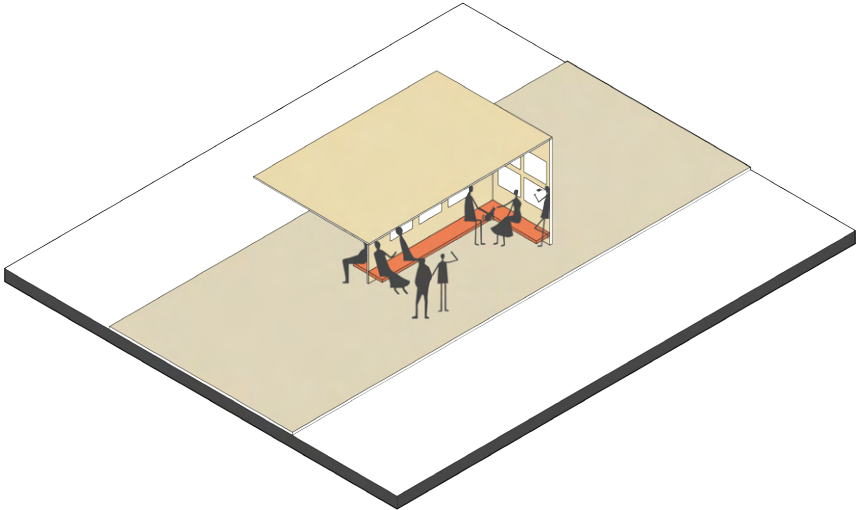
Figure 147. Pedestrian Priority
(Diagram by the Author, Icons by <https://thenounproject.com/>)



Announcement - Art Boards

Periodical public exhibitions, school events, or even street announcements could use these kinds of boards in order to attract people.

They can serve as a trigger for different groups of people to gather around and socialize.



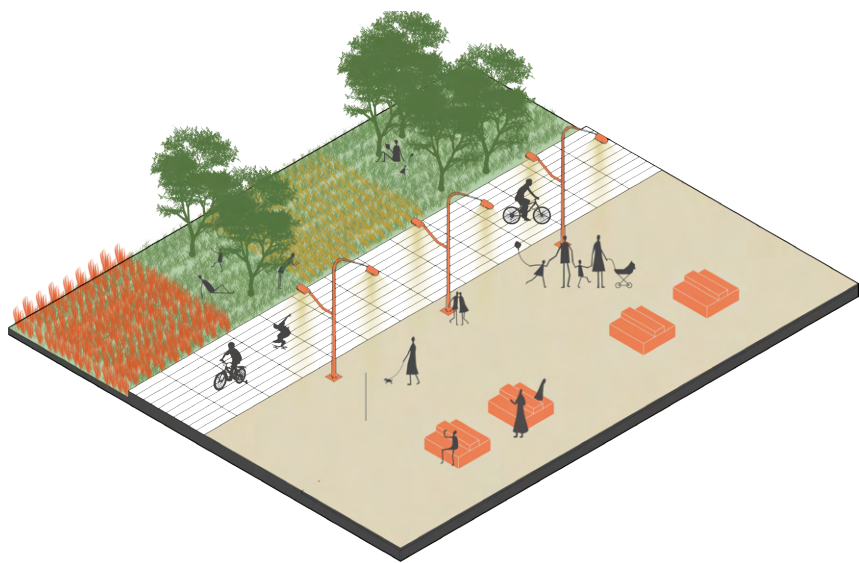
Bus Stops



Figure 148. Announcement - Art Boards
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Figure 149. Bus Stops
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Streetscape

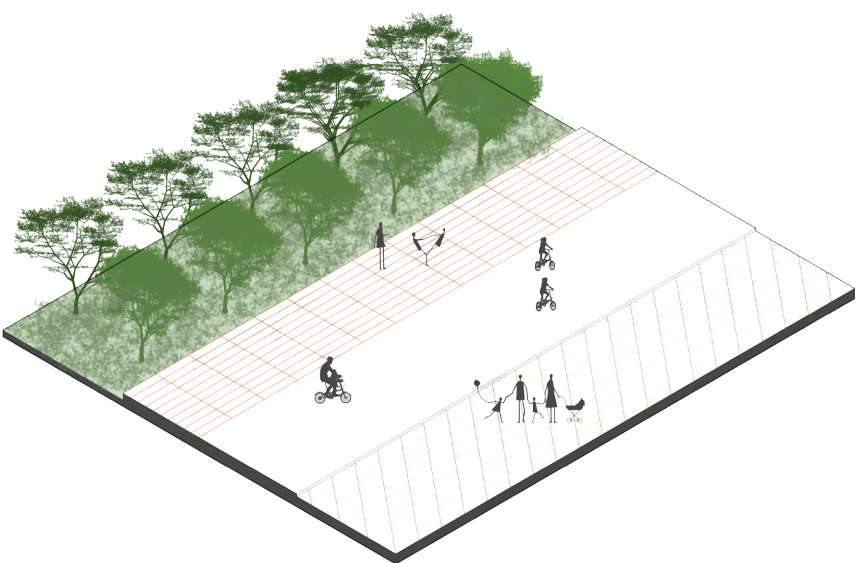


Lightning

Good lightning helps provide a better perception of the surroundings and improve the sense of safety and security in public and residential spaces.

According to each space, a different lightning management is needed to cover the needs of the city. In this way, activities will also be encouraged during the night and the different spaces in streets will be used all day long.

Figure 150. Lightning
(Diagram by the Author, Icons by <https://thenounproject.com/>)

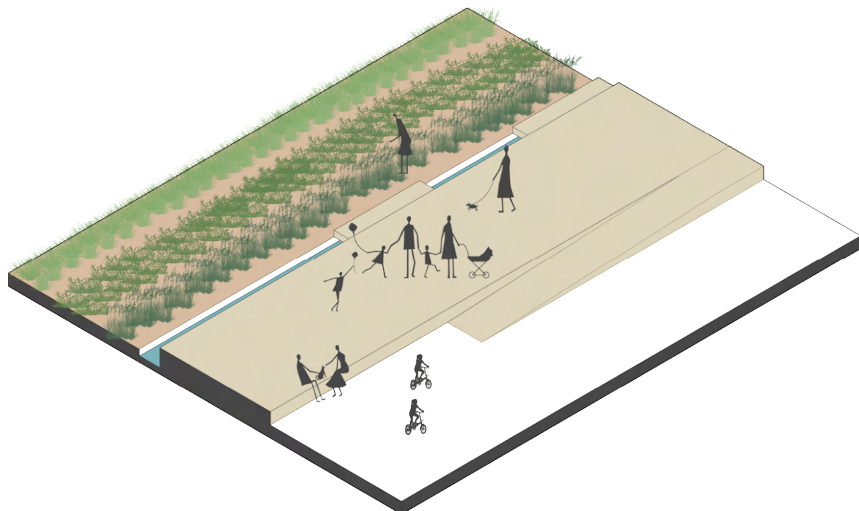


Different Routes

The division of a space into different parts, without converting it in a fragmented space without connectivity, can help different groups be in the same place but keep their distances when they prefer to.

This can also improve mobility and accessibility, because when there are different, well defined routes, pedestrians and cyclists can feel more protected and safe.

Figure 151. Different Routes
(Diagram by the Author, Icons by <https://thenounproject.com/>)



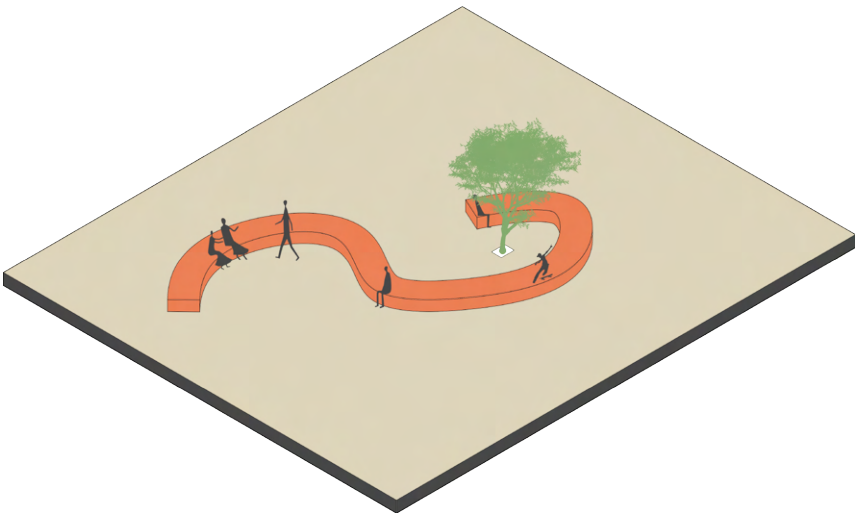
Height Differences

Creating different rooms in an open space, by means of changing the materialization or adding height differences, can provide people with more opportunities of where to sit or gather, based on their needs and preferences.

In this way the comfort zone of different groups is protected. They can see and they can be seen by others, but they do not need to interact if they do not want to.

Figure 152. Height Differences
(Diagram by the Author, Icons by <https://thenounproject.com/>)

Urban Furniture

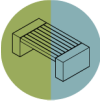
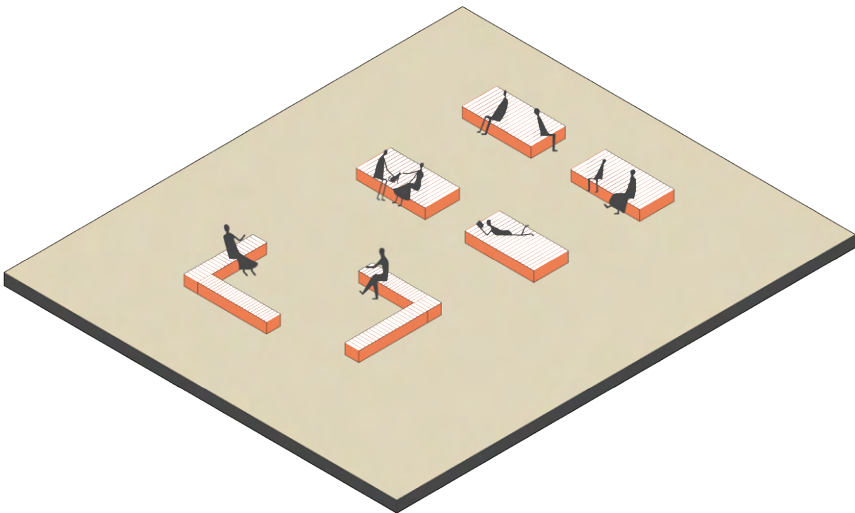


Curvy Bench

The design of the seating places or the benches can be quite adaptable and flexible. So, users can have the possibility to sit together with strangers if they feel comfortable to do so or share the same bench but also keep adequate distance so that they do not feel like their privacy is violated.

Such an example is the curvy bench, which can also function as a spot for playing or even skateboarding when it is long enough.

Figure 153. Curvy Bench
(Diagram by the Author, Icons by <https://thenounproject.com/>)

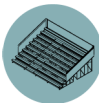
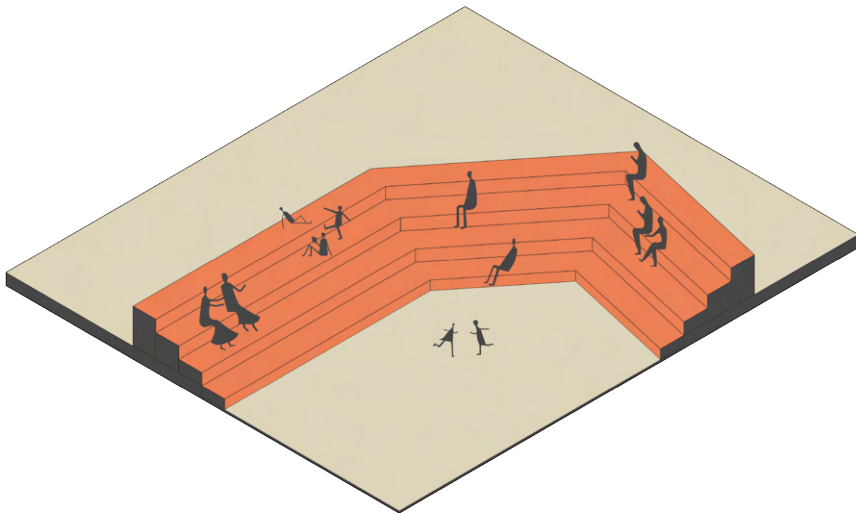


Wide and Corner Bench

Wide benches offer the same possibilities as the curvy ones, with people being able to sit together but not necessarily facing each other, contributing to both passive and active social interaction.

Corner benches can really promote interaction, as not being able to socialize while sitting on parallel benches is often the case. In this way, different groups can sit together facing one another if they prefer so.

Figure 154. Wide and Corner Bench
(Diagram by the Author, Icons by <https://thenounproject.com/>)



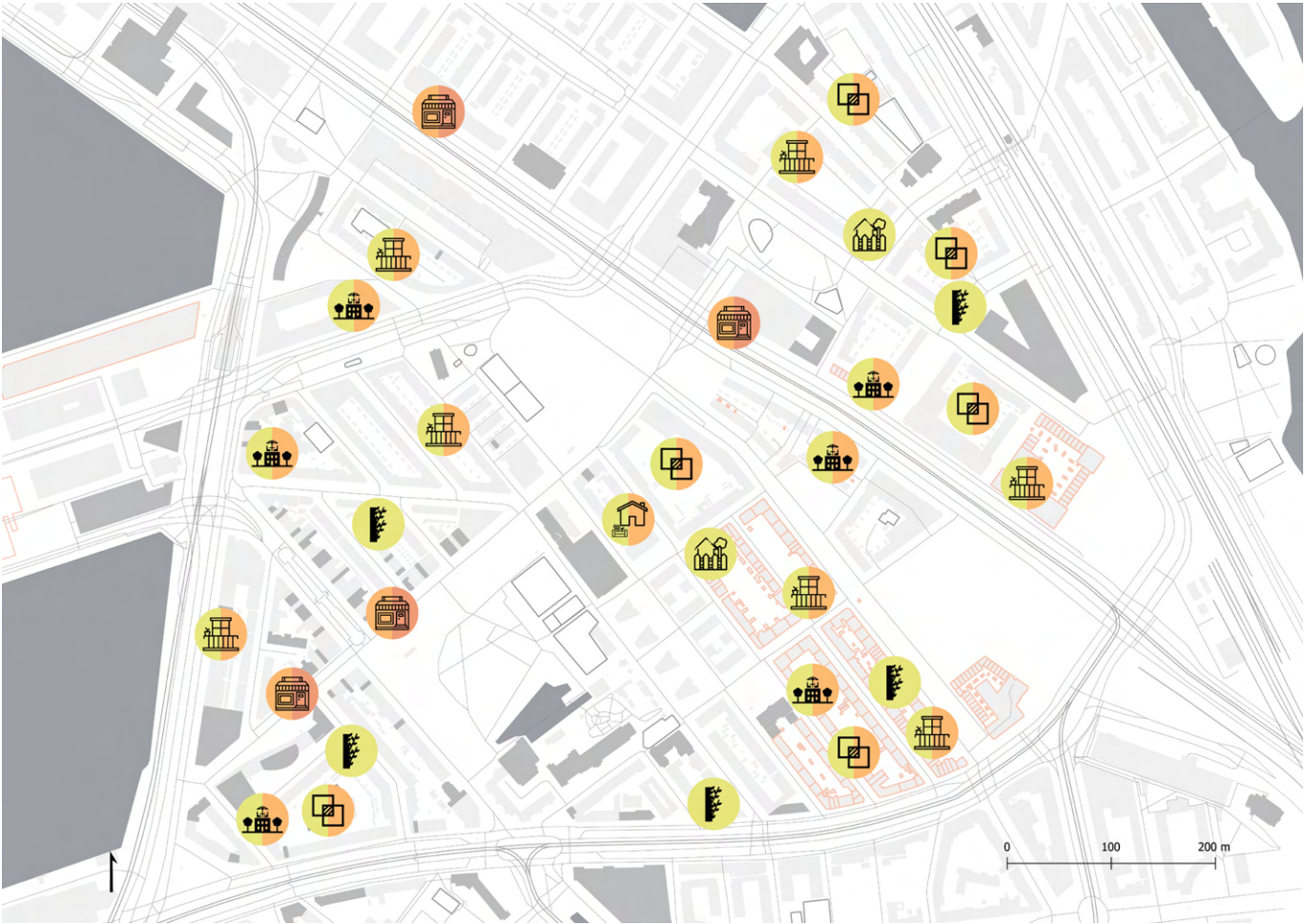
Bleachers

Bleachers of different kinds, smaller or bigger, permanent or not, with different materialization, can be used everywhere in the city, from school yards to open public spaces or smaller corners.

They provide seating spaces but at the same time they can also be used in cinemas, theaters or pop - up events in the city.

Figure 155. Bleachers
(Diagram by the Author, Icons by <https://thenounproject.com/>)

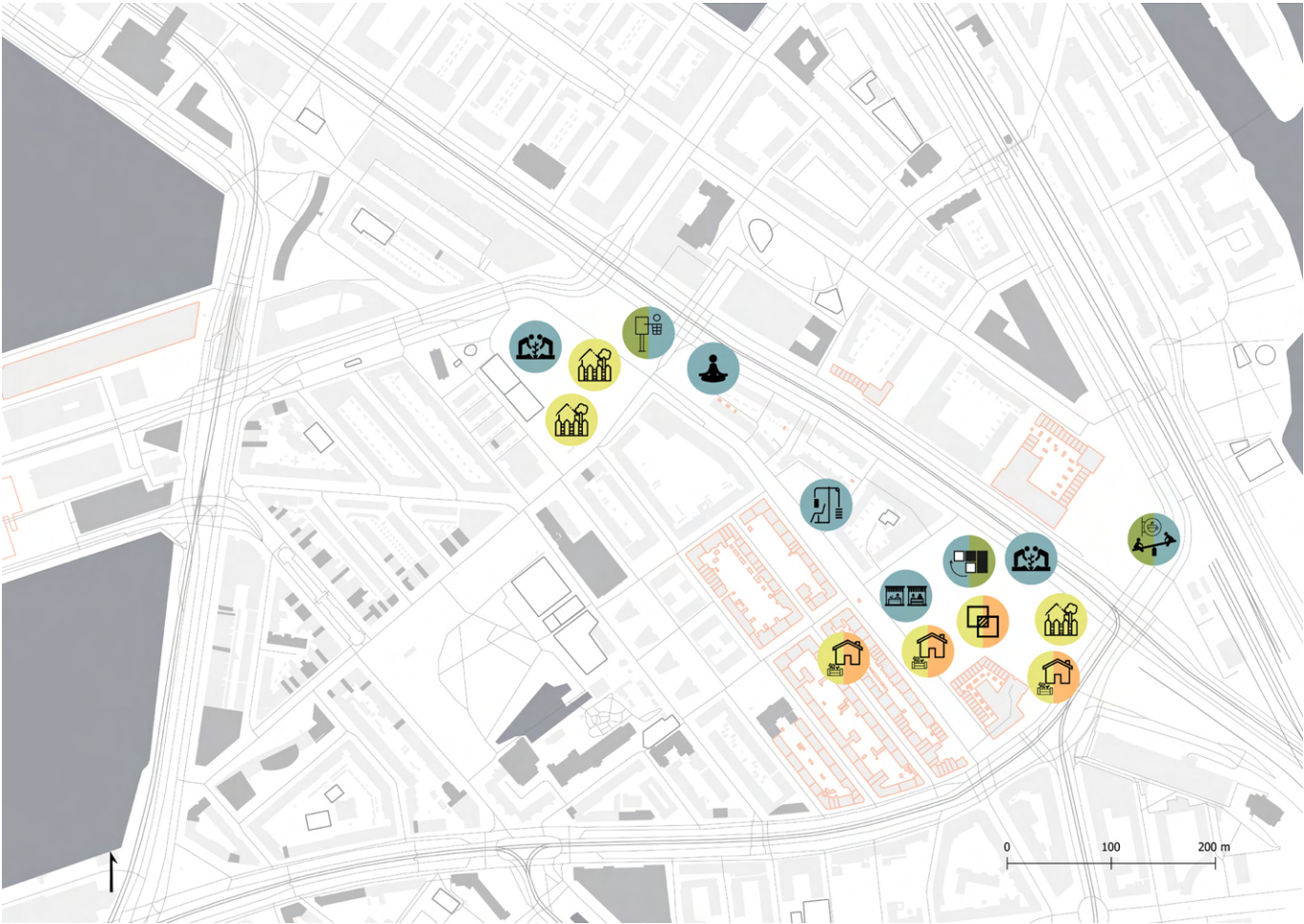
5.3 | Distribution of Design Principles Residential Blocks



- Front Yards
- Facade Gardens
- Balconies
- Rooftop Common Spaces
- Common Spaces
- Collective Spaces
- Sheltered Entrances

Figure 156. Existing Residential Block Interventions
 (Map generated by QGIS, by the Author, Icons by <https://thenounproject.com/>)

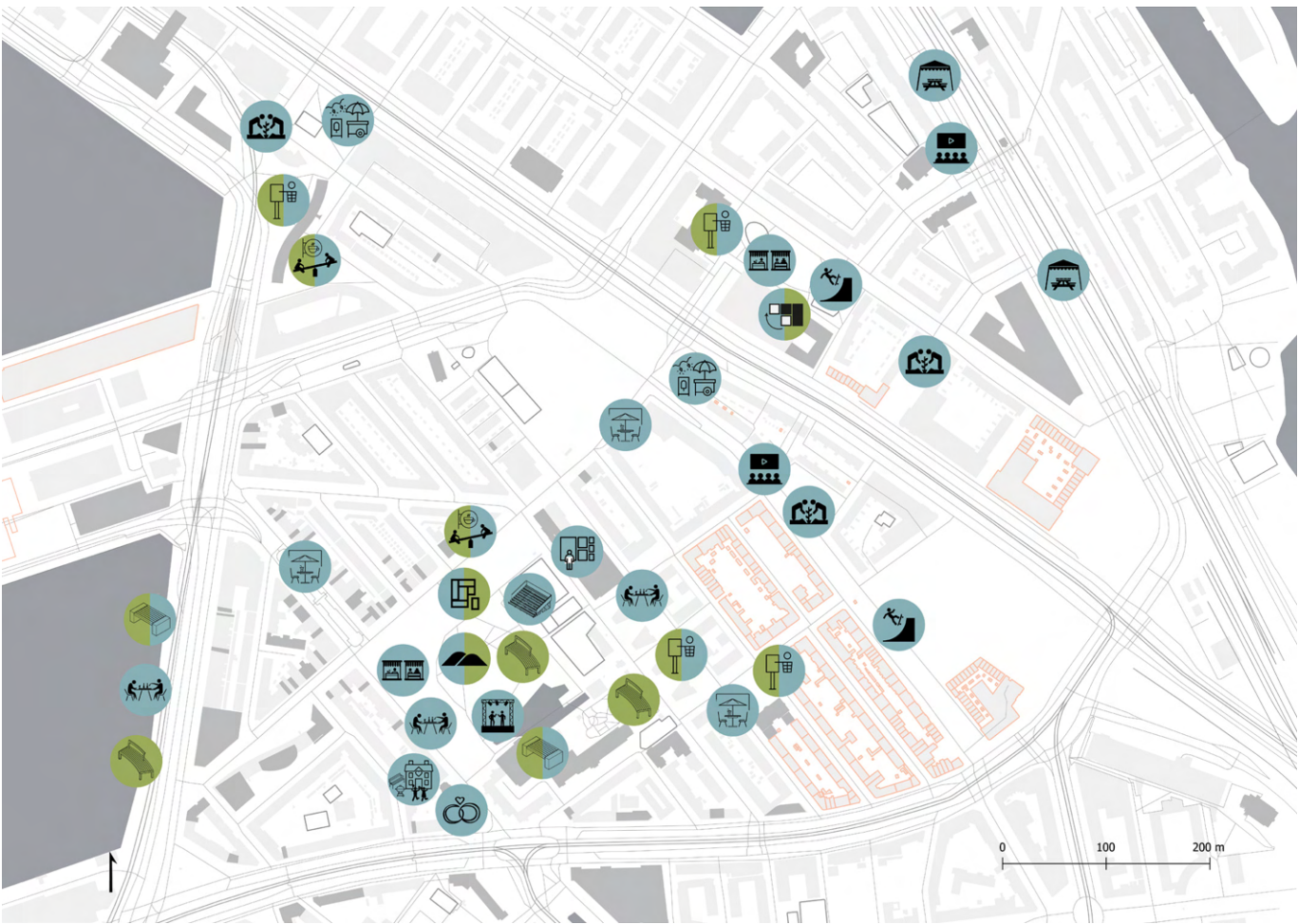
Construction Areas



- Front Yards
- Common Spaces
- Collective Spaces
- Community Gardens
- Modular Furniture
- Modular Furniture
- Playgrounds - Seating Areas
- Courts - Seating Areas
- Outdoor Sports
- Sports Equipment

Figure 157. Construction Areas Interventions
 (Map generated by QGIS, by the Author, Icons by <https://thenounproject.com/>)

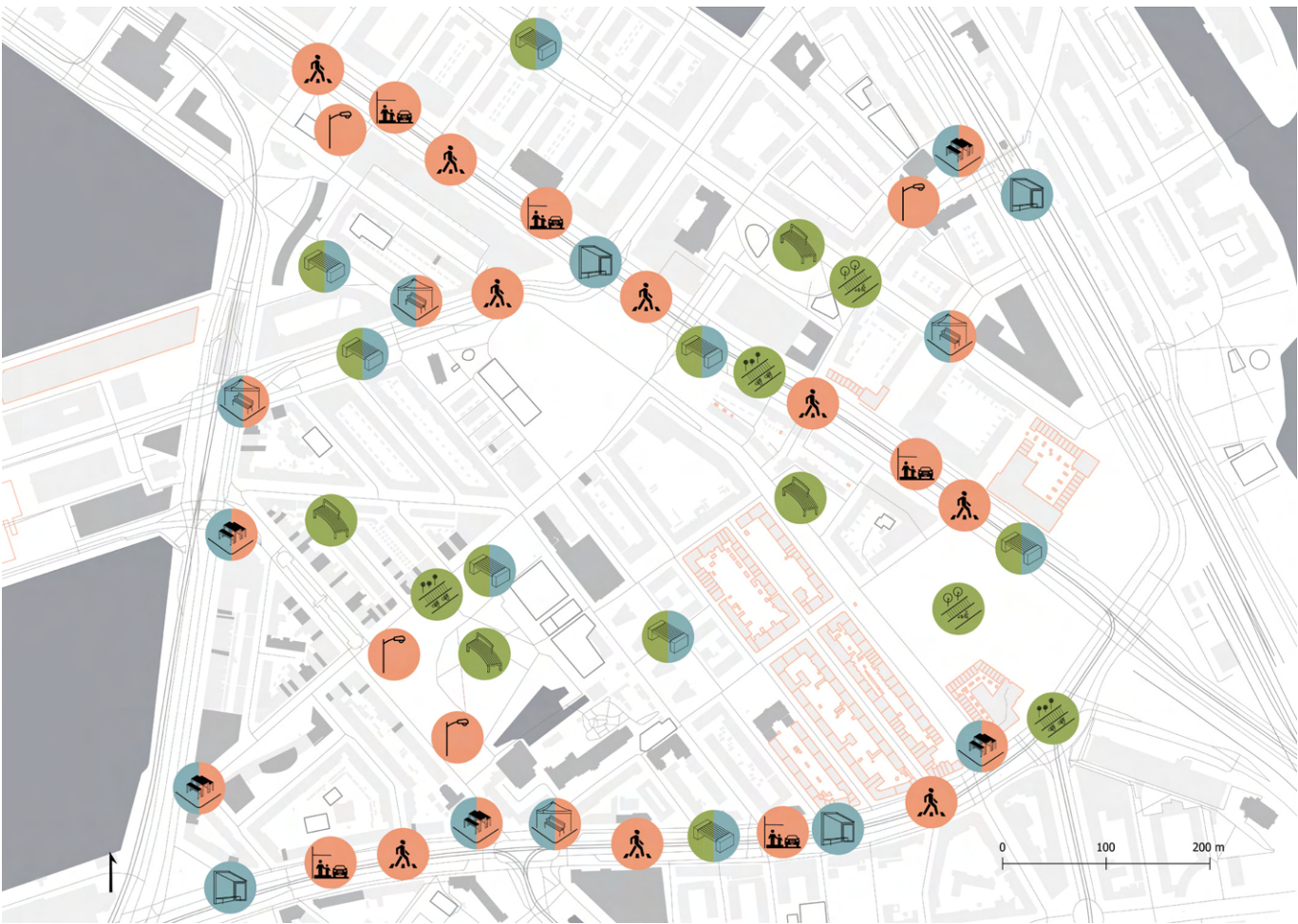
Public Spaces



- | | | |
|---------------------------------|---------------------------|-----------------------|
| Community Gardens | Courts - Seating Areas | Games |
| Gathering Spaces | Market | Modular Furniture |
| Cultural - Neighbourhood Events | Outdoor Cafe Extensions | Canopies |
| Skate Parks | Open Air Cinema | Curvy Bench |
| Playgrounds - Seating Areas | Cultural Events | Bleachers |
| Slopes | Multifunctional Surfaces | Wide and Corner Bench |
| Events Stage | Announcement - Art Boards | |

Figure 158. Public Space Interventions
(Map generated by QGIS, by the Author, Icons by <https://thenounproject.com/>)

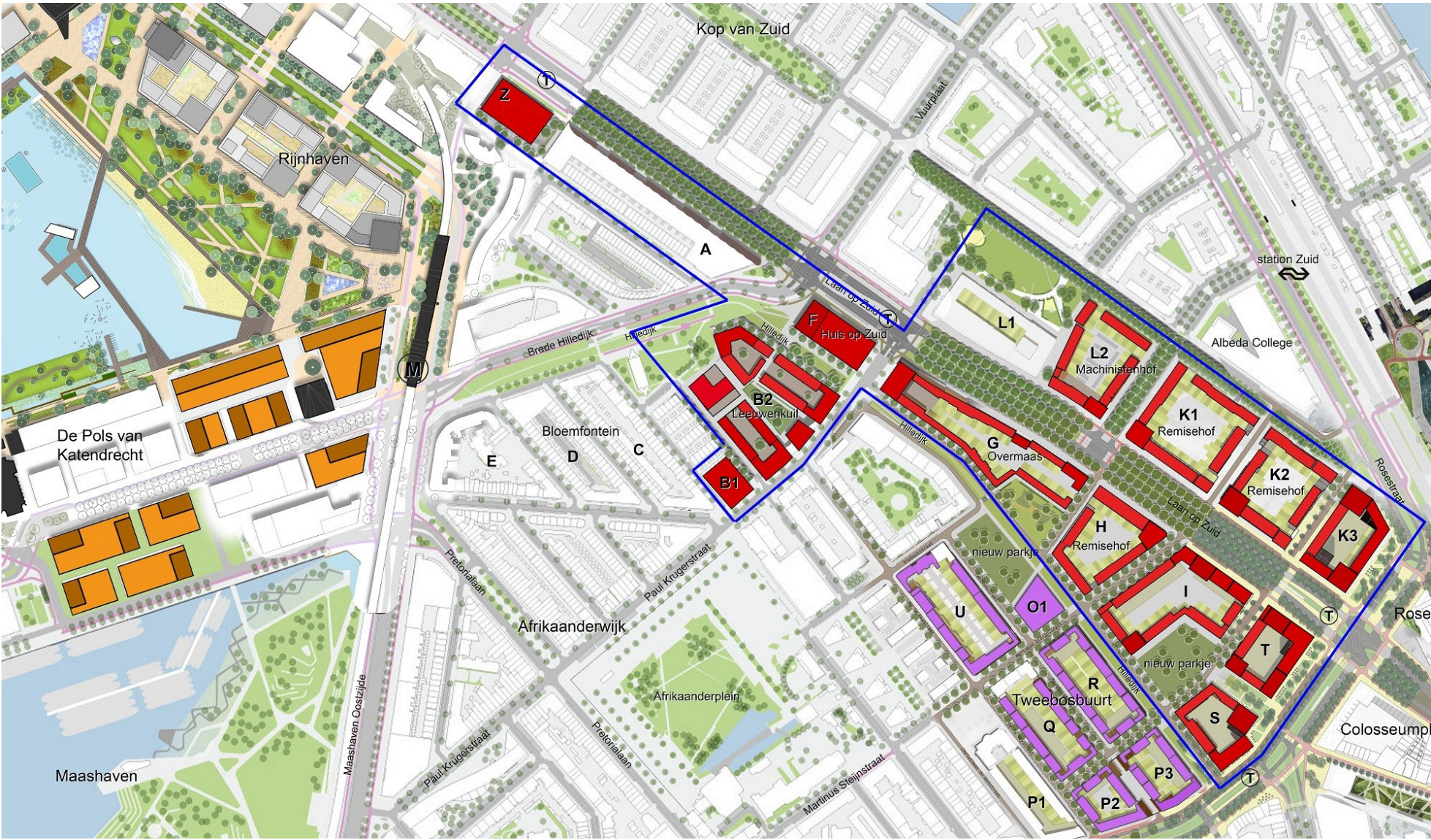
Streetscape



- | | |
|-----------------------------|-----------------------|
| Lightning | Wide and Corner Bench |
| Sheltered Sidewalks | Curvy Bench |
| Pedestrian Priority | Bus Stops |
| Street Corner Canopies | Different Routes |
| Street Corner Seating Areas | Height Differences |

Figure 159. Streetscape Interventions
(Map generated by QGIS, by the Author, Icons by <https://thenounproject.com/>)

6.1 | Current Municipality Plans



As already mentioned before, the Municipality of Rotterdam focuses on regenerating the whole of Rotterdam South, in order to “offer more pleasant and affordable living for those with middle or higher incomes” (Gemeente Rotterdam, n.d.). However, the current residents are missing from this statement.

In the place of former social housing complexes, new residential units for upper - class residents are being developed, without an actual plan for where these former residents are going to relocate to. This has already caused a lot of tension between the municipality and the people currently living there, however no new policy has been introduced even to this day.

As seen on the map above, the highlighted area, called Parkstad, is already being transformed into a neighbourhood functioning as a “connecting element” between the two parts of Laan op Zuid. It will consist of large building blocks, as seen in the pictures, quiet monofunctional, with a “hard” exterior, uninviting to non - residents, but with a collective interior, for very specific social groups.

The same goes for the soon to be demolished social housing blocks in Afrikaanderwijk, depicted with purple on the map. There seems to be no mixing of functions or apartment types, which could facilitate different target groups.

What is more, the only social housing unit that is going to be constructed, is Block S, which as depicted on its renders will contain a parking lot in its inner yard, not really promoting interaction.

Overall, it is quite visible that the new plans do not aim at co-existence or interaction between different social groups. The purpose seems to be at creating smaller

neighbourhoods inside the neighbourhood, with huge inner “collective” spaces, which as observed from the already constructed blocks, only function as closed parking lots, with little to no dialogue with the street and people outside.

At the same time, the proposed public facilities, like Huis op Zuid, a building containing a mix of sports and residential amenities, are designed in a way that it is almost impossible to “communicate” with their environment, so that a cohesive image of the city cannot be created.

Thus, the current thesis project aims at redesigning certain parts of the current plan, into a more inclusive and diverse environment, which will give emphasis on trying to facilitate the needs of various social groups.

Figure 160. Existing Masterplan of the Area
(Image by Gemeente Rotterdam)

Figure 161. Rendered Image of Huis op Zuid
(Image by Koen van Velsen Architecten)

Figure 162. Rendered Image of Planned School Building
(Image by OIII Architecten)

Figure 163. Rendered Image of Planned Residential Block
(Image by Imagine)

Figure 164. Rendered Image of Planned Inner Collective Space
(Image by KOER)

Figure 165. Rendered Image of Planned Social Housing Unit
(Image by KOER)

6.2 | Vision

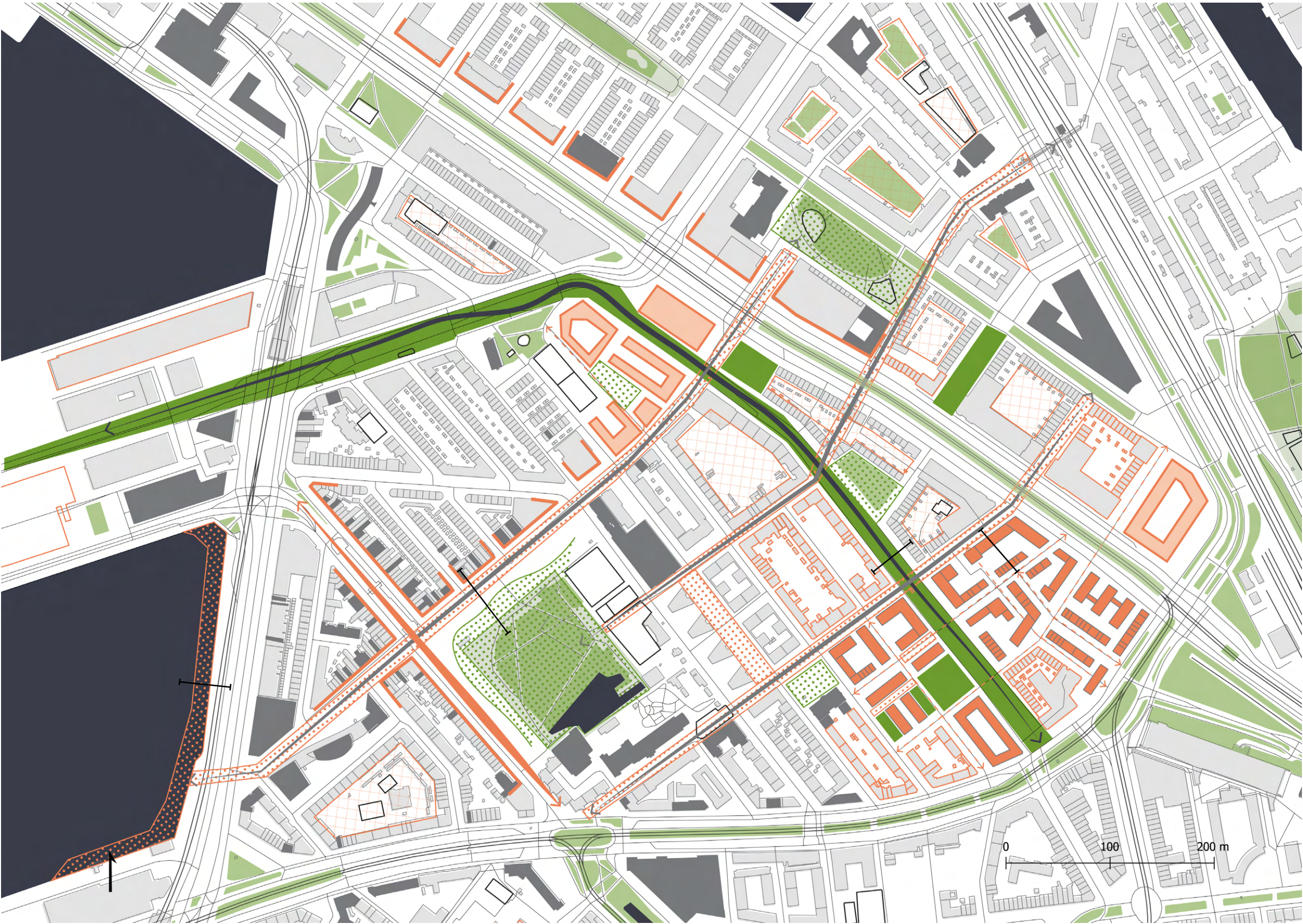


Figure 166. Vision Plan
(Map generated by QGIS, by the Author)

Concept

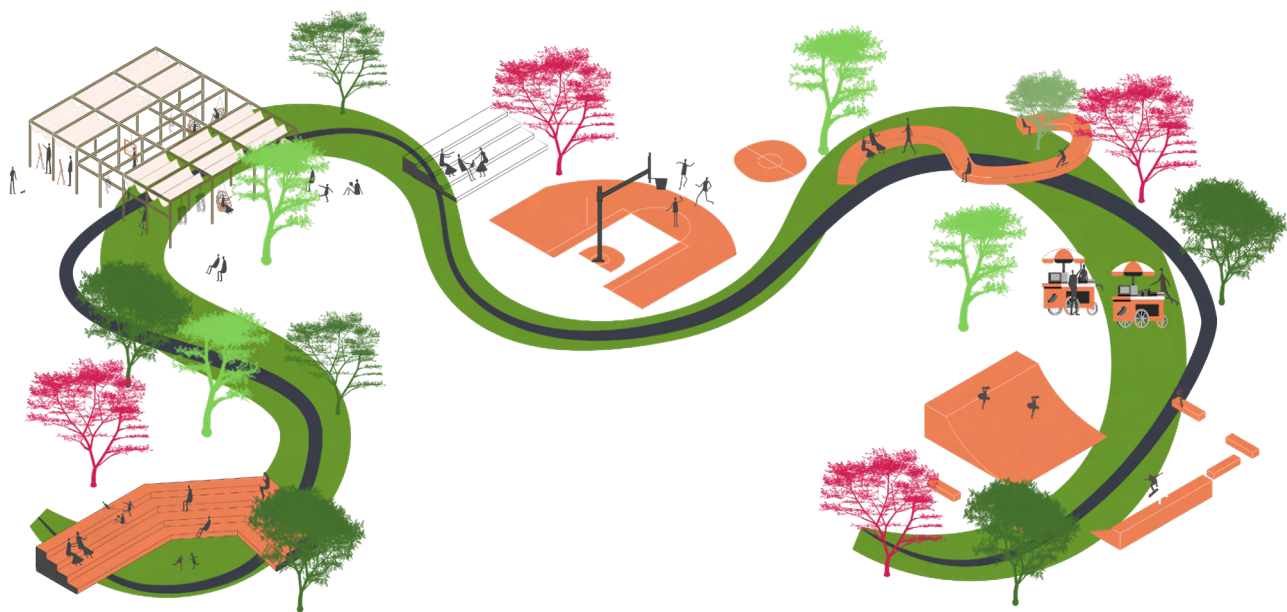


Figure 167. Linear Park
(Diagram by the Author)

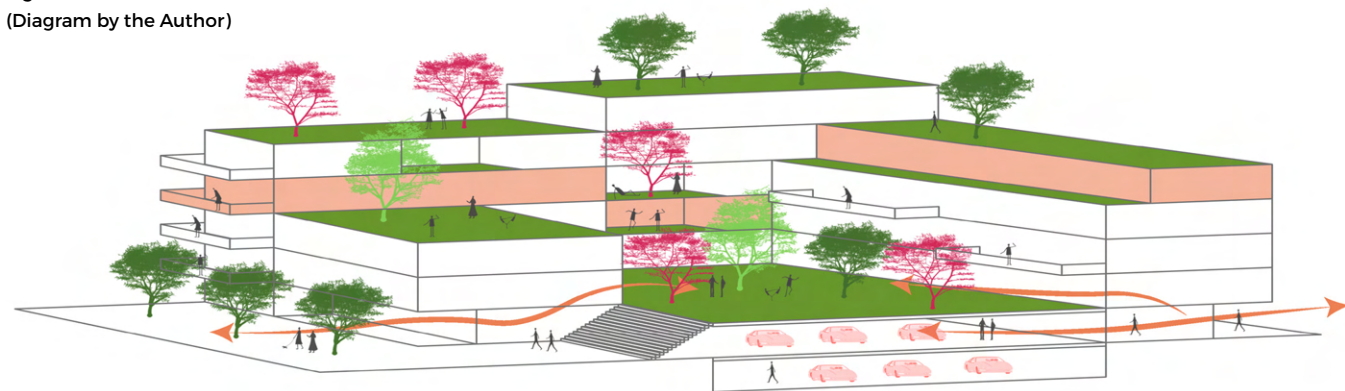


Figure 168. Proposed Types of Common and Collective Spaces
(Diagram by the Author)

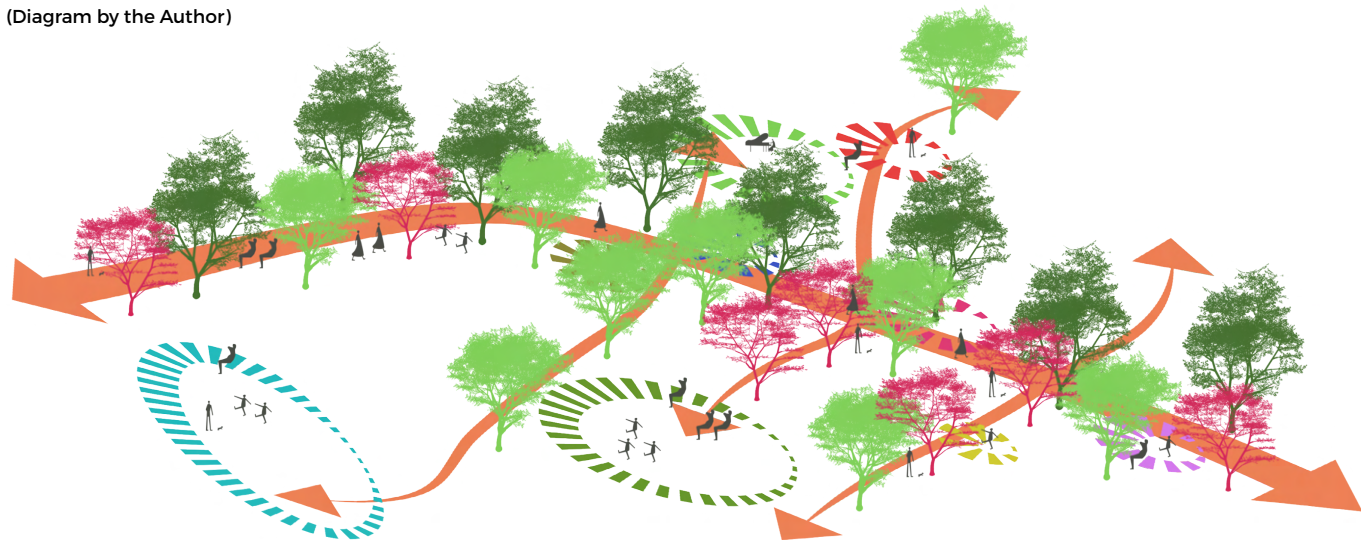


Figure 169. Network of Public Spaces
(Diagram by the Author)

The proposed plan of the area focuses on two sectors; a new densification plan for the demolished social housing blocks and the creation of a connecting element between the different parts of the neighbourhood, in the form of a public route, crossing the whole area, connected to smaller ones, so that a network of public spaces and routes, with different sizes, programming and functions can be realized.

As far as the densification plan is concerned, the new proposed blocks are much smaller in size, with different forms and typologies to facilitate different social groups, while at the same time containing adequate space for encounter, interaction and different activities.

According to the proposed design principles, these new blocks contain either an inner collective space, directly connected to the outside, or front yards, or they could even be directly connected to a bigger neighbourhood open space. Common spaces on different levels are an essential part of the new design, as well as a mix of functions inside the block.

As far as the network of public spaces is concerned, the idea derived from the need to transform the dike that crosses the neighbourhood, from a barrier that it is now. As it was earlier observed, the dike although only remotely designed, attracted groups of people like teenage girls or smaller children

and adult women, who needed a quite place to meet, on the edges, where they could observe but not so easily be observed.

The result could be a linear park, with the element of water reintroduced in the area, which could function as the main pedestrian route, connected to smaller ones, crossing the whole neighbourhood, with openings for different activities attached to it. In this way, new open neighbourhood spaces are created, with emphasis on different style and programming.

As already stated, an intention was for the water element to be strong in the area again, as the neighbourhood is attached to the harbour, but due to the heavy infrastructure that exists there now, it has lost its connection to the city. In this sense, starting from the harbour, a new waterfront was developed, more pedestrian friendly, with water being again redirected inside the city in the form of bioswales in the new pedestrian routes, reclaiming parts of the streets for the people.

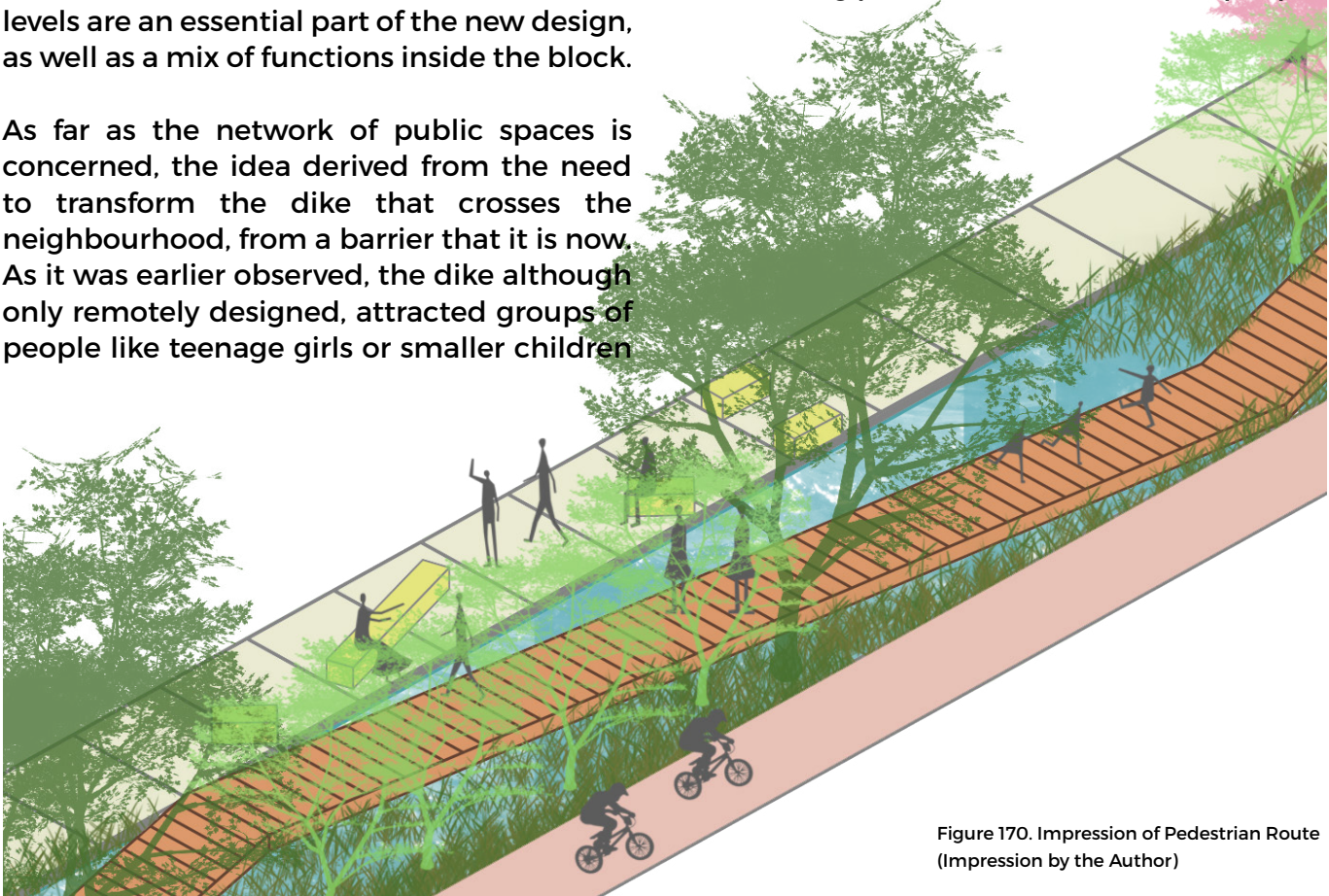


Figure 170. Impression of Pedestrian Route
(Impression by the Author)

Indicative Sections

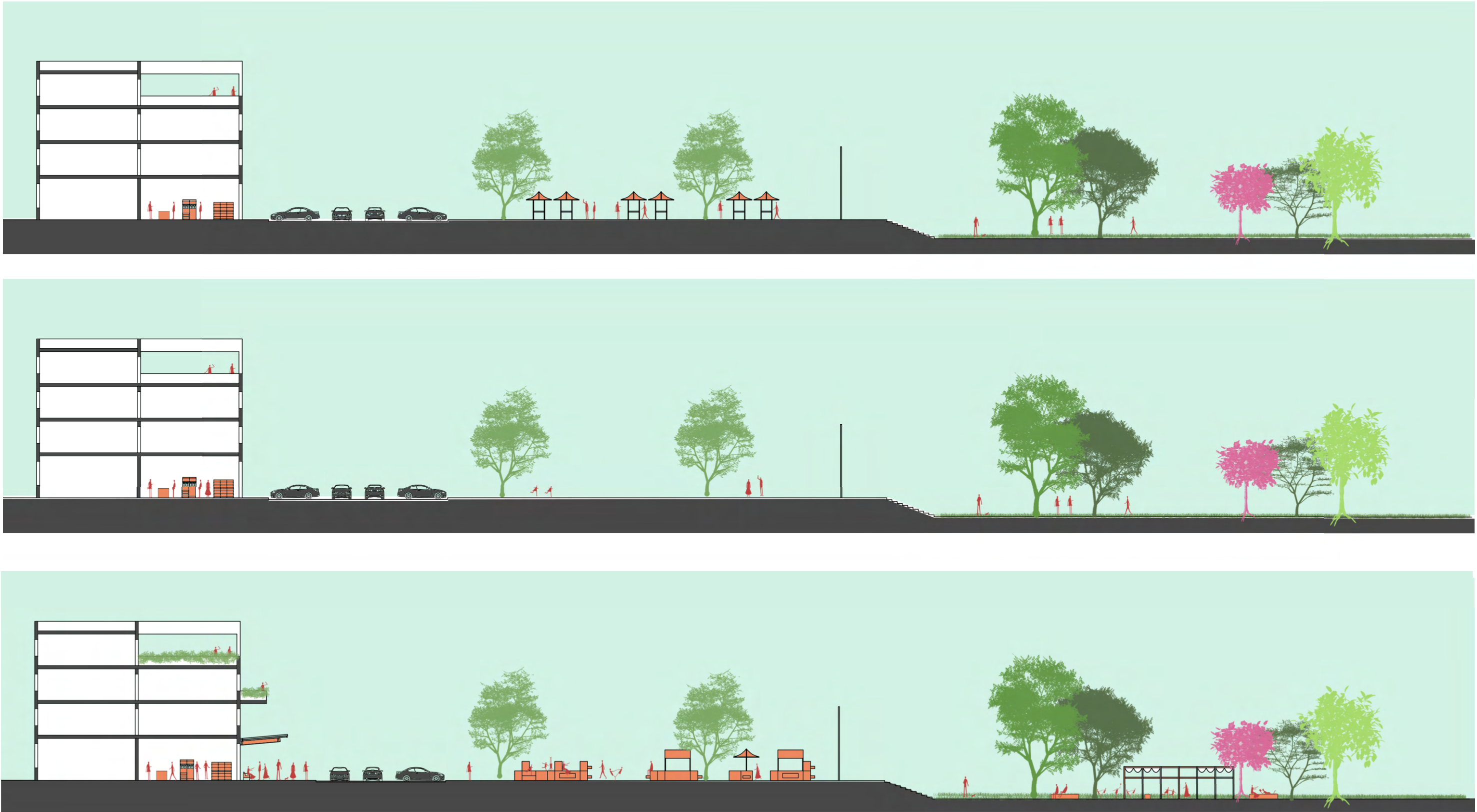


Figure 171. Market Area - Before and After
(Sections by the Author)



Dike

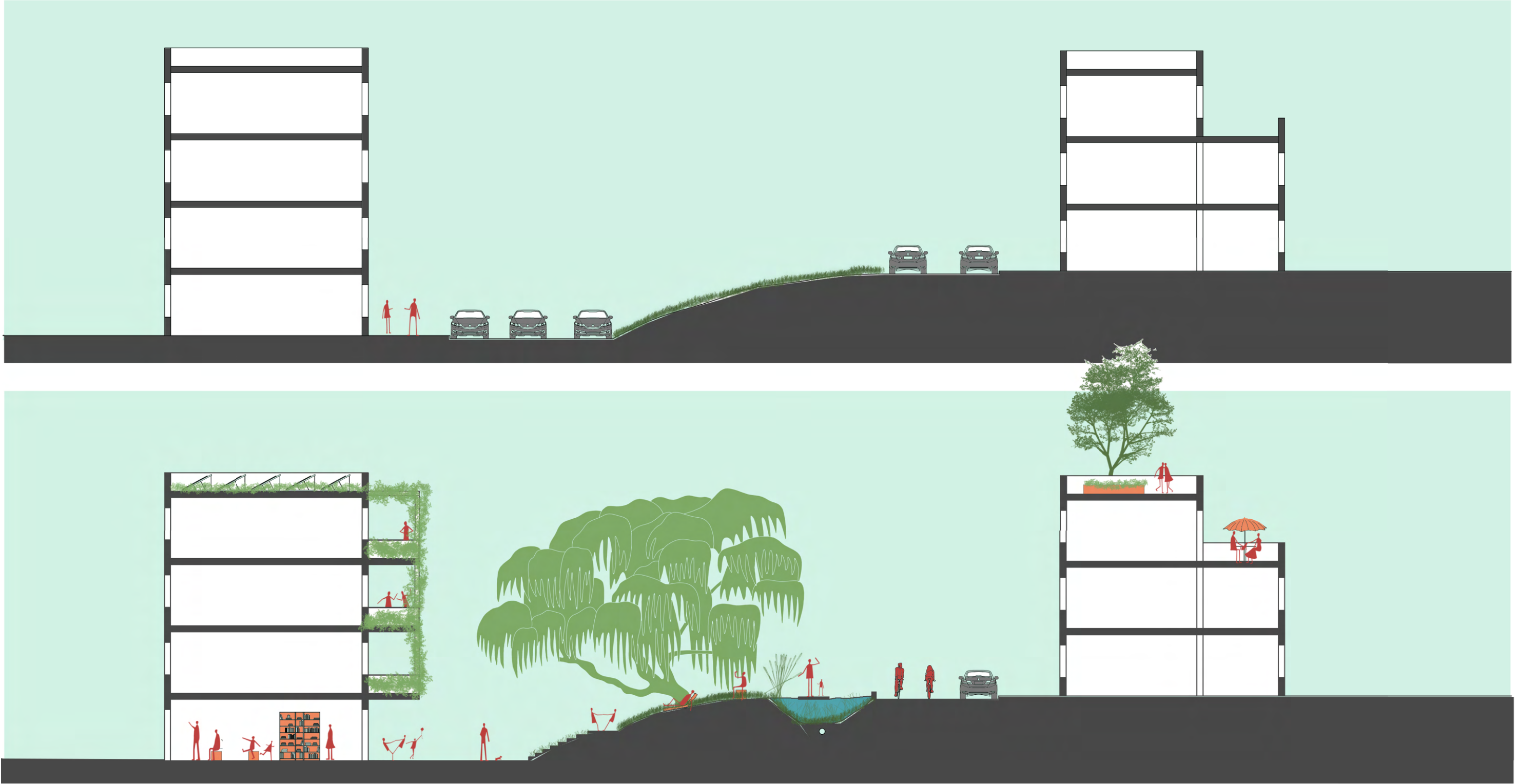


Figure 172. Dike - Before and After the Interventions
(Sections by the Author)

Waterfront Area

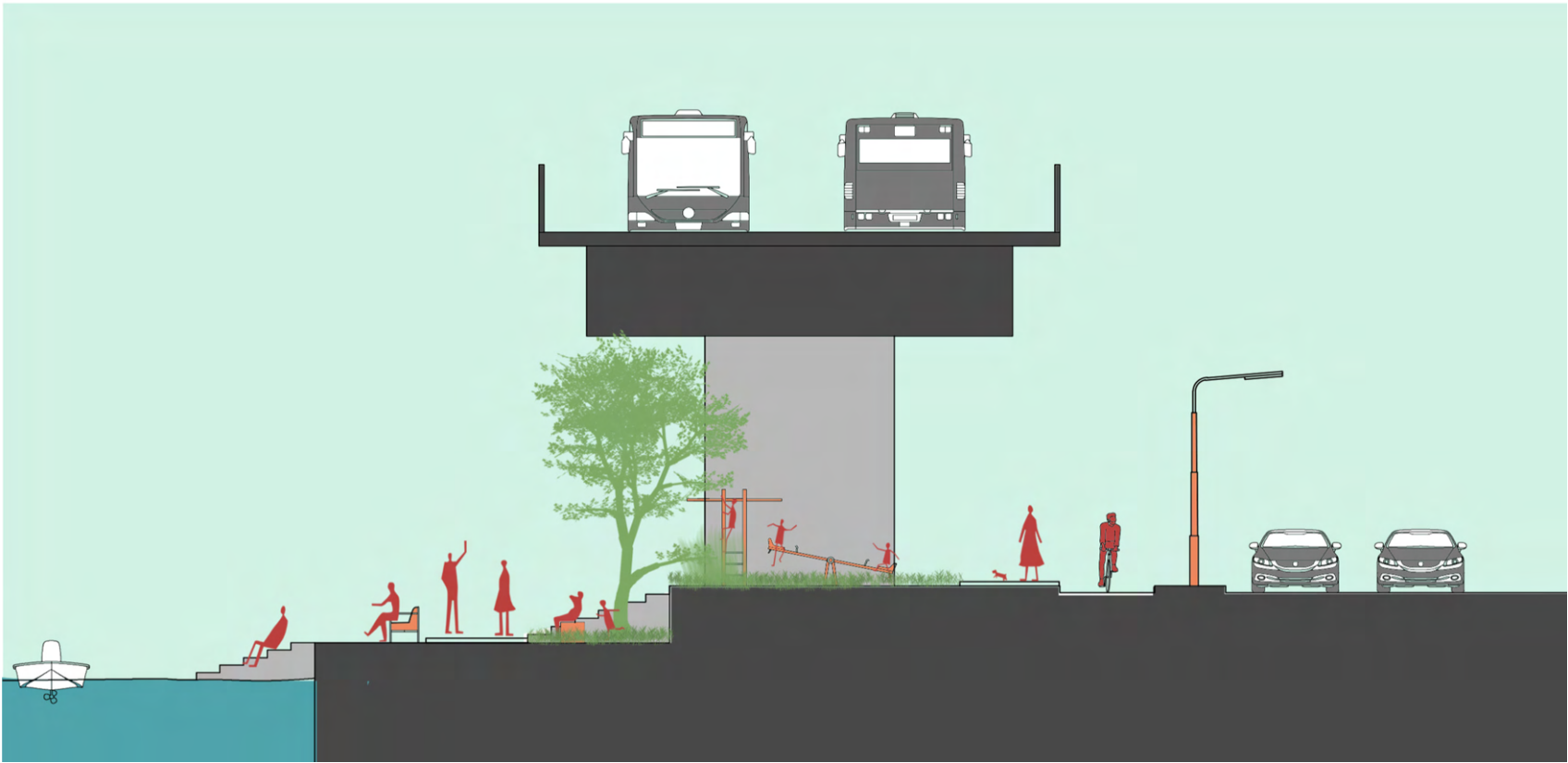
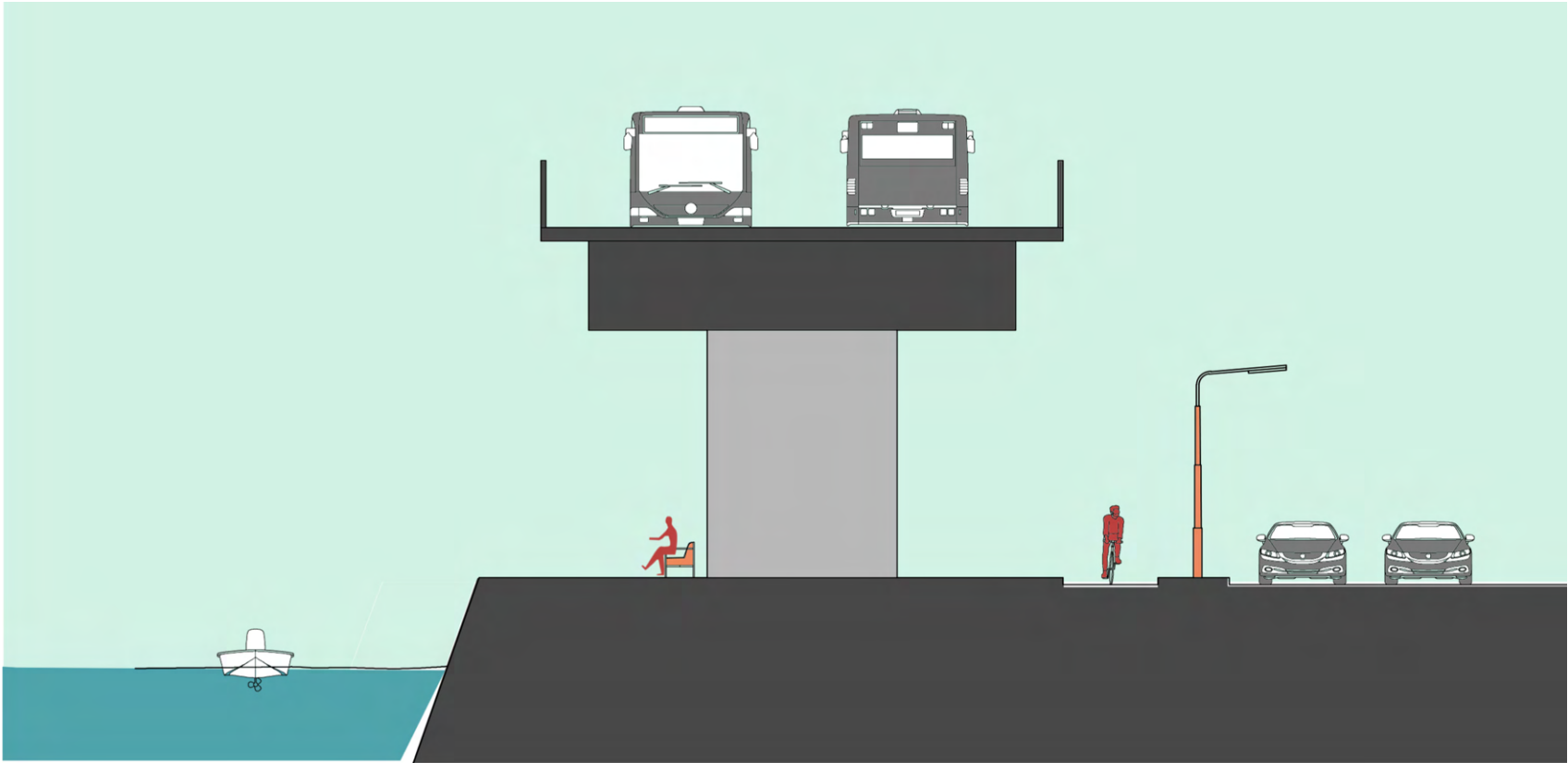
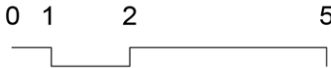


Figure 173. Waterfront Area - Before and After the Interventions
(Sections by the Author)



Building Block



Figure 174. Proposed Building Block
(Section by the Author)

6.3 | Zoom-in Areas

Afrikaanderplein



Figure 175. Proposed Plan of Afrikaanderplein
(Plan by the Author)

Zooming in on different parts of the area, different types of spaces were selected, to cover a variety of different types of interventions, while applying the design principles.

A first place that was chosen was Afrikaanderplein, the biggest and most supralocal open green space of the area. Its size, compared with the fact that almost no programming exists there now, except an undeveloped green space, has led to almost no use of the place.

However, as it situated at the heart of the neighbourhood, it also has the potential to function as such. This is why, new programming was added there.

To the already existing paths of the park ,new were added, to separate it into smaller parts, with also different materialization, instead of the already existing grass everywhere. Seating spots were added, both for people wanting to sit together or somewhere more secluded, as well as different types of vegetation, according to the Dutch landscape.

The new program consists of an amphitheatrical structure, of a considerable size, as it was observed that one of the main reasons why people used the park, was in order to attend community gatherings or public events.

A submerged volleyball court with bleachers, functioning also as a water square was added, along with a small cafe and stage for cultural events and festivals next to the lake. The different levels of the space give more opportunities for staying and the different program can ensure that the place is used during different hours of the day, by different groups of people.

Section

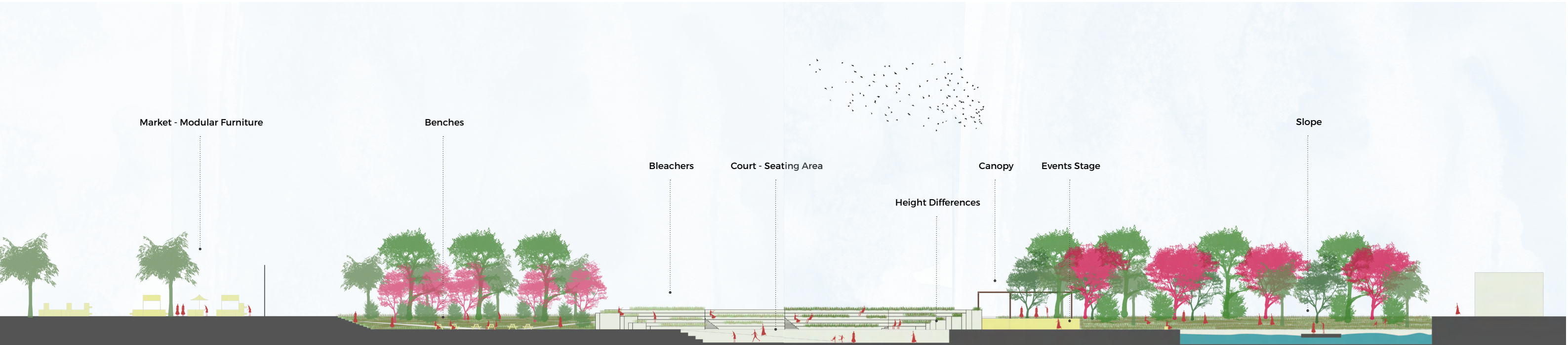
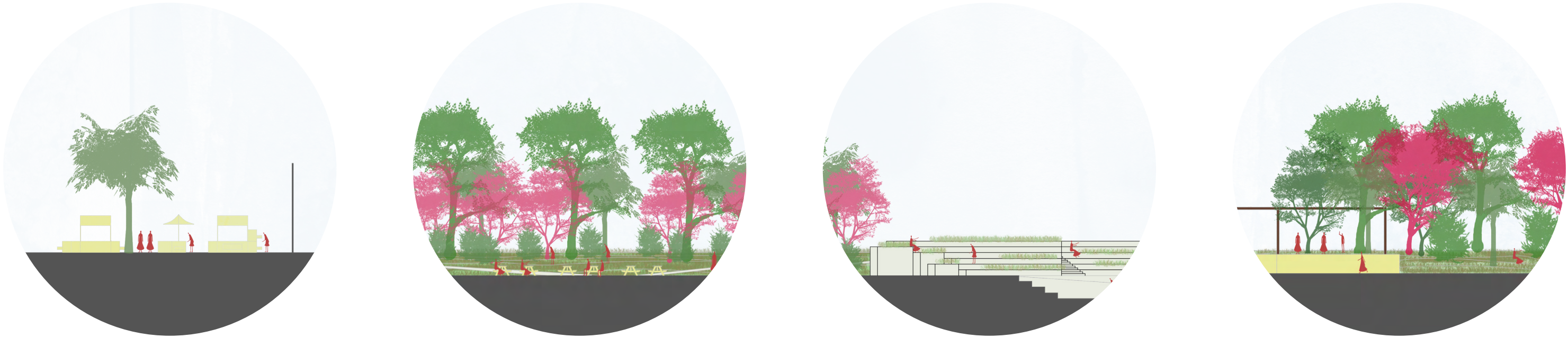
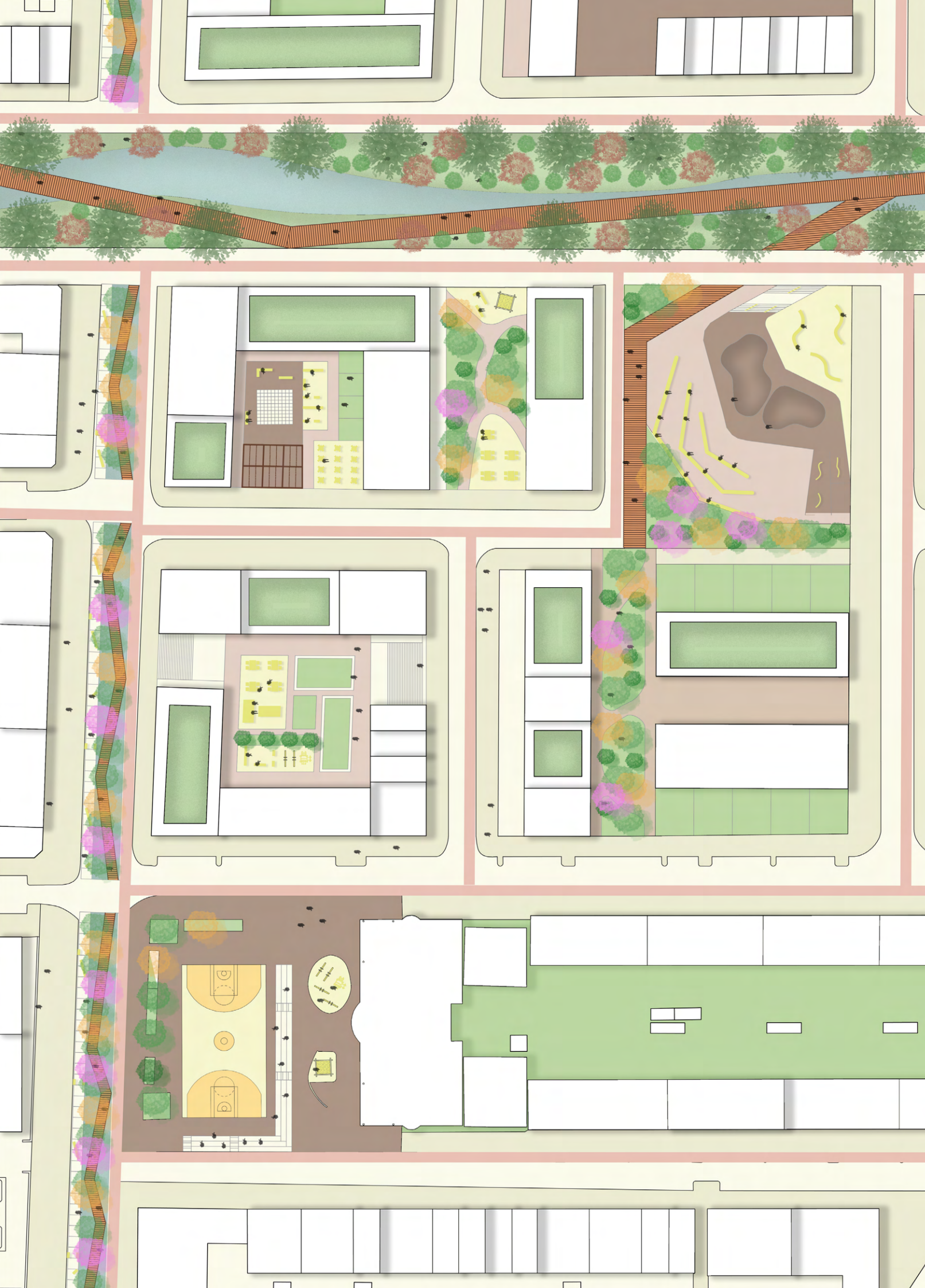


Figure 176. Section of Afrikaanderplein
(Section by the Author)



New Building Blocks

The basic idea behind the densification of the area, was not only to provide new housing for the rapidly expanding population of Rotterdam, but also provide a healthier and more inclusive environment, where people could feel integrated and not as part of a problem that had to be relocated. For this purpose a lot of emphasis was given on public and collective spaces and activities inside the neighbourhood, having in mind the needs of the already existing population of the area.

The new building blocks consist of different typologies and different functions. Most of the clusters contain a mix of residences, together with office spaces, sports, cultural or educational facilities either for the residents or for the public in general and common and collective spaces on different levels. There are also shops and cafes mostly on the first floors of the buildings.

Some of the ground floors serve as open plinths with active facades that could to refer either to the residents or to the public. Common spaces, interior or exterior, with community gardens can be found on different levels, to lead to an active neighbourhood where they can keep in touch with one another and socialize in different ways.

Some blocks contain an elevated semi-public or collective space, that can host different activities and provide a place for interaction but also access to the surrounding units. Underneath these elevated decks, parking spaces could be created in one or two levels.

In other blocks, the inner courtyard is on the ground level, with a mixture of common and private spaces, flexible enough to be transformed according the needs. Other contain front yards or are directly connected to a more public space. Significantly important especially for this specific area,

was the addition of balconies, especially when it came to the apartments facing the streets, as well as street furniture, for informal interaction.

Figure 177. Proposed Plan of New Building Blocks
(Plan by the Author)

Section

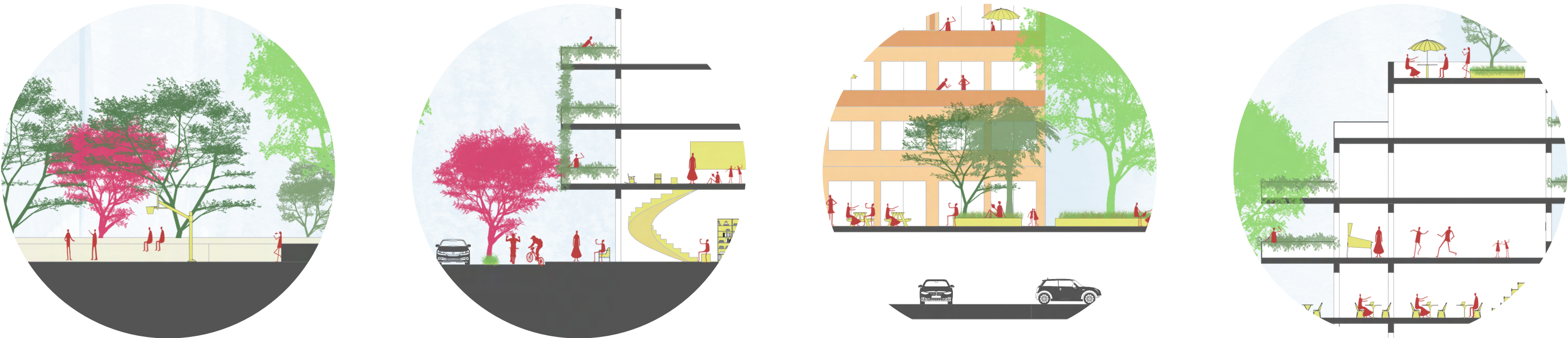


Figure 178. Section of New Building Blocks
(Section by the Author)

Section

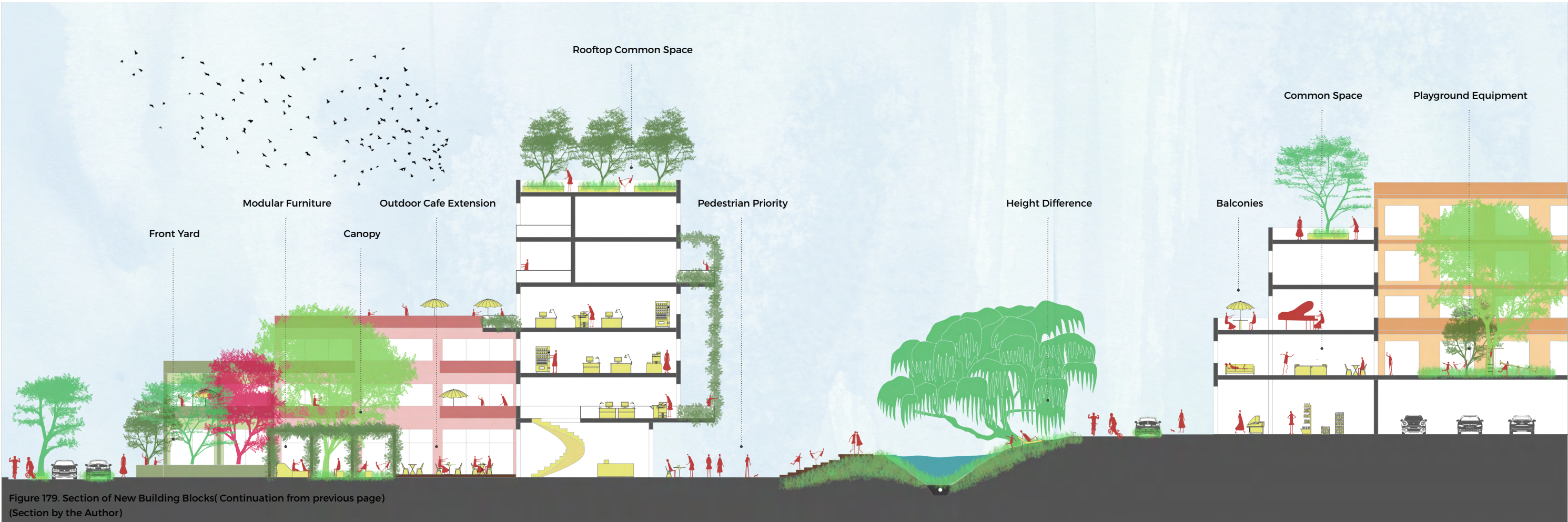
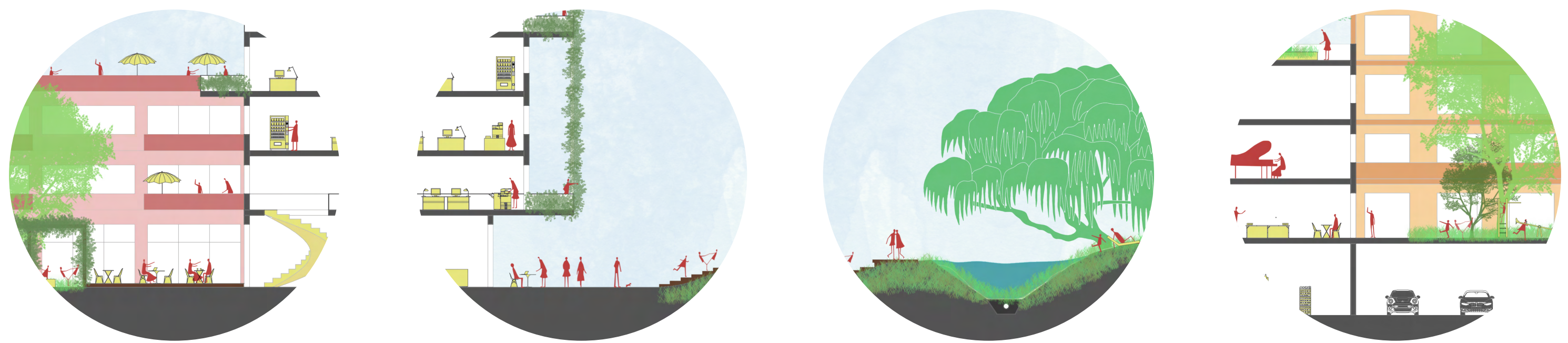


Figure 179. Section of New Building Blocks(Continuation from previous page)
(Section by the Author)

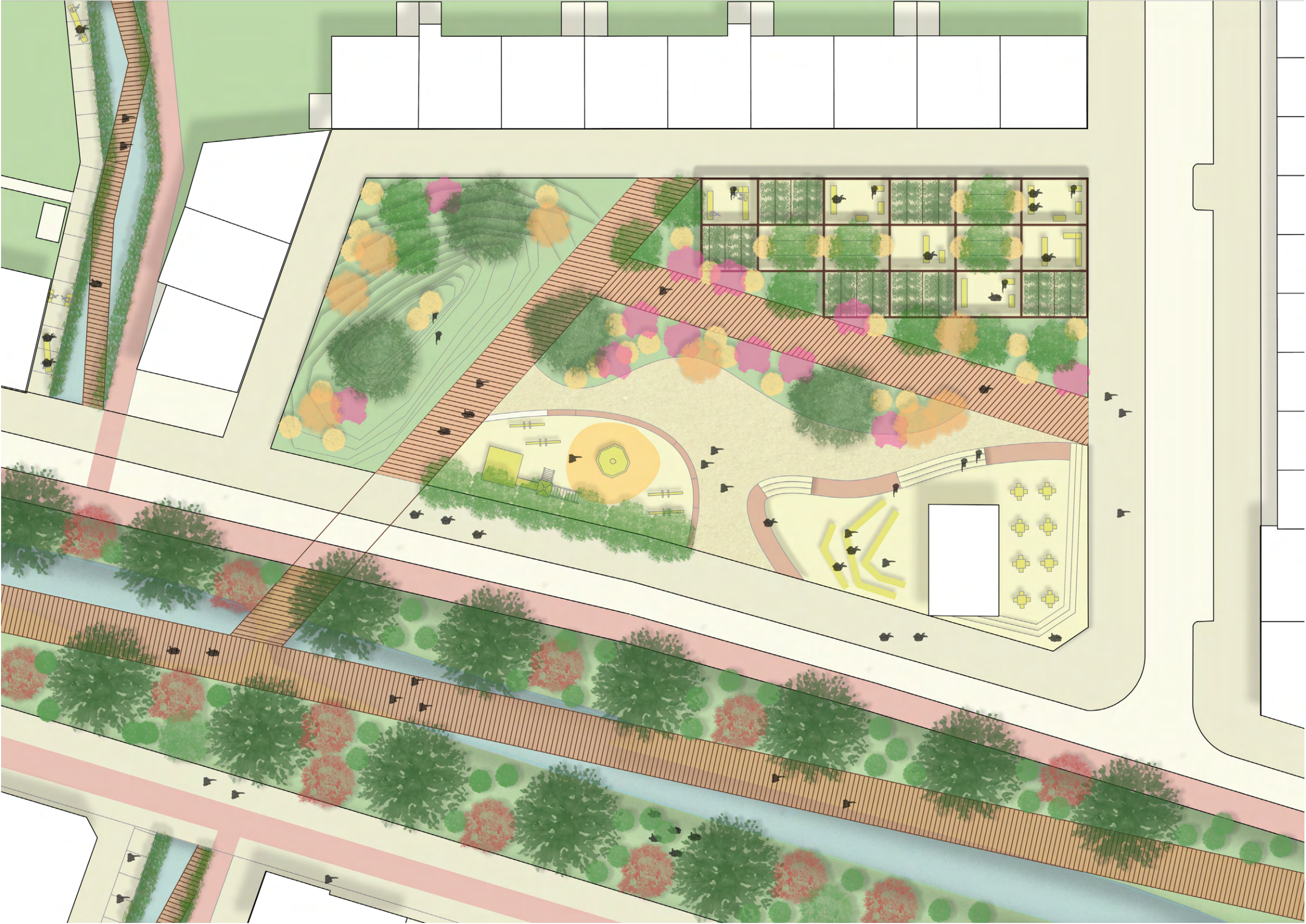


Figure 180. Impression of Pedestrian Street
(Impression by the Author)



Figure 181. Impression of Interior Space
(Impression by the Author)

Instance of Linear Park



Along the linear park, different types of public spaces were created, on various openings provided by now empty plots.

These spaces have different characteristics and try to cover the needs of the neighbours for interaction and relaxation. They are quiet flexible in terms of use and they can easily be transformed in the future.

They are created using affordable means, with soft materials. An instance is this small park, between existing building blocks and the dike, which combine a mix of elevated and submerged spaces, a garden with canopies, especially valuable for the elderly, a small playground for children and a small neighbourhood size open air cinema for the summer, or some extra seating spots for all year long.

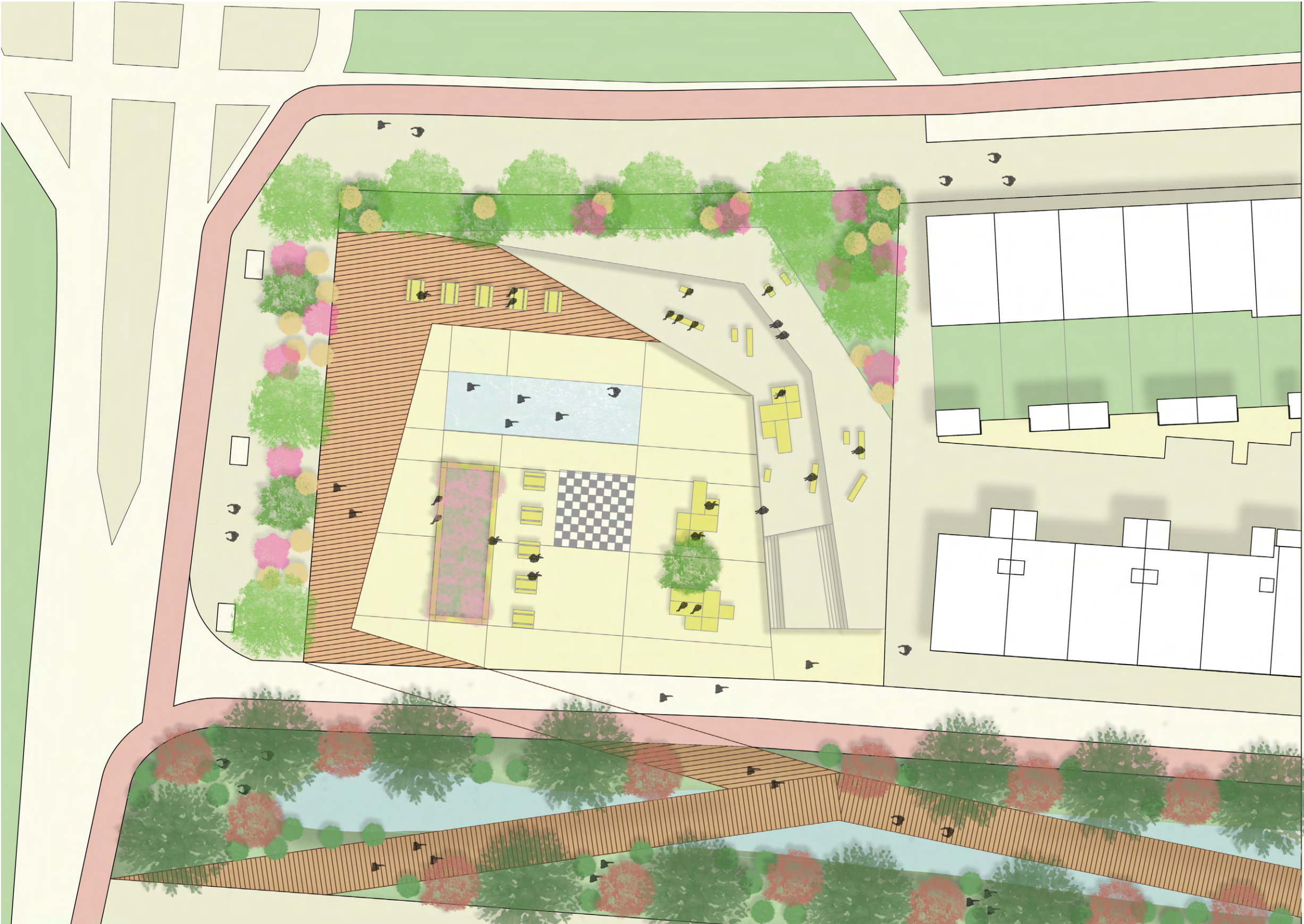
It is directly connected to the dike with an extension of the same wooden deck and uses primarily rammed earth, friendly for children and people with disabilities. The different places inside the small park make it easier for different groups of people to appropriate it during different hours of the day, without necessarily interacting with each other.

Figure 182. Plan of New Neighbourhood Space
(Plan by the Author)



Figure 183. Impression of Neighbourhood Space
(Impression by the Author)

Instance of Linear Park



Another instance of those new smaller open spaces, is one next to the main street of the area, Paul Krugerstraat, containing again different functions for different users, like bleachers and movable furniture for those groups that prefer to stay on the sidelines of an area, while still being able to be part of it and observe everything.

Fountains for children' s play as well giant board games for all generations coexist, so that different age groups can come together and interact. A thick zone of vegetation separates the place from the high street, but the parts facing the dike and the building blocks remain open and accessible to everyone.

Figure 184. Plan of New Neighbourhood Space
(Plan by the Author)

Reclaiming the Street

As stated before, a lot of emphasis was given on making the streets more people friendly and creating new pedestrian routes connecting important parts of the area. This is the case here, where a parking lot/ paved street leading to the train station of the area, Rotterdam Zuid, was turned into a new public route, combined with a parklet next to it.

In this specific street, the ground floor apartments of the buildings are elevated and they can be entered by stairs, creating small balconies in front of them. There was observed that people used to gather at the stairs while drinking their coffee or while smoking, to talk to each other, read a book or simply watch their children playing at the street.

Thus the idea to give more room to those people to interact and socialize, creating a submerged, to the street, level, with vegetation dividing it from the actual pedestrian and cyclist route, with different parts, either for the kids to play, or for gardening and with different options for sitting and activities like barbecues.

Figure 185. Plan of Streetscape Intervention
(Plan by the Author)



Section

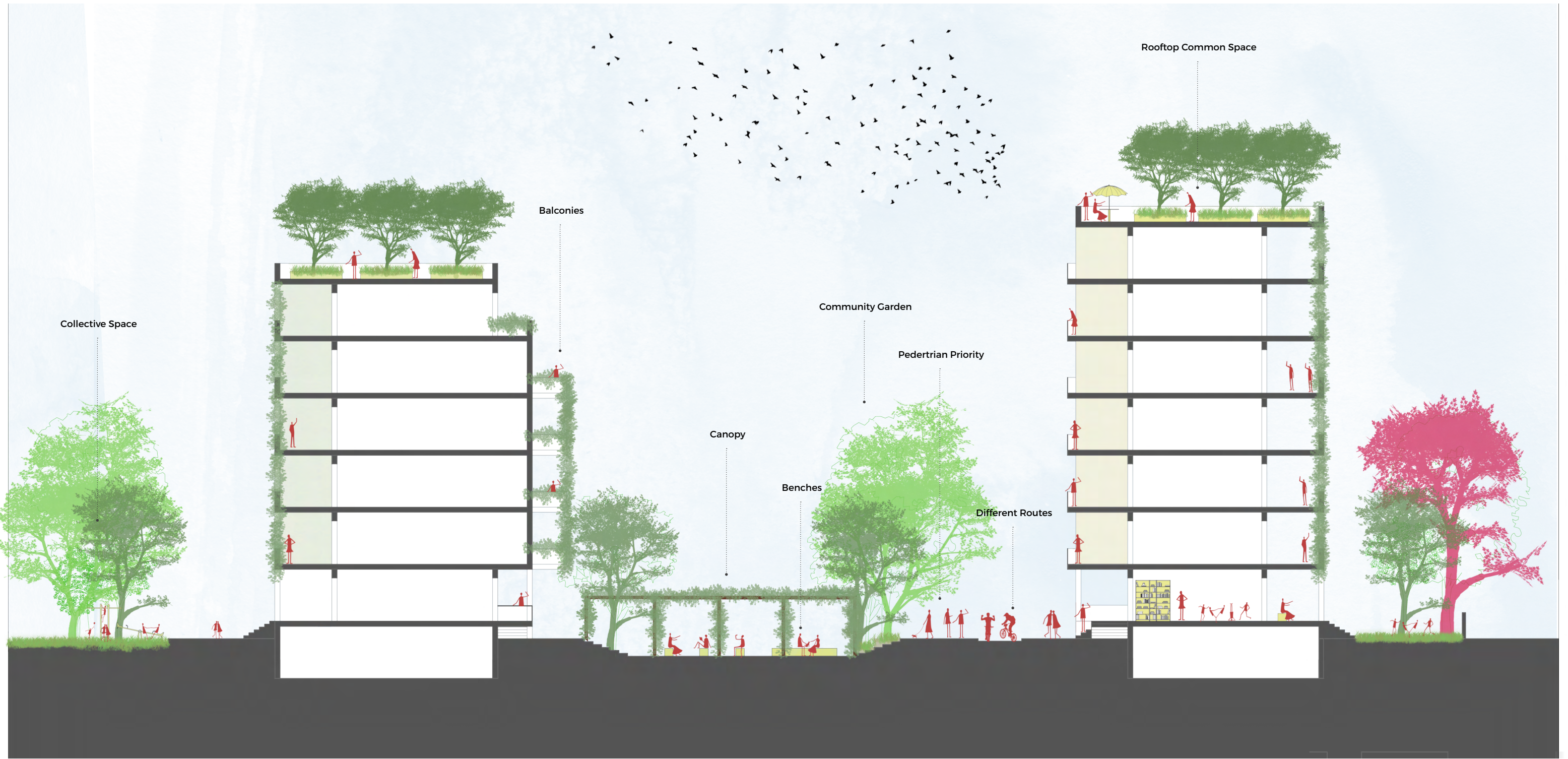


Figure 186. Section of Streetscape Intervention
(Section by the Author)





Figure 187. Impression of Streetscape
(Impression by the Author)

7.1 | Conclusions

This graduation project started off from my personal motivation to explore ways to achieve more social justice, in parts of the cities where conflicts and socio-economic problems pose challenges that do not create equal opportunities for all, at least regarding the right to the people in the public space. Cities today are characterized by a highly diversified population and because of the fact that this is still not widely accepted, thus referring to outdated policies and regeneration plans when aiming for change; the urban challenges are so many that inclusivity and resilience are systematically pressured or neglected.

Therefore the project has sought to find ways in which the public design interventions could answer to some extent to the need for co-existence in socio-spatially segregated and hyper-diverse environments. One such example was the case of Afrikaanderwijk and its surrounding neighbourhoods, which transcend the boundaries of the typical Dutch environment, as they are already hyper-diversified, with the majority of the population being of non-western origin.

This posed a challenge from the beginning, as understanding the people, their needs, experiences and backgrounds was very important for proceeding with the current project. Embracing the fact that societies today are not super- but hyper-diverse, means automatically that people are accepted as individuals with their unique cultural and behavioural patterns.

This diversification can complicate the already complex feelings of community and belonging, leading to alienation of the population. However, people still have the need to feel at “home” inside their neighbourhood and connected to others (Peterson, 2017). This sense of familiarity is crucial in order for different social groups

to feel included, and exactly this familiarity cannot be achieved anymore through traditional, outdated means of encounter in space.

Generally, as stated before, even the terms of what public and private space are, should be reconsidered, in order to give room for change. Distinguishing space as belonging either to the public realm of the “street” or the private realm of the home, cannot accommodate anymore the fast changing societies, resulting in segregating communities. “As people are inclined to connect to similar others, urban residents may prefer to live side-by-side without mixing socially” (2017).

Thus, the understanding of how hyper-diversity is expressed spatially is crucial in order to identify the places where people negotiate their differences (Gidley, 2013), with shared spaces being especially important venues regarding this daily struggle of negotiation. Spaces that people choose to appropriate regardless of their “formal” label of public or private and where there is a common tendency for them to be. According to Amin (2002), these spaces could either be libraries, community centers, corner shops and cafes, simple street corners etc., where the different social groups feel compelled to disrupt their familiar patterns and form new attachments helping them to “learn to become different”.

In this context, not only theories, but actual observation and interaction with the neighbourhood and its people was necessary, in order for adequate and valuable results to be extracted about what stimulates specific encounters and what not, so that new purposefully created sites of encounter could be created.

Through this process, a set of design values

was created, based on all findings. Those values, namely recognition of the attributes of people, encounter and flexibility were defined after understanding the problem of the study location; mismatch between the social and physical conditions of the neighborhood, as anonymity of the physical environment in combination with the lack of socio-economic amenities, construct a perfect setting for anti-social phenomena to emerge or even be intentionally constructed, so that gentrification processes can more easily become a “necessity”.

In order for a new, more local based design alternative to the demolition and renovation plans, a toolbox of design principles was created, which tried to answer to the challenges that the area faces. These principles took into account in the first place the different users of the space, as well as all the concepts that derived from the research, so that the different social groups analyzed, could all have their own public “living room”, where they can feel comfortable, included and seen. And although the analysis takes into account the case of Afrikaanderwijk and its unique characteristics, these principles can be transferred also elsewhere, with the right adjustments.

One cannot deny that this kind of design approach can generate, apart from new relationships and alignments between the different groups, also tensions and conflicts, when the interests of one group clash with the interests of another. In these situations an evaluation is always necessary, so that a balance between inclusivity and intended segregation can be reached, in order for a fairer distribution of space and amenities to be achieved. Therefore, these design principles should not be considered as a fixed set of rules, but more as a growing reference guide that can follow the changing socio-spatial conditions of an area.



Figure 188. Section of Streetscape Intervention
(Section by the Author)

7.2 | Overview of Applied Methods and Outcomes

| Methods | Outcomes |
|--------------------------|---|
| Literature Review | <p>In order for the key concepts of the project to be explained and defined, certain theories were chosen to be analyzed. “Public Space” has been the main focus, while others support it, in order to create a definition that aligns with the needs and purposes of this research. This analysis was used to underpin the theoretical framework of the project and highlight the importance of public space for deprived neighbourhoods.</p> <p>As explained in the chapter, the traditional definition of what public space is, regularly fails to align with the current needs of a hyper – diverse society, especially when it is characterized by deprivation and segregation, both social and spatial. Thus, in order to conclude to a redefinition of public, a number of goals had to be set, that would strive for inclusivity, resilience and coexistence.</p> |
| Mixed Media Analysis | <p>Online research, based not only on scientific papers, but also on articles and blog posts, even social media posts, were proven essential while conducting research, especially today that the corona pandemic has slowed down many procedures. While doing this kind of research, a lot of information about the area was gathered that made it possible to understand the situation there, the problems and the needs of the residents.</p> <p>Although, the sources could not always be tested in terms of validity, specific websites that document residents’ initiatives and news articles with interviews from previous years, were proven really valuable for this research.</p> |
| Socio – Spatial Analysis | <p>The socio-spatial study includes a broad demographic study such as population density and income range of people to understand the residents’ current status there, as it is essential to take them into account to achieve the project’s goal of enabling a socially diverse, resilient and inclusive environment. Furthermore, the existing distribution of functions and services was mapped to understand how people traverse within the area and access these places.</p> <p>This study helped create the problem statement and set the foundations for the analysis of the next chapters, by clarifying in which sectors the area seems to encounter the most important challenges, namely the social and spatial aspects.</p> |
| Network Analysis | <p>In the city scale, the street networks, public transport, including bus routes, metro and train lines, and boat routes, were analyzed in order to obtain a clear image of how the different neighbourhoods are connected, the problems they face and their importance. This analysis covers the hierarchy of road and public transport networks and their physical structures. On the local scale, the existing network and accessibility were analyzed using the PST plugin of GIS, in order to compare personal observations with the available data.</p> <p>Although several data were missing and the results extracted were not entirely accurate, while at the same time the use of the program was basically an experimentation, a lot of empirical observations seemed to be in accordance to the final results.</p> |
| Observational Research | <p>Site observation helped to understand both the actual physical and social conditions of the site. It complemented the network and statistical analysis as GIS and statistical data were proven insufficient in terms of qualitative research. Thus, personal observation offers a way to inspect, for example, the dynamic of the area, the users of the different sites and how and when people occupy the space, when they come together and when they prefer to distance themselves from the community.</p> <p>Observational research was also very valuable because it provided me with the opportunity to personally experience the area and extract important results about the use of space.</p> |

| Methods | Outcomes |
|----------------------|---|
| Ethnographic Mapping | <p>The observation of people behaviour and activities concluded to a series of ethnographic maps, containing information about how people interact with a place and with each other, or how particular spatial features interact with cultural practices.</p> <p>The goal of this part was to study the distribution of people's spatial activities at different times with controlled variables. For this part of the research, it was simply mapping what happened on a place to indicate movement and activities. That is, how people are using the space and which kind of functions are related to mobility or social use. The movement of people was then compared with the GIS analysis in order to find differences and common elements.</p> |
| Spatial Mapping | <p>Mapping in analytical research plays a crucial role in assisting the analysis by other methods; for example, the physical elements and qualities of the area are mapped, in order to understand where there is a shortage of amenities and functions. Besides, it helps to explain in visualizing the interventions and transformations within the research by design method.</p> <p>Through GIS mapping, the current urban form of Rotterdam South and Afrikaanderwijk along with the function of buildings, density, and the public facilities were mapped. The findings of statistical data were also used to illustrate the socio-spatial challenges that the area faces, such as the low-income, low-educated neighbourhoods or the level of unemployment in the area.</p> |
| Research by Design | <p>According to Jong & Voordt (2002), research by design generates knowledge and new insights by investigating the transformations of a design, by design interventions in a current situation, and the effects they will cause. The method used in this project is the generation of design values and the actual design of principles, based on the previously mentioned research, both social and spatial and concluding to some design decisions about what is suitable and needed for the area. These principles aim at covering the needs of people in terms of gender, age, cultural background and income level.</p> |
| Design | <p>Designing spatial interventions on various scales is the result of all the aforementioned analysis in order to produce concrete outcomes for the redefinition and transformation of the public space that could function as a new vocabulary on how to integrate theoretical concepts such as hyper-diversity into physical open spaces.</p> <p>The urban design of key projects in Afrikaanderwijk allows exploring the implications of the interventions at the local level. These interventions can serve as a prototype whose guidelines can be applied in other areas. The interventions cover the scope of public space, but also work on the street level and "personal - private" level, by proposing new densification plans for the area. Besides, the micro-scale interventions formed the basis that will support the city - scale vision.</p> |

Figure 189. Overview of Methods and Outcomes
(Table by the Author)

7.3 | Reflection

Aspect 1: The relationship between research and design

The current thesis project relies on a constant dialogue between research and design. The design spatially demonstrates the opportunities transformed from the concepts and findings of the research. The design principles, for instance, which were used as guidelines for the design proposal, heavily rely on both the empirical data collected and on concepts, in which all research was based on. While also, the chosen areas for more specific interventions were based on the conclusions of the multi-scalar analysis done earlier, which illustrated the most potential sites for redesigning.

Acknowledging the concept of hyper-diversity in the context of Rotterdam South, the whole project was developed having this theory on the forefront. Taking this concept as a given, the proposed interventions advocated for transforming it into a quality, in deprived and segregated areas, where gentrification is considered to be the only logical “solution” to the posed challenges. The proposal ultimately provides a more local-based design alternative.

Aspect 2: The relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)

The Design of the Urban Fabric studio is, as the name implies, design-driven, focusing on urgencies such as social diversification, inequality and the economic crisis, with the aim of creating new urban transformation strategies. This focus aligns with the topic of my graduation project as it tries to shed a light on vulnerable and deprived neighbourhoods, and how neglect and gentrification processes result in social segregation and disparities.

This thesis tried to highlight the necessity of turning hyper diversity, from a given to a quality, in order to create more inclusive and resilient cities for the future.

What is more, this project aligns both with the Urbanism master track of the MSc AUBS master program, as it tries to tackle the socio-spatial challenges of contemporary cities with urban design, aiming at a fairer and more sustainable urban development.

Aspect 3: Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work

This graduation project consists of a balance between research and design. Therefore literature and theories have formed the base of the problem setting and aim of this project and defined the structure of the course of the project. These theories have helped to make the topic more explicit and connect the theoretical foundation to the public space design.

Observational research was one of the most important tools used for the analysis and understanding the area. It helped to understand both the actual physical and social conditions of the site. It complemented the network and statistical analysis as GIS and statistical data were proven insufficient in terms of qualitative research. Thus, personal observation offered a way to inspect, for example, the dynamic of the area, the users of the different sites and how and when people occupied the space, when they came together and when they preferred to distance themselves from the community.

This type of research aligns also with the graduation studio methodological line of

fieldwork. However, a posed limitation was the fact that the area was observed in depth during the winter months, following the time frame of the project, which implies that during the summer, people's activities and the image of certain spaces could possibly differ. In order to conduct a complete fieldwork study, interviews with civic associations and initiatives in Afrikaanderwijk were also planned. However, due to time limitations, this part of the research was not conducted, which could have probably resulted in more specific information about people's experiences and needs in the public space.

What is more, by means of research by design, another important methodological approach of the Urban Fabrics studio, design principles were generated, functioning as guidelines for the design interventions in the area. These principles are a combination of both theories and gathered data and information during the analysis and fieldwork from the project location and touch upon a wide range of different public levels. They are based on certain concepts or rather values about the area and at the same time, they are directly linked to specific social groups. The applicability and use of each principle is in the end linked to its spatial, cultural and political context. It is the context that decides which ones and how they are applied, but at the same time it was tried for them to also be transferable to other locations and situations.

Aspect 4: Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results

The scientific relevance of the project has to do with the fact that although a lot of literature exists in terms of how to design a public space, it is not really compatible with the current needs of a hyper-diverse society,

especially when it comes to deprived areas.

This project aims to contribute and fill some gaps on how to design for different social groups and take into consideration their multiple identities and relations between one another, so that it can become clear that traditional one-size-fits-all policies, can no longer ensure a successful result. The outcomes of this project could function as a case study, or even better as a new vocabulary on how to create inclusive public spaces for different groups of people to co-exist.

From a societal point of view, this project could, through design, answer on multiplicity and create opportunities for people from different social groups to interact and communicate, thus creating a more inclusive and resilient environment, in places where conflicting interests and gentrification processes occur, at the expense of the most vulnerable. Those traditional processes of “regenerating” an area, have tried to prove that forcing social mixing is a bottom-up approach, which will benefit both the gentrified and non-gentrified communities of an area and create opportunities for all. The reality, however, has proven to be different, as in most cases these experiments end up failing.

Thus, this thesis, through spatial interventions, and taking into account the needs and identities of different social groups, aims at enabling the participation of people from different socio-economic statuses, lifestyles, attitudes and activities to interact and communicate, consequently steering the city towards fairer opportunity distribution and a more harmonious and co-existential urban environment.

Aspect 5: Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable)

elaborating the design and (iii) potential applications of the results in practice

While the outcome of the research and design proposals only aimed at benefiting the local communities, several ethical aspects were considered throughout the process of materialization;

While conducting fieldwork in the area, the residents' consent as well as the confidentiality and anonymity (by default) had to be guaranteed, with the same applying to any pictures, videos and recordings during the observations. What is more, while conducting the analysis part, a very important aspect was not to convey any false information, especially about the socio-economic conditions of the area or establish a negative reputation about certain social groups. That is why a lot of time was spent on very carefully observing the conditions of the area, to testify the legitimacy of the information and vice versa.

As far as the design outcome is concerned, when dealing with a hyper-diverse area and trying to create spaces for co-existence, the actual needs, expectations and experiences that every different person has, should be taken into consideration at all times, while also keeping in mind that the area has to be able to welcome new residents in the coming years, with their own, different requirements. However, due to the limitations of the current thesis project, compromises had to be made that sometimes may have led to a simplification or generalization of certain aspects and design decisions.

To conclude, it is crucial for any proposal to be successfully applied in the area to first ensure an open and active dialogue amongst the key involved stakeholders, like the municipality of Rotterdam and the current residents, so that conflicting interests and ideas are taken

into account in the process.

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