

Everyone's safety

Enhancing Perceived
Safety through
Urban Design in Oud
Mathenesse

Colophon

Everyone's safety
Enhancing Perceived Safety through Urban Design in Oud Mathenesse

Keywords: Perceived safety, human behaviour, hyper-diverse society,
vulnerable urban areas, gentrification, inclusive design

MSc Graduation thesis in Urbanisme

P5 Report

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Summary

Keywords | perceived safety, human behaviour, hyper-diversity, social environment, vulnerable urban areas, inclusivity

This research explores the impact of urban design on perceived safety in Oud Mathenesse, a hyper-diverse and vulnerable urban area in the Netherlands. Utilizing a human-centred and interdisciplinary approach, the study aims to provide insights and recommendations for urban planners and policymakers. The primary research question focuses on how urban design can enhance perceived safety in such a diverse context. The study employs qualitative methods, examining the social and physical environments and their influence on residents' perceptions of safety.

Key findings reveal that perceived safety or subjective safety is not something that is for everyone the same. Therefore a public space must be inclusive and accommodate the different experiences and perceptions. Social factors, such as public familiarity and social behaviour, significantly shape perceived safety. The physical environment, including accessibility, visibility, legibility, and attractiveness, also plays a crucial role. The research highlights the need for inclusive urban design that considers diverse safety perceptions of different user groups.

The study concludes that urban design interventions tailored to the specific needs of Oud Mathenesse can improve perceived safety and overall liveability. Recommendations include enhancing public spaces, creating communal venues, and fostering a sense of community identity. The research emphasizes the importance of interdisciplinary methods and human-centred design in addressing the complexities of hyper-diverse urban environments, contributing to the broader discourse on social equality and inclusivity in urban planning.

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01.

Chapter 1.

Introduction

10. Personal motivation

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Personal motivation

During my time in Delft, studying Architecture, I wondered how we as designers can make decisions for so many people. This interest in the daily use and behaviour of people is what started to fascinate me even more during my Master Urbanism. While cities, cultures and climates are different around the world, people everywhere use public space in their own unique ways.

Good public spaces can offer a social environment where people can gather, interact, and make a place their own. The philosophy of Hannah Arendt (2020) where the public sphere for the 'common world' that "gathers us together and yet prevents our falling over each other" gives a more political point of view on the work field of an urbanist (Arendt, 2020). My interest lies in co-creation: designing cities for people and with people, where the built environment is inclusive: both a physical and social place for everyone.

The philosophy of Hannah Arendt made me more aware of what I can do as a designer or urban planner for cities now and in the future. Especially nowadays, with increased migration, places are becoming more diverse, encompassing a variety of cultures, genders, ages, and more. Designing for this hyper-

diverse society will create tensions but also opportunities to create and innovate. I like the view of Richard Sennett about that city is not just a physical place; the city is a mentality (Sennett, 2018). This thesis project aims to connect the physical city with the city as a mentality.



Introduction

When we think about the definition of a city, the dictionary will describe a city as a built environment with squares, buildings, streets. Yet a city is much more; a city is about people, culture, and social life. A city is full of strangers, unexpected situations, and unknown locations. Sometimes, people feel more unsafe in a city, but the city is also a place with a diversity of people, culture and social life that gives richness to city life.

In 2022, the population of the Netherlands grew with 220.619 persons due to migration. This trend is expected to continue, especially in the Randstad, the four biggest cities in The Netherlands (Amsterdam, Rotterdam, The Hague, Utrecht) are set to densify and diversify (Centraal Bureau voor de Statistiek, z.d.). Rotterdam, for example, will grow up to 12% by 2040. Not only will the population of Rotterdam and its surrounding grow but diversity will also increase and become more complex. This diversification will also require a more varied design approach and a new way of organising our society.

Neighbourhoods in the Netherlands that are considered vulnerable have a lower liveability rate and a lower subjective safety rate than the national average. These areas often face challenges such as low-income, low-employment levels and higher criminality rates; many residents come from a non-western background. Research indicates that the actual crime numbers do not necessarily correlate with residents perception of neighbourhood safety (Baba & Austin, 1989). Oud Mathenesse is one such vulnerable urban area, characterized

by its diversity and affordability, which attracts many immigrants. Residents of Oud Mathenesse report low levels of liveability and perceived safety.

Subjective safety, reflecting residents' perceptions of their neighbourhood, is influenced by both social and physical factors. Urban design plays a crucial role in shaping these environments and can significantly impact perceived safety. This research aims to explore how urban design interventions can enhance the perceived safety of Oud Mathenesse, particularly within the context of a hyper-diverse society. By employing human-centred methods and an interdisciplinary approach, the study seeks to provide valuable insights and practical recommendations for urban planners, designers, and policymakers. While existing knowledge on social safe design and perceived safety form the foundation, the context of hyper-diversity adds a new perspective in this research.

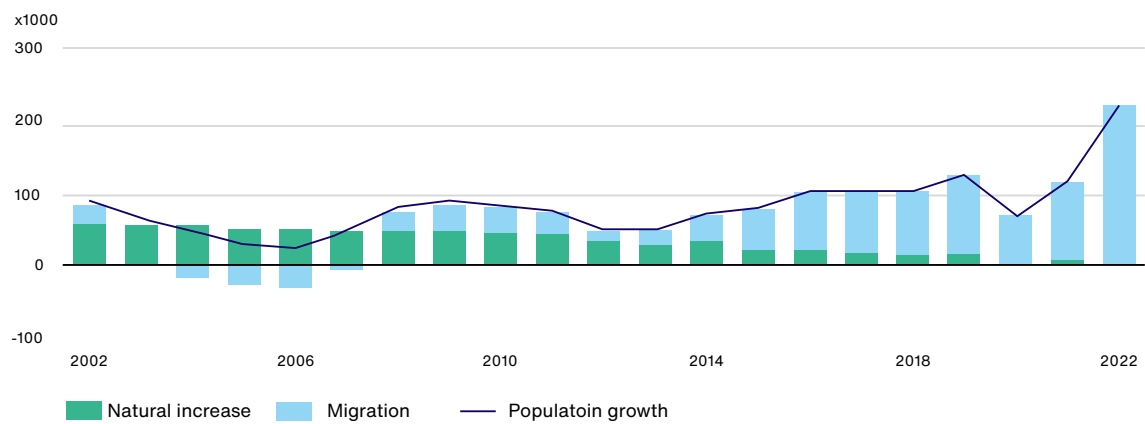


Fig 02 | Population development in The Netherlands (Centraal Bureau voor de Statistiek, n.d.)

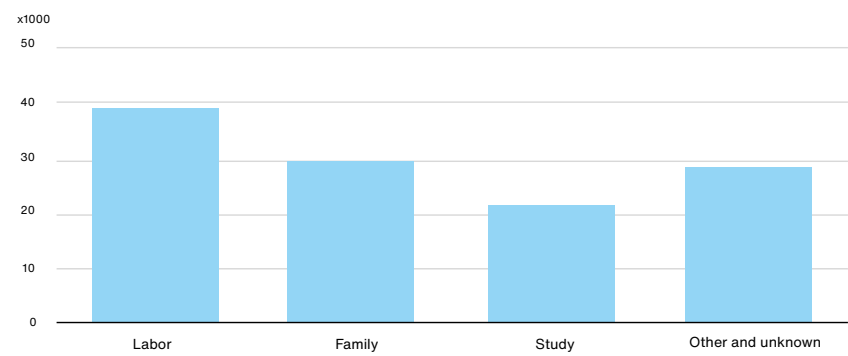


Fig 03 | Immigrants by reason for migration, EU/EFTA, 2021 (Centraal Bureau voor de Statistiek, n.d.)

02.

Chapter 2.

Problem field

16. Problem introduction

18. Problem analysis

26. Problem field

Problem introduction

In 2022, the Dutch government launched the National Programme for Liveability and Safety ('Nationaal Programma Leefbaarheid en Veiligheid'). This program aims to improve liveability and safety in twenty vulnerable urban areas in the Netherlands. These areas face significant challenges, including high unemployment, poverty, education disadvantage, lack of quality housing and poor health (Ministerie van BZK, 2022). The Dutch government is investing in these areas to improve the liveability and safety.

The National Programme has three main goals. The first goal is to improve the physical environment by providing more high-quality housing in mixed, safe and liveable neighbourhoods. The second goal is to offer a better prospects for the residents of this neighbourhoods. The third goal is to increase both actual safety and the perception of safety (Ministerie van BZK, 2022).

Compared to other neighbourhoods in the Netherlands, these vulnerable areas have a higher percentage of non-western residents or residents with migration background. According to the 'Centraal Bureau voor Statistiek' it is expected that the percentage of immigrants will grow rapidly in the coming years (Van Duin Han Nicolaas En Corina Huisman, 2022). The Netherlands is undergoing urbanization and diversification at an unprecedented rate. As a result, the population, usage patterns, behaviours, and social interactions within cities are becoming more diverse.

Designing for this variety of needs, cultures and uses presents a challenge but also necessitates a more diverse research field and scope. This is particularly crucial in vulnerable urban areas with a significant immigrant population. It is essential to prioritise inclusive design and conduct research that embraces diversity.

This research will focus on, Oud Mathenesse a neighbourhood situated at the edge of the municipality of Rotterdam. The analysis in this thesis will also encompass Het Witte Dorp, a small neighbourhood adjacent to Oud Mathenesse, due to their strong connection. However, the primary emphasis will be on Oud Mathenesse, as Het Witte Dorp possesses its own unique complexities.

Oud Mathenesse grapples low liveability scores and low perceived safety levels. Liveability, as defined by Van de Valk and Musters, pertains to the relationship between a subject and its surroundings, reflecting their appreciation or lack of for his or her living environment. (1998 in Van Dorst, 2005). This appreciation hinges on the useability, attractiveness, and safety of the environment. This is shaped by daily physical interaction within the built environment and social interaction there in (Van Dorst, 2005). Consequently, perceived safety and liveability are directly influenced by the built environment.

Kabinet investeert 600 miljoen om leefbaarheid kwetsbare wijken te verbeteren

Kwetsbare wijken Het kabinet investeert miljoenen in het voorkomen van
ken.
urten.

Alarm om kwetsbare wijken: 'Parallele samenleving dreigt'

Gentrificatie: het geweld

van

Lila Athi
van Coc

Achtergrond

Migratie en superdiversiteit: het beleid hinkt achterop

21 januari 2021 Dirk Geldof

COLUMN CLARICE GARGARD

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Problem analysis

In the problem analysis the problems mentioned in the introduction will be looked at more specific. Data is collected and mapped on the project site and its surroundings.

Liveability

In The Netherlands, the government assesses the liveability of neighbourhoods based on five parameters: housing, social cohesion, services, safety and physical environment. These criteria are derived from an extensive literature study defining liveability (RIGO Research en Advies BV et al., 2003) (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2019). Liveability is defined as the degree to which the environment meets the requirements and desires of its inhabitants. The results of this assessment for Oud Mathenesse indicate a comparatively low score as compared to the rest of the Netherlands, as depicted in the map. (figure 09).

Liveability is evaluated using two models: a judgement model based on resident feedback and a housing market behaviour model and translated into the Leefbaarometer maps. In this assessment, five dimensions considered, with each dimension weighing differently: housing 22%, social cohesion 18%, services 26%, safety 28% and physical environment 6% (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2019). For this research the aspects social cohesion, services, safety and physical environment are particularly pertinent due to their influence on perceived safety.

It is interesting to note that the physical environment contribution only 6%, while

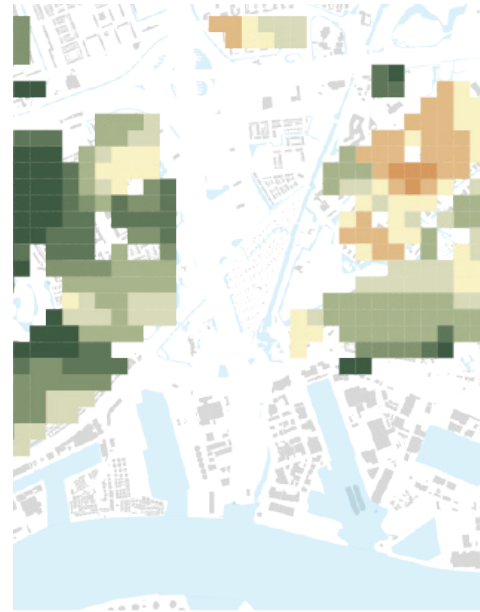


Fig 09 | leefbarometer Schiedam & Rotterdam

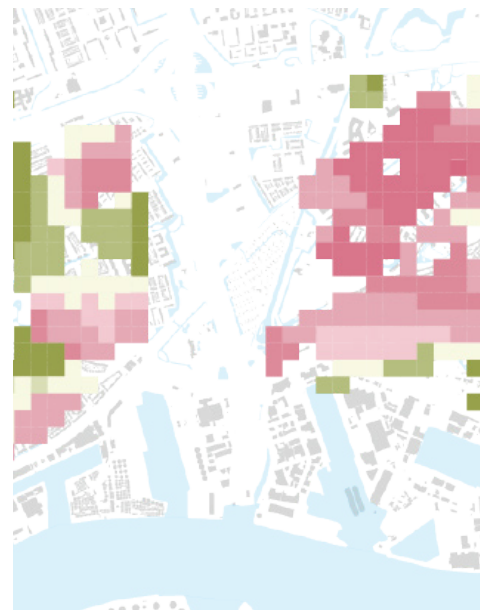
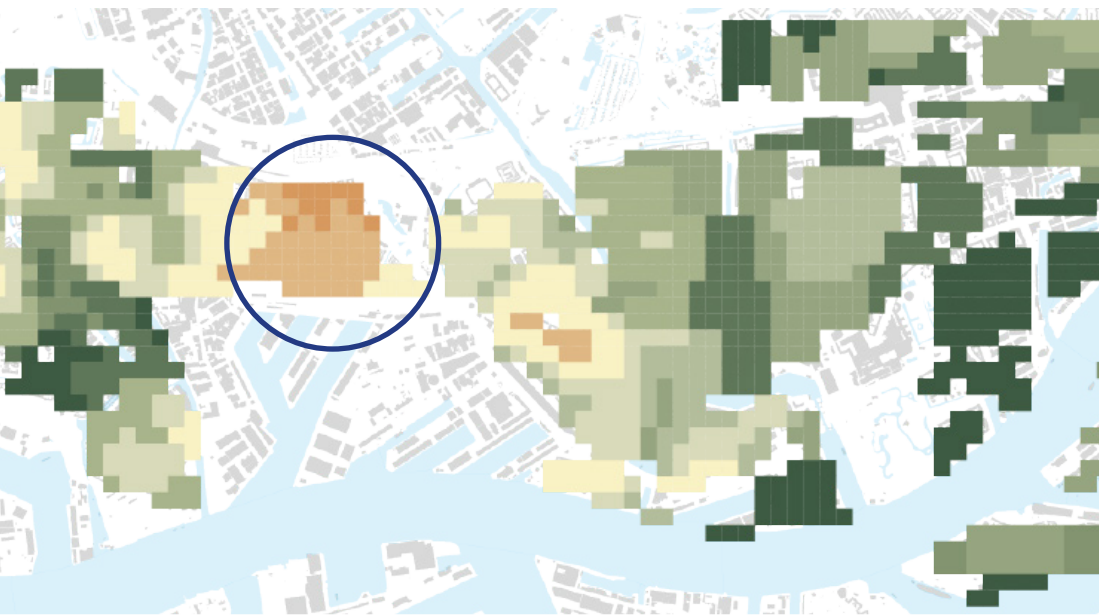
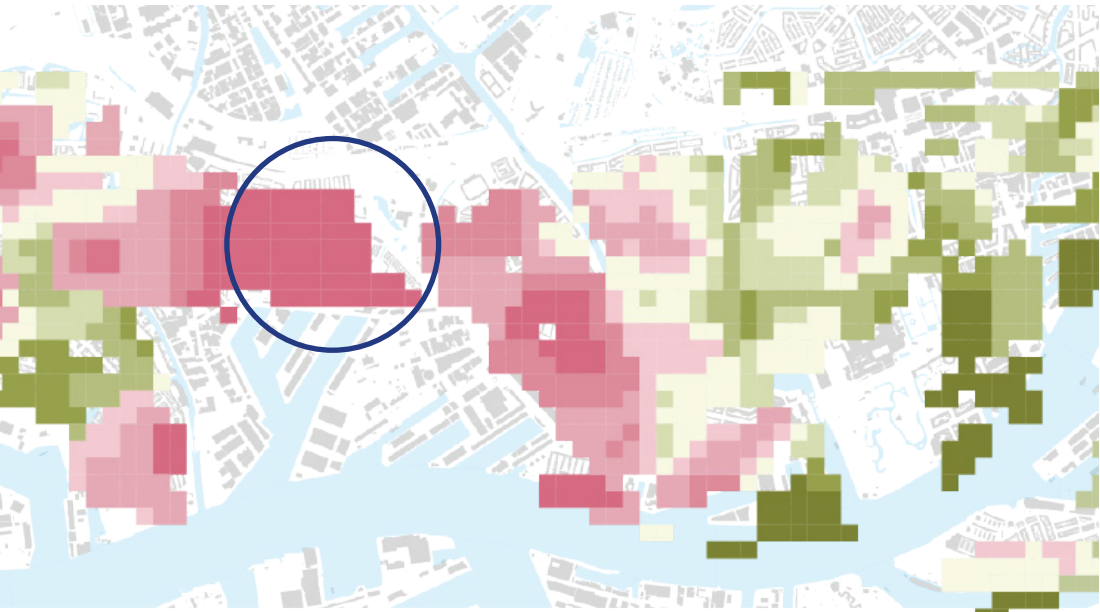


Fig 10 | leefbarometer Schiedam & Rotterdam



Amsterdam : Liveability score, Grid, 2020 (Leefbaarometer, z.d.)



Amsterdam : Deviation from the average in the Netherlands, Grid, 2020 (Leefbaarometer, z.d.)

services, safety and nuisance have the largest contribution. This discrepancy suggests that prioritizing amenities may create a skewed perception that a city's liveability primarily stems from its amenities, potentially overshadowing other vital aspects of liveability. Consequently, the Leefbarometer could be viewed as biased, serving more as a political instrument rather than an objective measure of liveability. A more human-centred methods and research can help to identify more specific what aspects contribute to this liveability and feeling of safety.

Diversity

Cities are densifying and consequently diversifying. Rotterdam is officially a hyper-diverse city (IDEM, 2019). Hyper-diversity means a population of different nationalities, ages, and genders that need to coexist. Groups within this populations have different lifestyles, cultures, values and needs (Tasan-Kok et al., 2013). These varying behaviours and cultures can create conflicts or tensions, and different perceptions of safety. What for some feels safe does not always feel safe for another.

Rotterdam is a hyper-diverse city with more than 200 nationalities. 70 percent of all Rotterdam young people under the age of 18 have parents with a migration background (#4 de Meerdere Minderheid (Superdiversiteit), 2022). In Rotterdam more than half of the residents is non-western. Professor Paul van de Laar of History, Culture and Communication stated that cities are changing so much that it is difficult to say who is the majority; Rotterdam has become a city of minorities (#4 de Meerdere Minderheid (Superdiversiteit), 2022). He mentioned

that when a population is so diverse with so many minorities, it is difficult to make policies. The same can be said about designing for diversity.

Hyper-diversity can result in both polarisation (division or conflict) and bridges (connections or relationships) between diverse groups. Diversity in Rotterdam is now so complex, that it can no longer be described in clearly defined ethnic or cultural groups. This complexity creates a new point of view; "diversity" is what people share. According to Professor Paul van der Laan (2022), a focus on social equality is imperative, particularly in contexts where more equal opportunities are needed (#4 de Meerdere Minderheid (Superdiversiteit), 2022). Van der Laan (2022) identifies three crucial elements that can enhance equality: equal employment opportunities, access to education, and improvements in the quality of public spaces (#4 de Meerdere Minderheid (Superdiversiteit), 2022).

Safety

Research indicates that the actual crime rate in a neighbourhood does not necessarily correlate with residents; perceived safety (Baba & Austin, 1989). The study examining the relationship between perceived neighbourhood safety and various factors such as environmental satisfaction, victimization, and social participation, revealed intriguing insights. Specifically, the study found no direct link between victimization or social participation and perceived safety. It did, however, identify a positive correlation between environmental satisfaction and perceived neighbourhood safety (Baba & Austin, 1989).

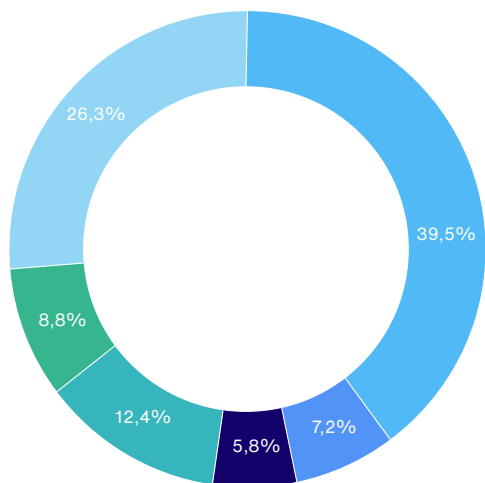


Fig 11 | Migration background in the oud Mathenesser (AlleCijfers.nl, 2024)

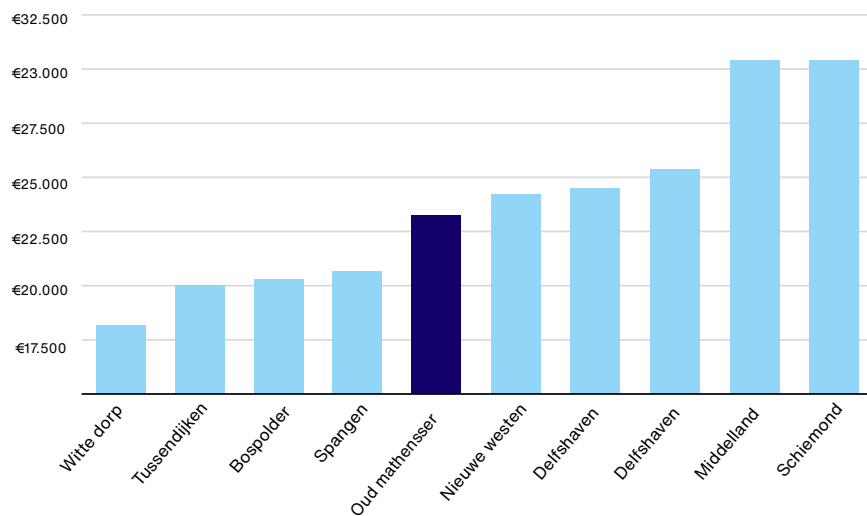


Fig 12 | Income Oud Mathenesser (AlleCijfers.nl, 2024)

Individuals who reported higher levels of satisfaction with their environment tended to perceive their neighbourhood as safer. The satisfaction was gauged through factors such as the usability of the public space, prevalence of abandoned buildings, presence of loitering youth, and the incidence of vandalism. Improving the quality of the neighbourhood environment can have a profound impact on residents' perceptions of safety. When neighbourhoods are well maintained and aesthetically pleasing, residents are more likely to feel secure. Additionally, enhancing the physical environment can lead to increased social cohesion and a greater sense of community, further contributing to perceptions of safety and well-being. (Baba & Austin, 1989).

The socio-economic status of a resident influences their subjective evaluation of their environment (Baba & Austin, 1989). Residents with higher socio-economic status tend to have a higher subjective standard of evaluation. Oftentimes, they also benefit from a relatively higher quality environment. Baba and Austin (1989) noted that neighbourhoods are part of a complex ecological system involving interaction and subjective evaluations. Therefore, the feelings of perceived safety can vary greatly depending on the context and location.

In Oud Mathenesse, the average income of the residents is middle to low (24,600) compared to the rest of Rotterdam (27,173) (figure 12). The leefbaarometer figure shows that Rotterdam has a higher negative contribution to safety and nuisance compared to the average of The Netherlands (figure 15). The municipality of

Rotterdam uses Neighbourhoods profiles to evaluate areas based on safety, social, and physical qualities. Oud Mathenesse scores low on all three elements (figure 13) (Wijkprofiel Rotterdam, n.d.).

Oud Mathenesse

Oud Mathenesse has 7,100 residents; the adjacent neighbourhood Witte dorp has 550 (AlleCijfers.nl, 2024). They are considered to be among the most vulnerable neighbourhoods in Rotterdam. Both neighbourhoods suffer from neglect in the maintenance of public spaces and quality housing. In addition, there is a shortage of social meeting spaces. Residents face numerous challenges, including health issues, poverty, nuisance, and inadequate services and public amenities. Despite this, these the neighbourhoods do not have higher criminal numbers than other neighbourhoods in Rotterdam and there are no indications that serious crime is increasing (Bewonersvraag: Hoe Veilig Is Mathenesse? z.d.).

Oud Mathenesse is located next to the M4H district and close to the Glasfabriek districts in Schiedam, in these areas ambitious plans are underway to revitalize these harbour districts by integrating workplaces and residential living. Oud Mathenesse and Het Witte Dorp are expected to feel the impact of these new developments (Mathenesse aan de Maas, 2020) ("Masterplan Merwehaven", 2023). Starting in 2024, the sewer system will be upgraded and the streets renovated. These plans create new opportunities for Oud Mathenesse and its urban fabric. This research aims to provide recommendations and insights for shaping the urban fabric in alignment with these developments.

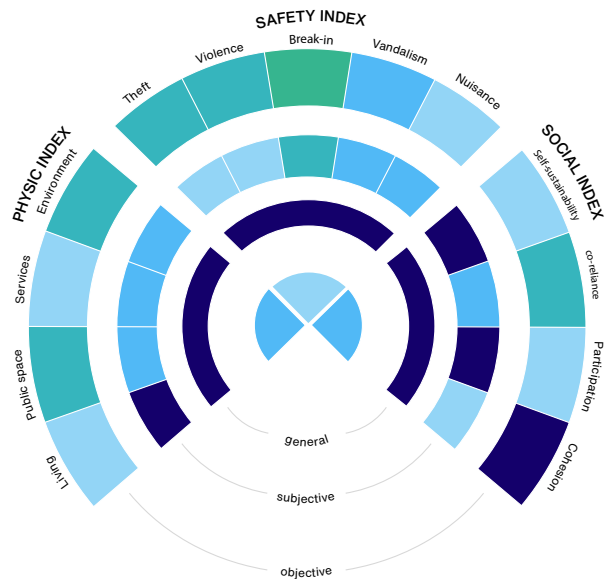


Fig 13 | Neighbourhood profile (2022 | Wijkprofiel Rotterdam, z.d.)

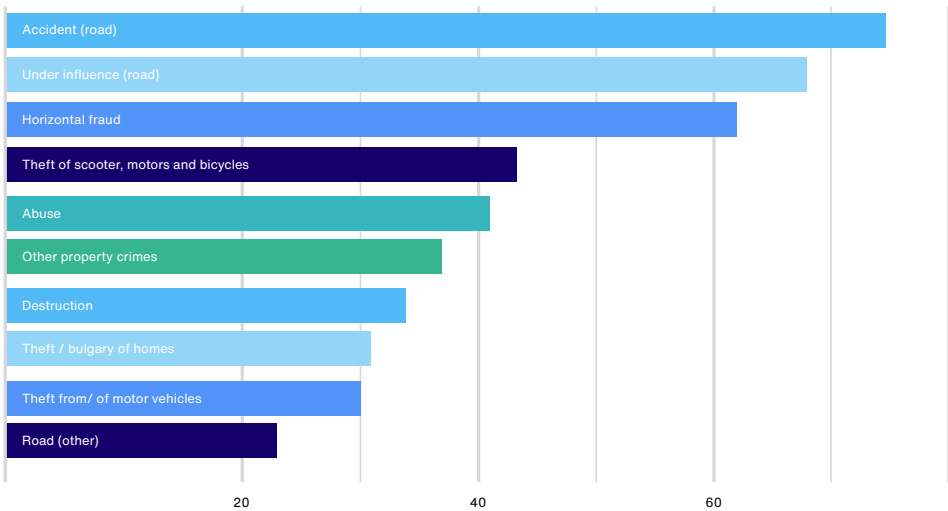


Fig 14 | Crimes by type of crime, Number of registered crimes for the ten most common types of crimes, 2023, Oud Mathenesse neighborhood. (AlleCijfers.nl, 2024)

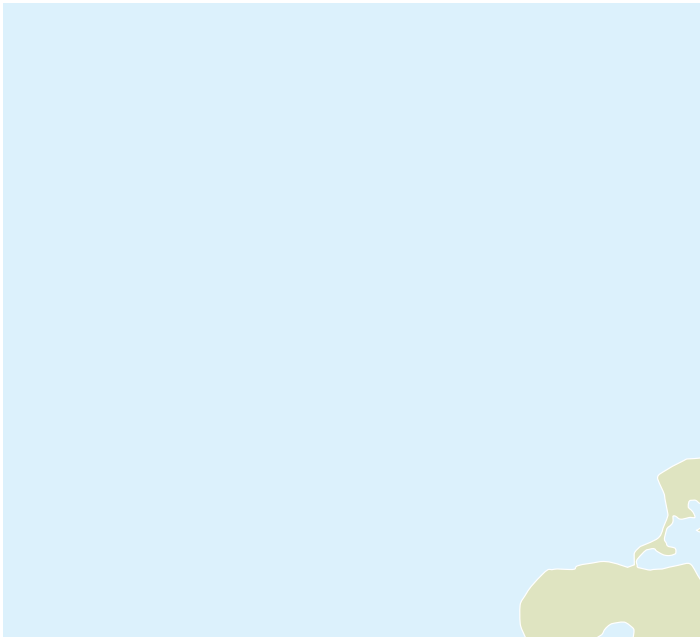


Fig 15 | leefbarometer Rotterdam : Deviation from the average in NL, Gric

- Very large negative contribution
- Large negative contribution
- Negative contribution
- Small negative contribution
- No deviation
- Small positive contribution
- Large positive contribution
- Very large positive contribution

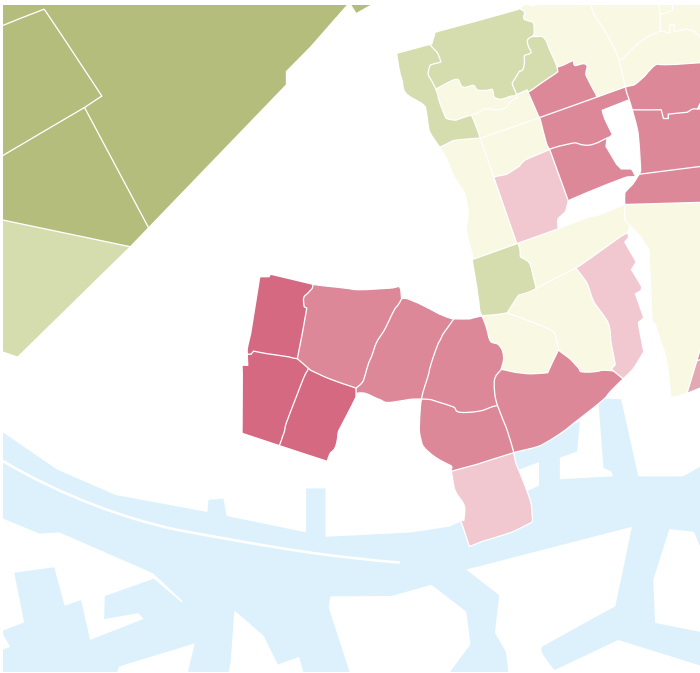
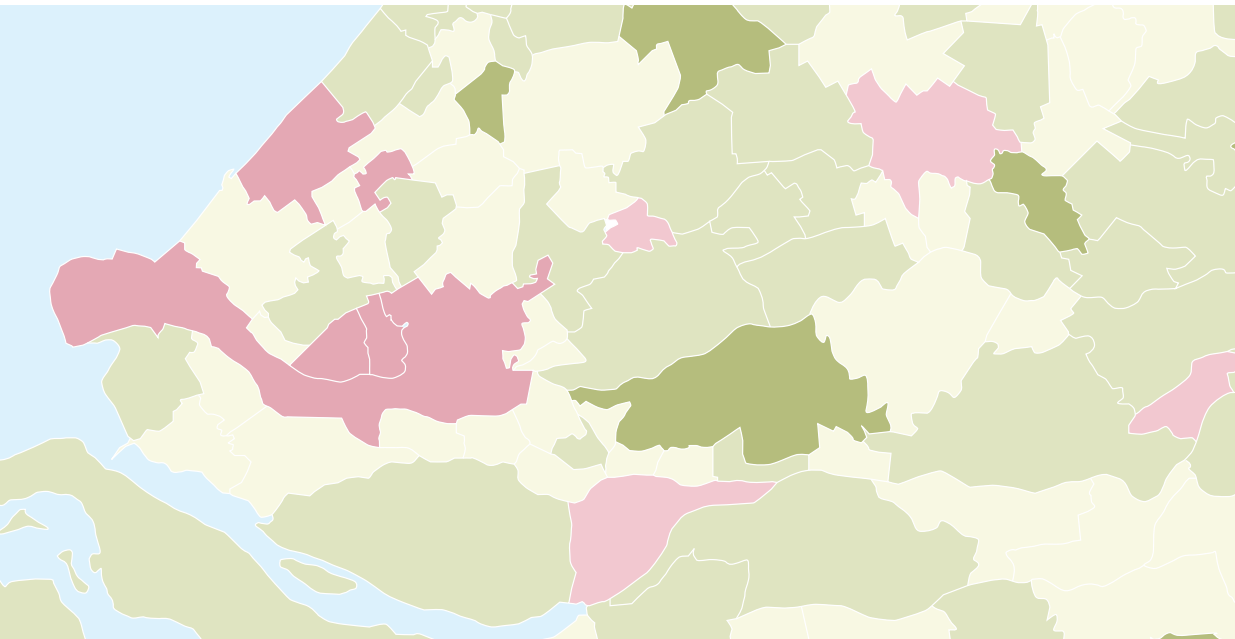
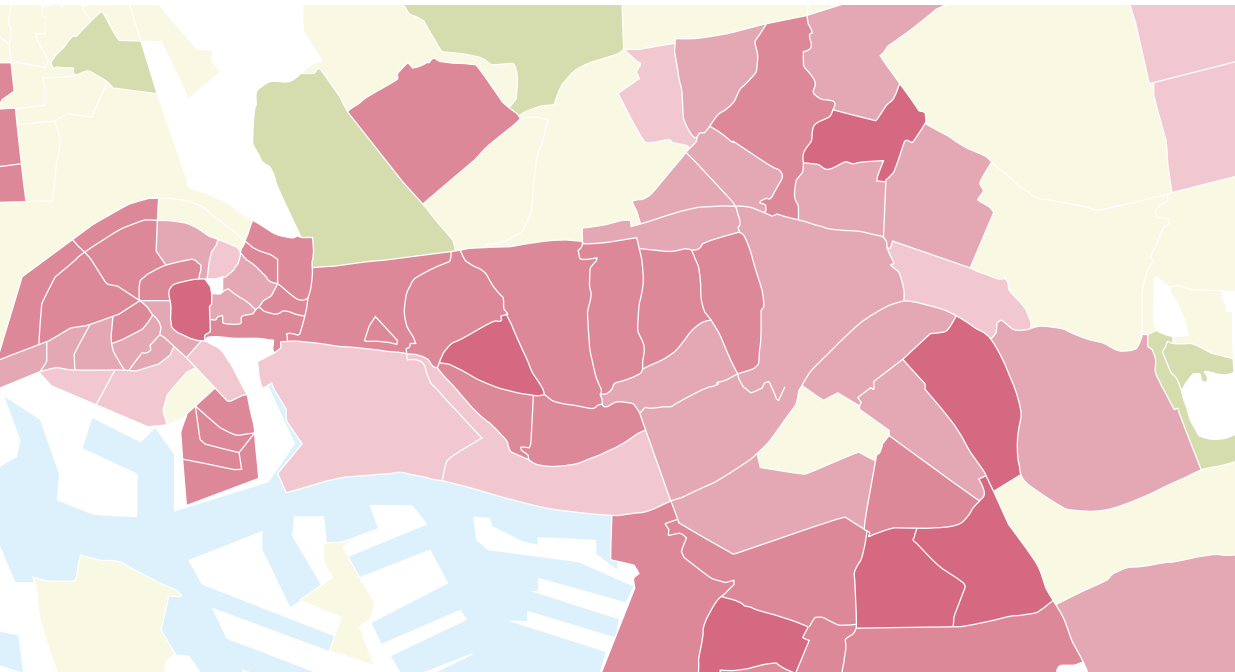


Fig 16 | leefbarometer Rotterdam : Deviation from the average in NL, Gric



d, 2020 concerns Safety and Nuisance (Leefbaarometer, z.d.)



d, 2020 concerns Safety and Nuisance (Leefbaarometer, z.d.)

Problem field

Perceived safety is influenced by multiple factors, including personal experiences, social and cultural norms, and the physical and social characteristics of the urban environment. In this research the focus will be on the relation between the physical environment, the social environment, and the perceived safety.

Social environment and perceived safety

How an environment is perceived is dependent on the social environment. How social groups and individuals behave and act has strong influence on the perceived safety of an individual. The social environment of a neighbourhood influences the perceived safety and the overall perception of a neighbourhood and is thus important to take into account when analysing the perceived safety and the physical environment.

Perceived safety and physical environment

Jane Jacobs (1961) was one of the first urbanists to research the social dynamics of neighbourhoods and the subject of “safety and urban design”. She argued that space, not people, is responsible for feelings of safety (Jacobs, 1961). Social safety is influenced by design, built form, organization, and maintenance (Luten, 2008). The design of a neighbourhood and its public places strongly influences feelings of safety. A poorly lighted area that is lacking clear sightlines or accessible escape routes will rapidly induce feelings of insecurity in neighbourhood residents.

Physical environment and social environment

This is where public life and public space meet. Observing public life is a process that undergoes continuous change (Gehl 7 Svarre, 2013). Understanding the dynamics of a city requires a comprehensive understanding of human behaviour. The physical environment facilitates the human behaviour and facilitates (or hinders) social interaction between people.

Hyper-diverse cities

Hyper-diverse cities have an exceptionally diversification of the population in socio-economic, social and ethnic terms, but also with respect to lifestyles, attitudes and activities (Tasan-Kok et al., 2013). Because of this diversity a more diverse and inclusive approach is needed to build our cities. The research will take place in the bigger context of Rotterdam, a hyper-diverse city. Safety and the built environment have been studied for long time, yet the context of hyper-diversity brings new aspects into the research field of perceived safety.

03.

Chapter 3.

Methodology

30. Research question

34. Research aim

36. Methodology

42. Societal & Scientific Relevance

43. Ethical consideration

Research question

In what *effective* way can *urban design implications* improve the *perceived safety* in Oud Mathenesse in a *hyper-diverse society*?

Secondary research questions

To answer the main research question, it is necessary to break the research down into smaller, more specific research questions. These have been organised into three categories: (1) perceived safety and the social environment, (2) the social environment and the physical environment and (3) perceived safety and physical environment (fig 17).

The conceptual framework illustrates the interconnections among various facets of this research. The urban environment consists of the social environment and the physical environment. The urban environment comprises the social and physical environments, each influencing the other. These combined environments, in turn, are linked to individuals' perceptions, which is the third field – perceived safety (fig 18). The three topics are in constant interrelation and interaction, making it difficult to dissect them individually. However, to provide a clearer structure for this research, they will be explored separately with the aim to better understand the dynamic interconnections and relationships.

Perceived safety and the social environment are about how perceptions of safety are influenced by social interaction, community dynamics, and individual experiences. The social environment and the physical environment will explore the relationships between the social and

physical aspects of the environment/public space. How social interactions/behaviour shape and are shaped by physical elements. The perceived safety and the physical environment will examine the impacts of the physical environment on perceived safety, considering factors such as design, layout, and lighting, and how these elements contribute to residents' sense of security.

Sub question 1 | Social and perception

In what way does the social environment influence the perception of safety of individuals in accordance to literature about subjective safety?

Sub question 2 | Physical and perceived safety

To what extent does the physical environment influence the perceived safety in Oud Mathenesse?

Sub question 3 | Social and physical

What is the relationship between the spatial and social qualities of Oud Mathenesse and the perception of safety?



Fig 17 | Conceptual framework elements

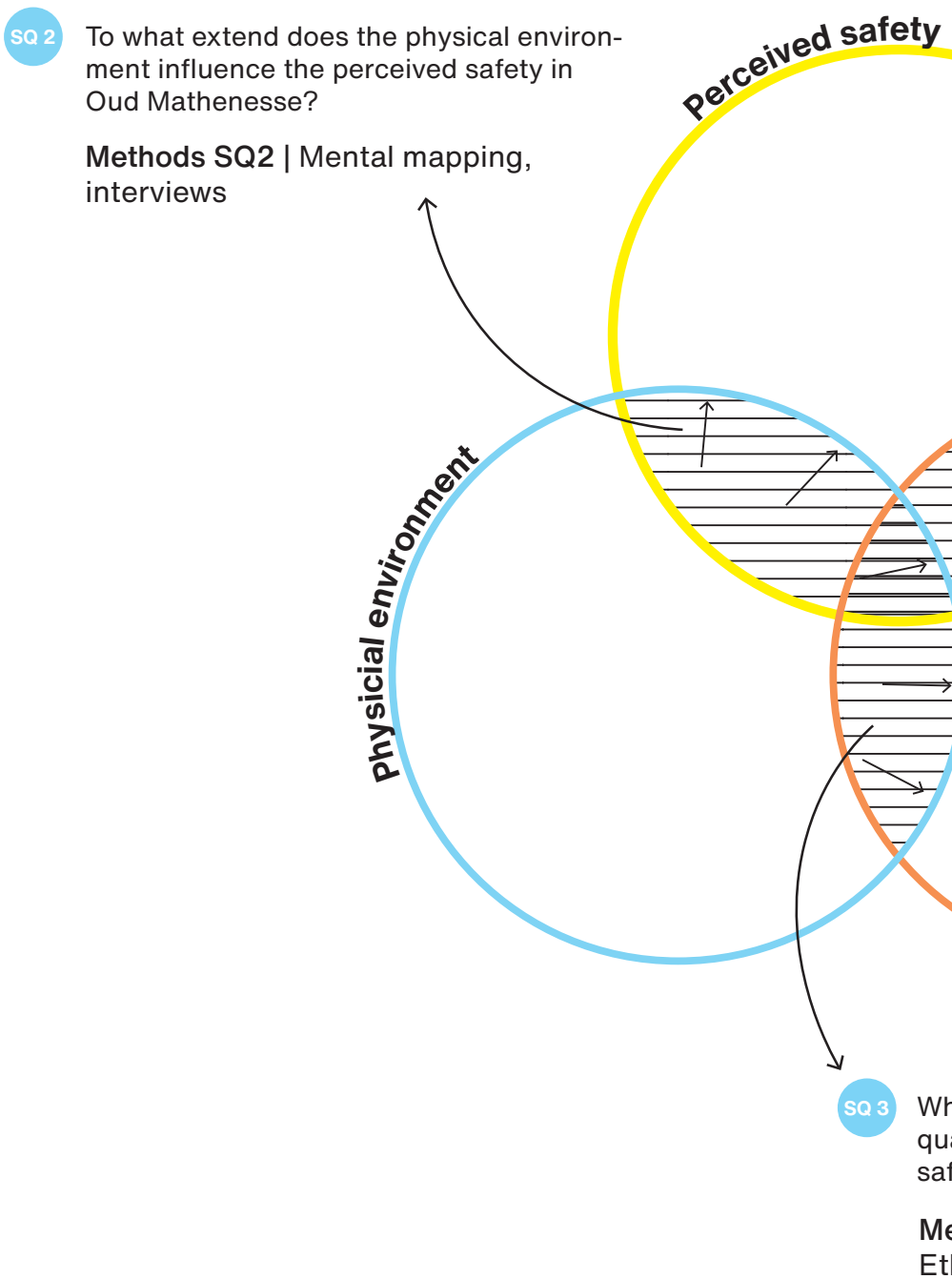
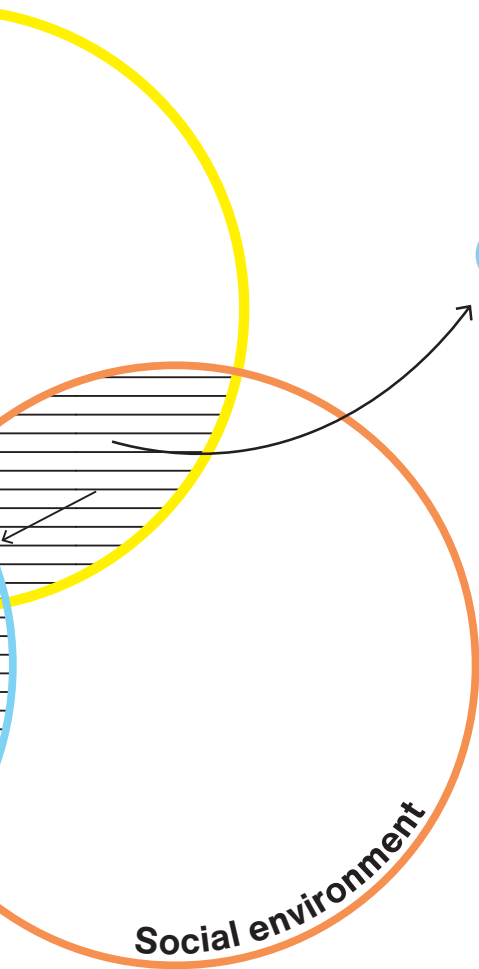


fig 18 | Conceptual framework and subquestions



SQ 1

In what way does the social environment influence the perception of safety of individuals in accordance to literature about subjective safety?

Methods SQ1 |
Literature review

What is the relationship between the spatial and social realities of Oud Mathenesse and the perception of safety?

Methods SQ3 |
Ethnographic mapping

Research aim

Main aim

The research aim of this thesis is to investigate what effective urban design interventions can be implemented to enhance the perceived safety of the residents and improve the overall liveability of the residents of Oud Mathenesse. The research will examine various user groups to highlight subjective safety based on their experiences. This approach aims to identify specific elements that different groups perceive as unsafe, allowing for the design of public spaces that consider diverse safety perceptions rather than adopting a one-size-fits-all strategy. By examining the challenges and opportunities in this diverse urban area, this research seeks to provide valuable insights and practical recommendations for urban planners, designers, and policymakers, ultimately contributing to the creation of more inclusive and equitable urban environments.

Knowledge extension

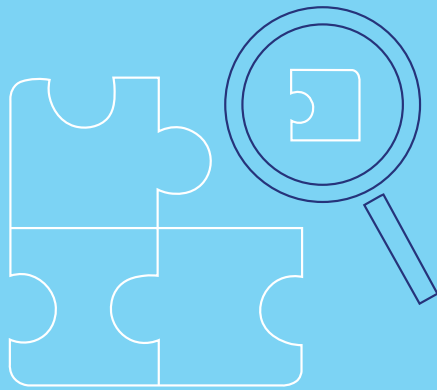
Most of the research done in the field of crime prevention is based on an approach to design safe and liveable places for the majority. However, contemporary cities are experiencing surges in diversity, with people exhibiting varying perceptions, opinions, cultural backgrounds, and lifestyles. This necessitates a shift in the way we conceptualize the design of our cities and formulate policies. This research will aim to extend the knowledge in the field of urban design and safety to explore the different perceptions of safety in the urban environment.

Human-centered methods

Another research aim of this thesis is to employ and evaluate human-centred methods to enhance the understanding of user experiences, preferences, and needs in various contexts. By doing qualitative research in the form of interviews, observations, and mental mapping it tries to capture the subjective safety of the residents.

Interdisciplinary

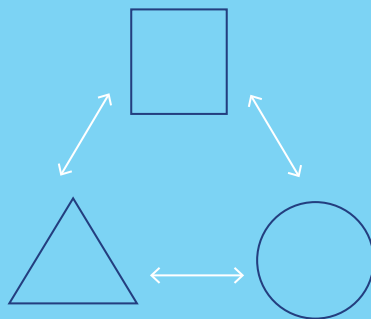
Unifying environmental psychology, sociology, anthropology and urban design to design better public space for people. The aim is to create an interdisciplinary approach to understanding these different research fields in relation to urban design.



Knowledge extension



Human-centred methods



Interdisciplinarity

Overview of methods

This research thesis will take form through a mix of methods. By using quantitative and qualitative methods, the relations between social environment, physical environment and the perceived safety will be explored. It is important to grasp the subjective experience of the residents in this research. The methods will be focused on collecting the subjective experience and combine them in an inter-subjective collection of results. Intersubjectivity is when two or more people agree on a given set of meanings or share the same perception of a situation (Cooper-White, 2014).

Literature review

To start the research first a literature review will be conducted to gather information about the social environment in relation to the physical environment and the relation between the social environment and perceived safety of an individual. The information provided through the literature review will create a general understanding of the topics. It will be a first step for further research because the perceived safety and social environment are context specific. Further research is necessary to understand the situation in Oud Mathenesse.

Mapping

To understand the site of Oud Mathenesse mapping will be used. Context specific quantitative data will be collected. By analysing the space through maps, it will be possible to indicate certain physical aspects that are related to perceived safety from the literature review.

Interviews and mental mapping

The perspective and experience of the residents is important to really understand the perceived safety in the neighbourhood. For these methods enough data must be gathered because one mental map or interview will not give a clear understanding of the safety of an area. Comparing numerous mental maps and interviews is essential to identify overlaps and establish inter-subjectivity. This approach will unveil potential areas perceived as most unsafe and offers insight into elements that can cause this feeling of unsafety. This will eventually give potential areas within the neighbourhood that can be improved through urban design and will give focus areas within the area for further research.

A mental map is a person's subjective perception of their surroundings (Harteveld, 2021). Every person draws a unique mental map based on their own memories, resulting in a drawing that shows elements that are present in the area or thought to be. When these maps overlap, patterns or intersections in people's understanding emerge, forming an intersubjective image of the area (Harteveld, 2021).

The research and use of mental maps gained prominence through Kevin Lynch's work, particularly in his book 'The Image of the City' (Lynch, 1960). Lynch's research on wayfinding and orientation involved participants drawing maps of their hometowns, highlighting significant aspects. The mental maps are narrative analysis of the urban environment where he tried to connect the space in the city with experiences of the residents.

Lynch categorized the results into paths, landmarks, edges, nodes, and districts-physical elements aiding orientation in a city (Lynch, 1960). The maps are a combination of the actual city spaces with abstract thoughts, offering a clear reflection of the visual and mental connections people have with the city.

David Canter, a psychologist, studied how physical attributes, activities, and conceptions within a place influence residents' mental maps and images of that place (Canter, 1977). Three dominant categories of urban perceptions shape the image of a place: operational, responsive, and inferential (Appleyard, n.d.). Operational perception includes elements that stand out due to their functional roles, such as roads and traffic intersections. These elements are used by individuals to navigate and perform tasks within the city, helping them to effectively use and move through the space (Appleyard, z.d.). Responsive perception is more passive, involving the perception of signs, billboards, water, people, sounds, and smells. These elements gain significance based on their specific context and evoke emotional reactions to places (Appleyard, z.d.). The third characteristic of perception is inferential. As we grow up, we develop a system of environmental categories, concepts, and relationships, forming our mental framework for the city. These are interpretations and meanings attributed to environments by individuals, encompassing more functional and social patterns. This cognitive processes and how urban perceptions shape the image of a place will be valuable to study in order to understand

how individuals perceive the safety in Oud Mathenesse.

Fieldwork and observation

Qualitative data will be collected during fieldwork. By visiting the neighbourhoods and observing the social environment by ethnographic mapping. It is important to visit the neighbourhood at different times during the day and different days during the week. The visits will consider factors such as time of day, weather conditions, weekends, and nights to gain a comprehensive understanding of the area.

Ethnographic mapping is a method used in the field of anthropology, sociology, geography, and urban studies to visually represent and analyse the spatial distribution of social activities, cultural practices, and human interactions within a community (Low, 2016). It is used to show and understand human interactions and behaviour within a place. Setha Low (2016) is a well-known anthropologist that has done research about the role of space, place, and culture in shaping urban environments and communities. She studied how social and cultural factors intersect with urban environments, influencing patterns of behaviour, identity forming, and dynamics within cities. Setha Low discussed the importance of ethnographic research in her book "spatializing culture: the ethnography of space and place" (Low, 2016). Ethnographic mapping involves immersive, on-the-ground research that captures the lived experiences and perspectives of individuals within specific spatial contexts (Low, 2016). She encourages researchers to engage with the everyday practices of

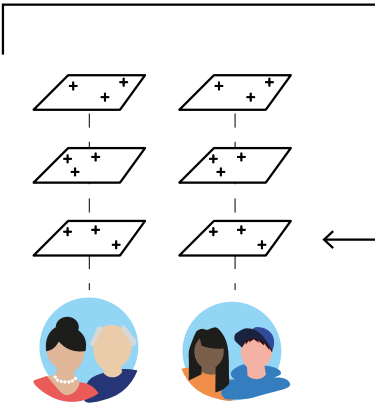
people in their spatial environments (Low, 2016). In the lecture of Leeke Reinders, he mentioned that what people say and what people do are two different things. This means that observing behaviour can give insight into the use of public space and behaviour in public spaces and how the public space offers a place for certain behaviour. Using this method next to the mental maps and interviews will give insight into the behaviour that is happening at places that are perceived as unsafe. Also, will give ethnographic mapping insight how certain places create a stage for certain behaviours and help to explore the ways in which space and place shape and are shaped by cultural practises, identities, and social relations (Low, 2016). Therefore, this method will be helpful to analyse the social environment of Oud Mathenesse and understand the social communities and cultures that exist in this neighbourhoods.

Pattern Language

A method that will be used throughout the whole research is the pattern language. This method was created by Cristopher Alexander (1978), an architect that published the theory of the pattern language in his book ‘A pattern language’ (Alexander, Ishikawa, et al., 1977). A pattern identifies a problem in our environment and outlines a solution that can be applied repeatedly, with each implementation being unique (Alexander, Ishikawa, et al., 1977). The collection of the patterns creates a pattern language, this is an organized and coherent set of patterns, each pattern describes a problem linked to a solution that can be used in many ways within a specific context. Patterns can conflict with

each other or complement each other; this can be made clear in a pattern field.

In this research, residents will express specific needs for particular spaces. The interpretation of these needs varies significantly, influence by personal, cultural, social, historical, economic, and contextual backgrounds. Consequently, needs are subjectively explained and interpreted, introducing potential ambiguity in design processes. Shifting from the notion of needs to understanding what people are inclined to do (tendencies) implies assuming that they will engage in



Collecting mental maps

those activities whenever possible. As urban designers we have to make sure that people can do what they are trying to do by making sure the environments allow for it (Alexander & Poyner, 1966). However, conflicts may arise under certain conditions where tendencies clash. In such conflict situations, relying solely on tendencies is insufficient. Design intervention becomes necessary to rearrange the environment and alleviate conflicting tendencies (Alexander & Poyner, 1966: p 311).

The literature review, observations and interviews/mental mapping will help form

patterns and a pattern language. The pattern field will help indicate where there are tensions or potentials between certain patterns. Therefore, this method will help to connect the results from the other methods and form patterns to use in the vision and recommendations for Oud Mathenesse. Eventually the full version of the pattern language will be collected in a separate booklet.

These methods will be utilized throughout the research and integrated to address the sub-questions and eventually the main question. Each method offers a new perspective and can complement one another, contributing to comprehensive research.

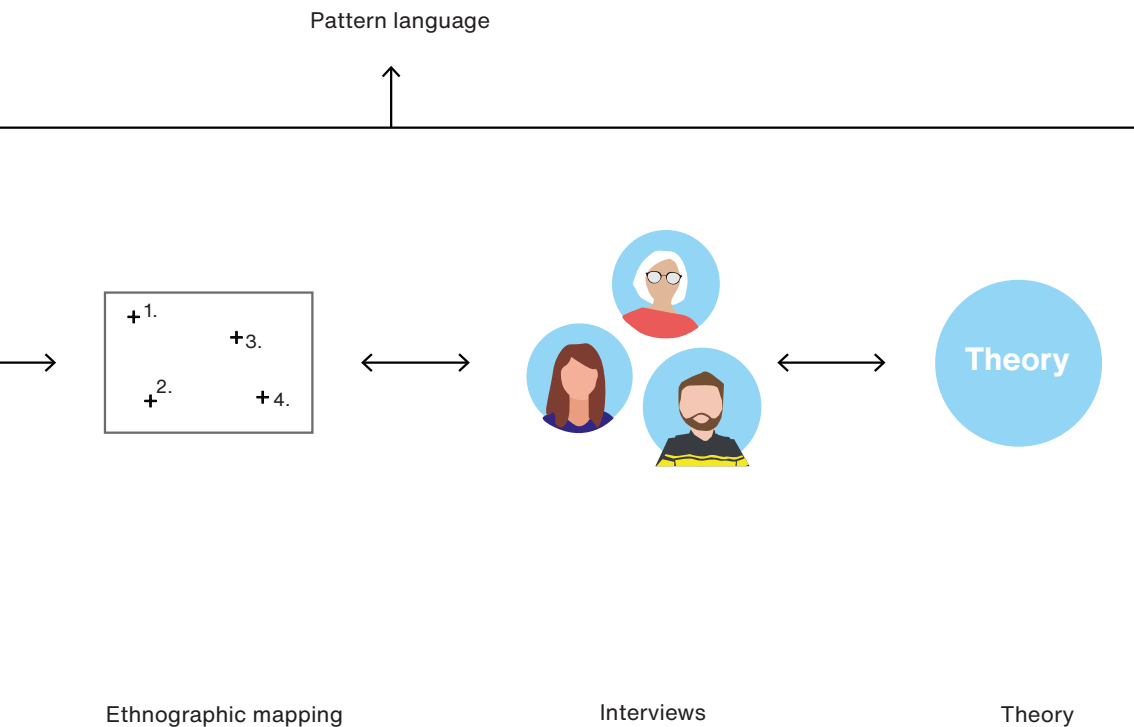


fig 19 | Scheme of overview methods

| Research question | Research aim | Methods |
|---|--|---|
| <p>Main research question In what effective way can urban design implications improve the perceived safety in Oud Mathenesse in a hyper-diverse society?</p> <p>Sub research questions</p> <p>SQ 1 Social and perception In what way does the social environment influence the perception of safety of individuals in accordance to literature about subjective safety?</p> <p>SQ 2 Physical and perceived safety To what extend does the physical environment influence the perceived safety in Oud Mathenesse?</p> <p>SQ 3 Social and physical What is the relationship between the spatial and social qualities of Oud Mathenesse and the perception of safety?</p> | <p>Main aim The research aim of this thesis is to investigate in what effective ways urban design interventions can be implemented to enhance the perceived safety of the residents and improve the overall liveability of the residents of Oud Mathenesse.</p> | <p>1 Literature Review Examination of theories on perceived safety in relation to urban design and the connection between perceived safety and the social environment.</p> <p>2 Mapping and Analysis Creation of maps, area sections, and socio-demographic maps.</p> <p>3 Interviews and Mental mapping Conducting interviews and conversations with residents, alongside mental mapping with a diverse group of residents.</p> <p>4 Fieldwork and Observations Observing human behavior in the area (ethnographic mapping) and photographing the current situation.</p> <p>5 Pattern Language Synthesizing results from other methods to develop patterns and a pattern language.</p> <p>6 Design Recommendation Integrating the pattern language with neighborhood strategies and small interventions in public spaces. This includes maps, sections, 3D visuals, recommendations.</p> |

Method limitation

1 | Literature review

Relying on outdated literature can impact the relevance and accuracy of the findings. Additionally, some theories originate from researchers in different countries and were written during various periods and societal contexts, which may not fully align with the current study's setting.

2 | Mapping and Analysis

Limited data availability and the complexity of mapping subjective topics pose significant challenges.

3 | Interviews and Mental mapping

Reaching and engaging a diverse group of stakeholders is challenging. Explaining urbanism concepts to those unfamiliar with the field can result in responses that are not specifically focused on the built environment. This necessitates developing new approaches to translate interviews and mental maps into usable information for urban design.

4 | Fieldwork and Observations

Observations are influenced by weather, time, and specific moments, potentially compromising accuracy. Additionally, since observations are conducted by a single person, there is a risk of bias.

5 | Pattern Language

Translating research findings into patterns is a complex and difficult process.

Prospect outcome

1 | Literature review

Enhanced understanding of the interplay between urban design and human behavior (psychology). The existing knowledge about urban design and perceived safety.

2 + 3 + 4 | Combination of the methods

A comprehensive overview of unsafe areas and elements within the neighborhood, highlighting opportunities for improvement. Insight into the interaction between the social and physical environments in Oud Mathenesse and their impact on the perceived safety of various resident groups.

5 | Pattern Language

Development of a set of patterns to guide design implications for safer neighborhoods.

6 | Design Recommendation

A recommendation for improving perceived safety in Oud Mathenesse

General prospected outcomes |

Deepen understanding of research methods linking human behavior and psychology to urban design. Enhance expertise in creating inclusive urban designs and public spaces.

Relevance

Societal

Liveability and quality of life relate to the needs of people and the development of the individual in relation to the environment in a broad sense (Van Dorst, 2005). In the pyramid of Maslow, safety is included as second most important need. This pyramid outlines a hierarchy of human needs, each level building upon the next one below. The idea is that individuals must satisfy the lower-level need before moving on to the higher-level needs (McLeod, 2023). People will seek safety before meeting social needs. The social and physical environment plays a big part in establishing a safe environment. In cities where the population density is increasing, creating a safe environment will be more complex. Additionally, the well-being of people is also dependent upon feeling safe in their living environment. However, in Oud Mathenesse the residents are lacking a liveable and safe environment.

Furthermore, by addressing the context of hyper-diversity, this research also contributes to broader discussion of social equality and inclusivity. It aims to ensure that urban development is more equitably for all residents.

Scientific relevance

This thesis contributes to the existing knowledge regarding the design of social environments and the perception of safety. The current body of knowledge on social safe design and perceived safety is there, the context of hyper-diversity brings a new perspective in the research field. Often design strategies for a safe urban

environment are developed more top-down as result a generic approach on safety. This thesis will try to investigate more bottom-up methods in the research field of urban design, where the focus is on the experience of the user (residents). Most of the literature about physical environment and perceived safety is from the 1990s, however societies and cities have changed since then and it is important to research if they are still applicable for the cities nowadays. Our current society and cities are changing to more hyper-diverse societies and the cities are denser then ever. Therefore, it is important that the way we do research also becomes more diverse.

Ethical consideration

Gathering data on human behaviour necessitates careful attention to ethical considerations. Ensuring anonymity and privacy of participants is paramount. When engaging with local communities, obtaining informed consent from residents and stakeholders is crucial. Maintaining transparency in all interactions with community members and stakeholder is essential. This includes openly discussing research methodologies, objectives, and potential conflicts of interest. Respect and understanding the cultural and social norms of diverse community groups are critical when working with a wide range of stakeholders. This approach fosters trust and cooperation, contributing to the integrity and success of the research.

Research framework

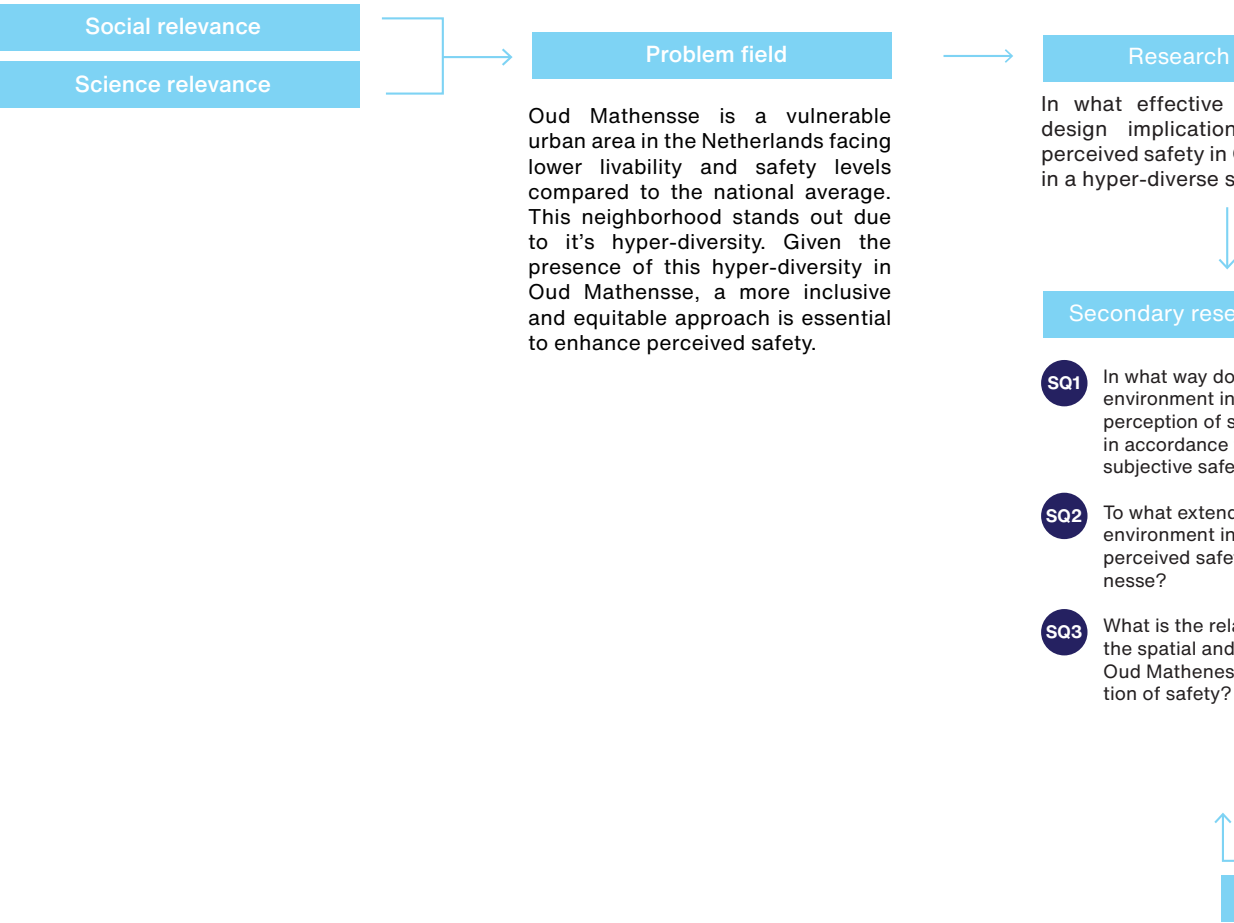
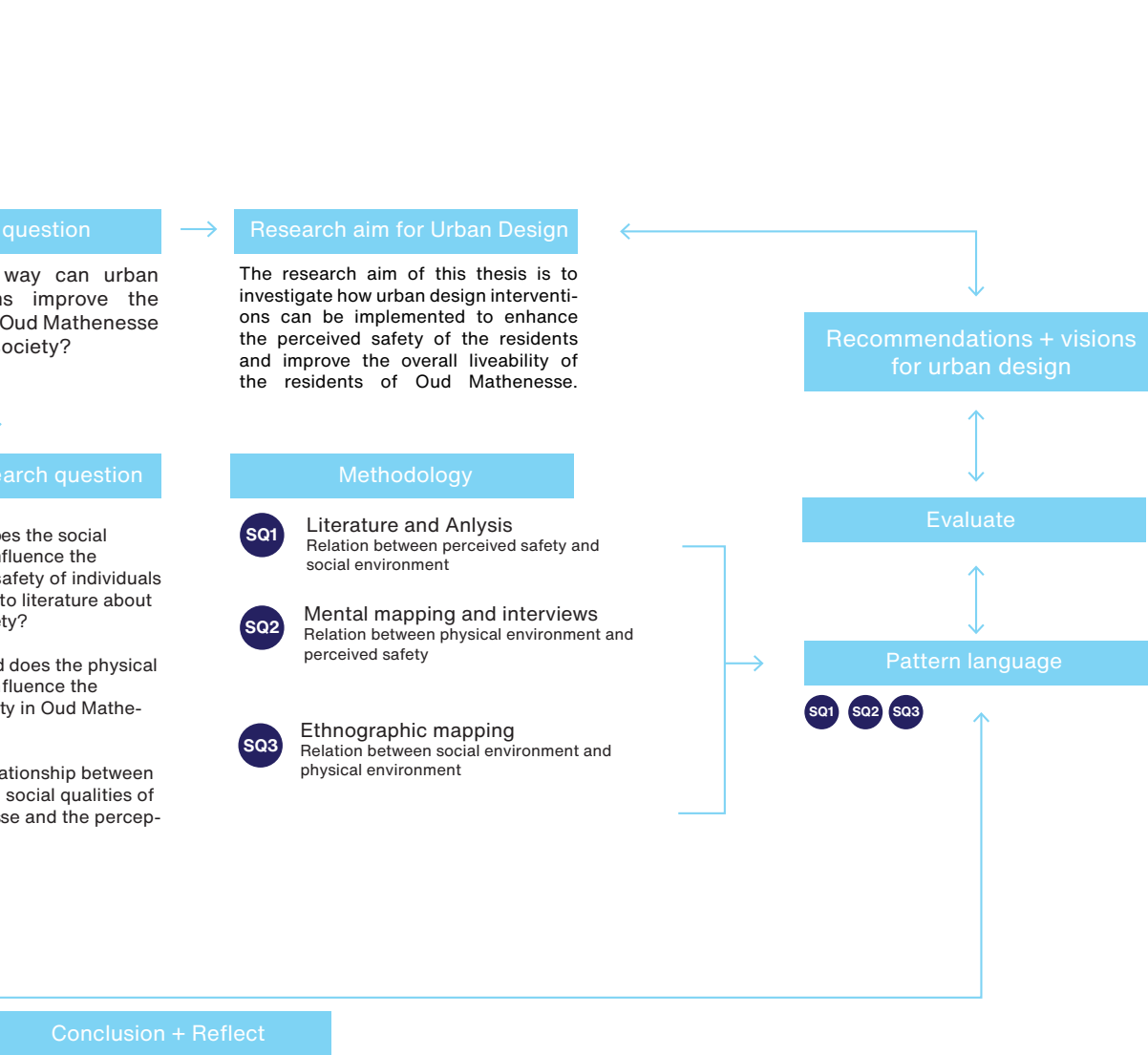


Image 20 | Research Framework

The framework on this page offers an understanding of the study’s structure and methodology. It outlines the essential elements and phases of the research process, research questions, methods for data collection, and the role of the design.



04.

Chapter 4.

Theory

48. Perceived safety

50. Social environment

55. Hyper-diversity

56. Physical environment

Theory

This chapter will first explore the definition of safety and perceived safety. Especially the relationship between of perceived safety and the social environment will be explored utilising theories of Altman and Talja Blokland. Finally, the relationship between physical environment and perceived safety will be explored using various theories and research, including Crime Prevention Through Environmental Design (CPTED), Veilig ontwerp en Beheer (Luten, 2008) and ‘Duurzame leefbare woonomgeving’ (Van Dorst, 2005).

Perceived safety

Safety is one of the basic needs and something everyone is confronted with everyday, yet what safety is, is not easy to define. Especially because the feeling of safety is for everyone different. Safety is a bigger description for multiple kinds of safety such as fire safety, traffic safety, user safety, social safety, etc (Luten, 2008). Social safety relates to the direct actions of other people, such as theft, violence, burglary, vandalism, and nuisance. In this research, safety will primarily refer to social safety.. The perceived safety influences the appreciation of the living environment and is therefore a crucial aspect of neighbourhood liveability. Feelings of unsafety can limit personal freedom (Van Dorst, 2005).

Safety can be broken down into objective safety and subjective safety. Objective safety is measured in numbers of criminal acts. It is typically highest in cities, due to larger population and increased opportunities for crime (Luten, 2008). Objective unsafety refers to the numbers of victims and incidents that happen in

Social - cultural context

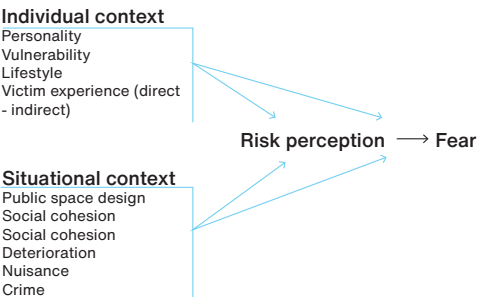


Image 21 | Keyfactors safety experience (Eysink Smeets, 2007, from A.luten)

an area. There is not a strong relationship between the objective and subjective safety. Residents of a neighbourhood with low crime rates (objectively safe) can still perceive the neighbourhood as unsafe (subjectively unsafe) (Baba & Austin, 1989).

Subjective safety is the perception of safety or unsafety. It involves the individual's assessment of risk (Luten, 2008). This perception is influenced by various factors: socio-cultural context, individual context, and situational context (Luten, 2008). Environmental Signals are interpreted through a cognitive processing process. Individual context will create a risk perception based on personality, vulnerability, lifestyle, and experience as victim (fig 21). Situational context is dependent on the design of the public environment, social cohesion, nuisance, and crime. The situational context is changeable, which is positive and can improve the overall perception of a

neighbourhood, especially for urbanist this is an important context.

In urban design, safety is primarily associated with the situational context, while the social context occurs within the physical environment. Both contexts influence one another. Talja Blokland assesses that feelings of unsafety can stem from crime and general life uncertainties, for example unemployment risks or discrimination (Blokland, 2008). Figure 22 illustrates the relationship between an individual and their surroundings. Within the social-cultural context, individuals continually interact with the natural, social, and physical environment. While the built environment is in the domain of urbanists, it is essential to consider the intersections with the social and natural environments.

As urbanists, our primary focus is on implementing innovative solutions within the built environment, considering the natural and social contexts. These domains are interdependent and responsive to each other. A better understanding of these interactions will lead to better solutions in urbanism

Criminals and Victims

Public spaces are used by a diverse range of individuals, but when discussing safety, the focus often narrows to two groups: criminals and victims. Socio-economic factors are closely related to the crime rates in a neighbourhood. Most criminals tend to commit crimes in their own neighbourhoods or neighbourhood nearby (Kopinsky et al., 1987). Neighbourhoods with certain socio-economic characteristics are at a higher

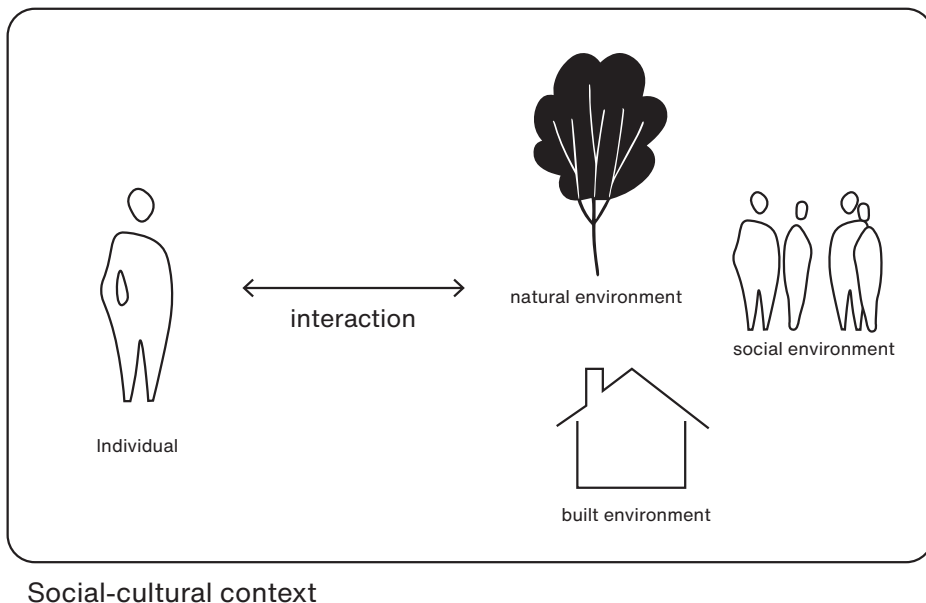


Image 22 | Visualization of Different Environments and Interaction with Individuals (M. van Dorst)

risk of criminality. The presence of specific services, such as liquor stores, can also attract more perpetrators (Blokland, 2008).

In the field of crime prevention, the focus has traditionally been perpetrators. In recent years, however, there has been a shift towards acknowledging the significance of the victim’s role. Youngsters and men are at a higher risk of becoming victims as compared to the elderly and women. This increased risk is partly due to the lifestyles of these groups, as they spend more time outside their homes than elderly and women.

One concept that has gained recognition is the “victim paradox” (Luten, 2008). This paradox suggests that individuals who perceive themselves as vulnerable often experience a heightened sense of insecurity but are statistically less likely to fall victim to a crime. Conversely, individuals who engage in delinquent behaviour have a higher risk of becoming victims of crime (Blokland, 2008).

The social environment

The social environment encompasses social, cultural, economic, religious factors that influence human behaviour. Social groups such as your family, friends, colleagues are important elements of this environment. Perceived safety is affected not only by environmental factors but also by personal characteristics and socio-cultural contexts (Van Dorst, 2005). The groups we belong to, the neighbourhoods we live in and the organization of our workplaces or educational institutions and the policies we create to structure our lives are all part of this socio-cultural context.

The social environment significantly shapes our behaviour within the physical environment, and conversely, the physical environment can encourage specific social behaviours. These two factors engage in continual interaction with one another. Understanding how the social environment interacts with the physical environment is key to understanding how they facilitate each other and how they create situations perceived as unsafe.

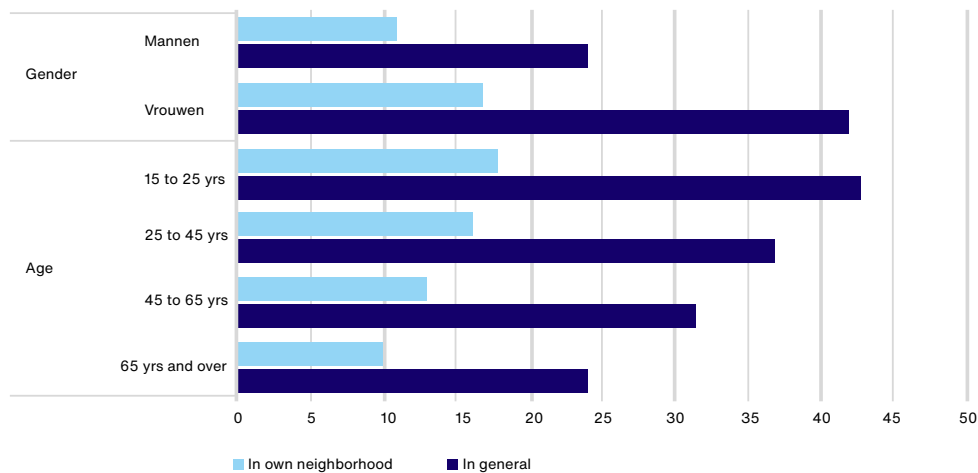


fig 23 | Experience of feeling unsafe per personal characteristics (Aa, 2022) edited by author

Jane Jacobs (2016) is well-known for her ideas of “eyes on the street”, where she asserts the design of the physical environment can influence the social environment and enhance social control or surveillance. (Jacobs, 2016). Talja Blokland (2008), a social scientist and urban researchers, drew inspiration from Jacobs but was also critical of her work, leading her to embark on new research into the concept of social surveillance. Blokland suggested that establishing relationships within a neighbourhood could enhance social surveillance by increasing the number of “eyes on the street” (Blokland, 2008). However, she later realized that fostering everyday interactions in public spaces was crucial for fostering a sense of community within the neighbourhood. Blokland argued that these brief contacts and relationships held significant value in creating an effective social surveillance system (Blokland, 2008).

Contrary to the notion that simply having many people present in an area would lead to social control, Blokland observed that in numerous ghetto neighbourhoods with crime and insecurity, despite the many “eyes on the street”, there was a lack of effective social control. Consequently, Blokland proposed a shift from the concept of “eyes on the street” to “eyes for each other,” highlighting the importance of mutual care and concern communities for effective surveillance and control.

The perception of social safety is significantly influenced by the social climate of the neighbourhood, making it crucial aspect to study. The social climate plays

a vital role in shaping people’s perception of safety within their neighbourhoods. This is particularly clear in cases of mistrust, where individuals are not able to predict the behaviour of others due to lack of contextual understanding within their own social framework. Informal surveillance, conducted by residents and passersby, plays a vital role in ensuring social safety within a neighbourhood.

Familiar strangers, individuals who may not be personally acquainted but are recognizable due to shared daily routines or paths, contribute to this informal surveillance. This concept of public familiarity, as described by Blokland (2008), fosters social surveillance and a sense of security within communities (Blokland, 2008). Brief interactions are often facilitated by neighbourhood amenities like schools and grocery stores, which serve as spaces for these small encounters (Blokland, 2008).

In contrast, public anonymity can lead individuals to rely on stereotypes when interacting with unfamiliar faces. Public familiarity, on the other hand, allows people to make more informed assessments of others, helping them navigate public spaces with greater confidence. For example, recognizing a familiar figure, such as the person who sells the paper everyday at the corner store, can empower individuals to adapt their behaviour, accordingly, enhancing their sense of control and safety in the environment.

Creating open and accessible public spaces is essential for fostering public familiarity

within a neighbourhood (Blokland, 2008). Prioritising the social use of physical spaces in urban planning and design will create environments where individuals feel empowered and connected to their surroundings. Contact with strangers can make us feel at home and experience community, especially when we become familiar with others in public spaces (Blokland, 2008).

Social behaviour

Irwin Altman is a social psychologist, he explored the complex interplay between the physical environment and human behaviour, particularly focusing on the psychological and social aspects of the environment (Altman, 1975). He delves into various topics related to the environmental psychology and how the design and structure of physical spaces influence human attitudes, emotions,

and social interactions. Altman’s theory of privacy, particularly his definition of privacy as the selective control of access to oneself or one’s group, significantly influences perceived safety (Altman, 1975). Recognizing the importance of regulating privacy is crucial for safeguarding individual freedom of choice.

There are a few key themes and concept Altman discusses in his book: “The environment and social behavior: Privacy, Personal Space, Territory, Crowding.” One concept is personal space, the study of how individuals perceive and use their personal space. Cultural and social factors influence people’s preferences for personal space and the design of environment can impact social interactions (Altman, 1975). Personal space is a dynamic process of moving towards and away from people and groups, this process is different for men,

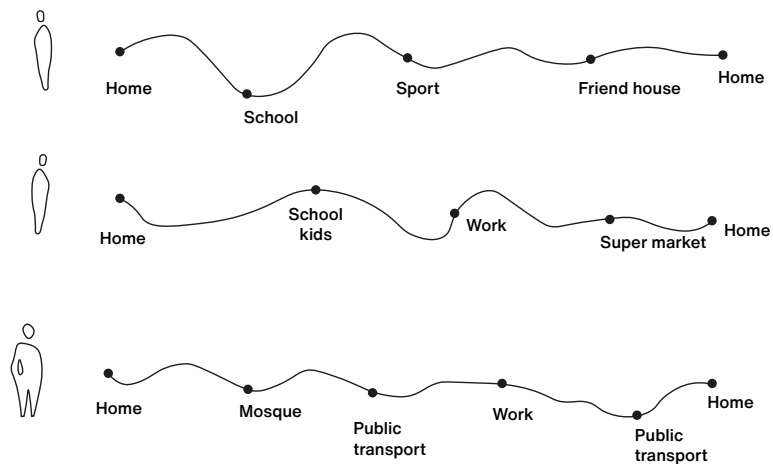


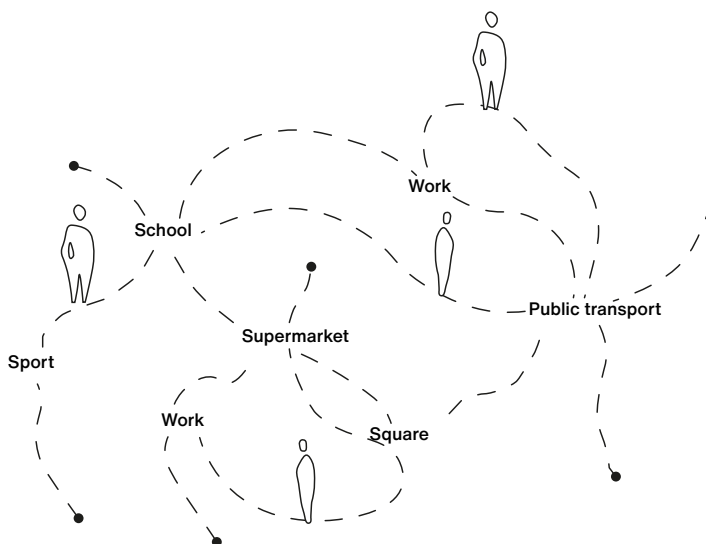
fig 24 | Visualisation of public familiarity

women and different social groups. You control whether you desire to be close to people you like or withdrawal and protective reaction to intrusion or overly contact by strangers.

Another theme is privacy, privacy is the regulation by changing self/other boundary examines importance of privacy in different contexts, the control of this interaction with others. It is the process in which a person or a group sometimes wants to be separated from others and sometimes want to be in contact with others. Design can enhance or diminish individuals' perceptions of privacy and personal control. Altman concluded that in order to facilitate this process an environment needs to be responsive to the needs of privacy. People have a changing privacy need, a door for your sleeping room for examples helps to sometimes interacts with others but also the possibility to

withdrawal and have some privacy. Having privacy is important for people their well-being (Van Dorst, 2005). The design of the built environment can create clear zoning (territories) to make people feel more in control over their privacy, avoid certain interaction for example. Van Dorst defined this zone as physically readable and socially accepted (Van Dorst, 2005). According to Van Dorst there is a divergence in the perception between groups and individuals. While groups operate within semi-private and private spaces, these areas can affectively serve as private zones for the group. The design of certain areas can facilitate territorial claims by groups (Van Dorst, 2005).

This brings us to the third behaviour Altman discussed which is territoriality. This is about how people defend and establish their territories, whether they are tangible



territories with clear boundaries or more fluent territories but understood by people. Territorial behaviour manifests differently across various settings, impacting social behaviours and interactions. Territoriality refers to the extent to which users have control over a space (Altman, 1975). People exhibit different degrees of territoriality to ensure that their space align with their social needs and provide control over social interactions and situations (Altman, 1975).

Altman classified territories into three categories: primary territories, secondary territories, and public territories (Altman,

1975). Primary territories are easily identified as private spaces both physically and legally, while the other territories are more ambiguous. A public space can transform temporarily in a secondary space when it is claimed by a specific user group (Van Dorst, 2005).

A final topic that is of importance regarding perceived safety and social behaviour is crowding and the social effects of crowding. They examine how individuals respond to varying levels of population density in urban and non-urban environments. Altman emphasized the importance of perceived control over social interactions

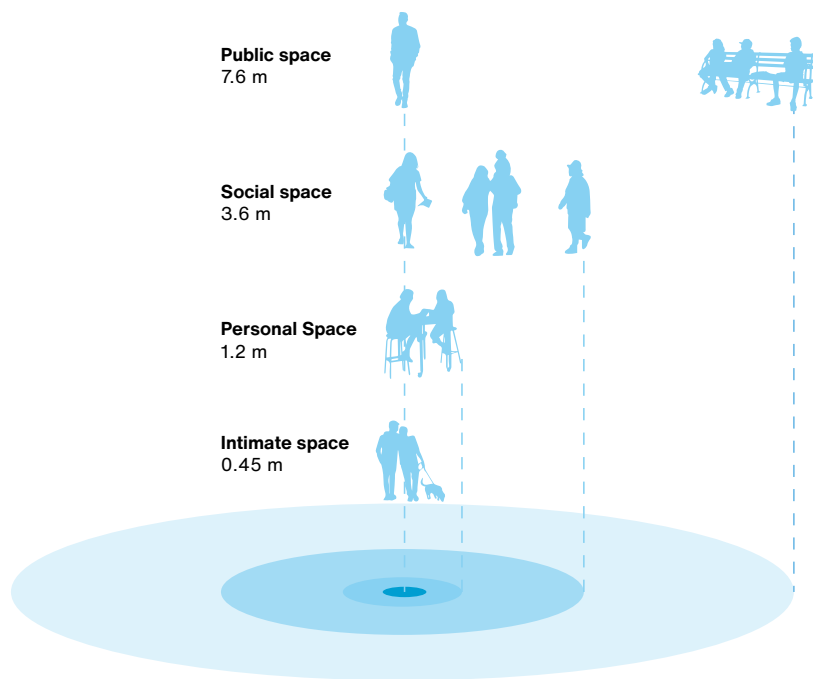


fig 25 | (San Francisco Civic Center Public Life Framework, 2018)

as a key indicator of stress (Van Dorst, 2005). In loneliness, the perceived level of social interaction is lower than the desired level. Conversely, in social crowding, the perceived level of social interaction is higher than the desired level (Van Dorst, 2005). When the perceived crowding is undesired this can result in stress levels or unsafety feeling.

Hyper - diversity

Setha Low is an environmental psychologist and anthropologist. She argues that space and place are not neutral or passive elements but are actively shaped and infused with cultural meaning (Low, 2016). Different societies and communities interpret and use space in unique ways, reflecting their cultural values and practices (Low, 2016). Especially in a neighbourhood, as described by Sim (2019), the human-environment dynamic is about relationships, values, needs, behaviours, and lifestyles. This complexity can lead to conflicts, particularly among neighbours sharing a common environment. Hence, it's crucial to acknowledge the diverse needs and aspiration of community groups in both the design and management of the built environment (Sim, 2019).

In terms of safety, a case study in Queensland employing the Crime Prevention Through Environmental Design approach highlights the importance of developing safety strategies that embrace and enhance the cultural and heritage strengths and icons of the community, rather than alienating them (Crime Prevention through Environmental Design guidelines for Queensland, 2007). However, a significant diversity within

a community can sometimes result in anonymity. Van Dorst's research suggests that making these differences visible can contribute to better social cohesion (Van Dorst, 2005). When residents can attribute meaning and identity to their living environment, they are more likely to incorporate it into their sense of self (Van Dorst, 2005). Cultural significance also plays a pivotal role in nurturing a sense of belonging and acknowledgment within communities. "Street codes" and other cultural norms can influence individuals' sense of ownership and connection to a specific place.

The social use of physical spaces can be of more importance in urban design, considering how they can accommodate diverse community needs, including spaces for social interaction and informal gatherings. Addressing issues of mistrust and insecurity requires creating environments where individuals feel empowered and connected to their surroundings. When a neighbourhood shares a common identity, it fosters a sense of community (Sim, 2019).

Perceived safety and physical environment

When we talk about the built environment, we talk about everything that's built such as services, buildings, houses, objects on all different scales. Guidelines have been established for urban design to create socially safe environments, shaped by research spanning several years. The evolution of research in crime prevention through environmental design (CPTED) will be discussed, and this chapter will conclude by discussing how the theories will be used for further research in the following chapters.

History of social safety, crime prevention and the physical environment

The discourse surrounding social safety has persisted throughout history, particularly in the urban environment. Even during the medieval period, individuals erected fortified structures and city walls to safeguard themselves against external threats. Cities were stratified into guild neighbourhoods, emphasizing communal living within specific social groups. The industrialisation changed the physical approach of city walls. During this era, pioneering researchers initiated the analysis of physical environments, seeking correlations with criminal activities. These researchers aimed to establish connections between socio-demographic factors and the surrounding landscape (Luten, 2008).

In the period of 1900-1950 research shifted from enforcement to prevention approaches. The Chicago school set up this prevention projects in specific neighbourhoods, they actively sought to enhance conditions in impoverished

neighbourhood, specifically exploring causal links among social circumstance (such as poverty), situational conditions (such as people's living situations) and the behaviour (such as criminality) exhibited by juvenile delinquents.

In 1961 Jane Jacobs published here book "The death and life of great American Cities," where Jane Jacobs argues that not the social factors of a neighborhood create criminality but the design of the physical environment (Jacobs, 2016). A decade later C. Ray Jeffert wrote the book "Crime prevention Through Environmental Design" in 1971, establishing an explicit link between criminality and the built and social environment and in 1972 Oscar Newman published his theory in "Defensible space," where he analyzed how the physical environment can foster a sense of connection among residents and enhance overall security. These three books changed the perception and the relation between crime and urban design and are the basis for more research about Crime Prevention Through Urban Design.

In 1985, the Netherlands witnessed a shift as authorities began to prioritize crime prevention over the traditional approach of merely apprehending thieves. This strategic re-evaluation recognized that modifying the physical environment could effectively mitigate criminal activities. The Bureau Criminality prevention (DSP-group) was established to comprehensively analyse the factors influencing the development of criminality and its relationships with the physical environment. Following the new crime prevention approach Theo van der

Voordt and Herman van Wegen promoted for the integration of social safety considerations into the built environment at the TU Delft in 1991. This seminal work introduced a checklist designed to assess the impact of the built environment on social safety.

In 2008, Luten released her book “Handbook for Safe Design and Management,” this comprehensive work consolidates extensive research conducted over the years and serves as the foundation for this thesis regarding safety and the physical environment. Luten’s study expanded on the research conducted by Jacobs, C. Ray Jeffert, Newman, Van der Voordt and Van Wegen.

Guidelines for social safe environment

The book of Luten (2008) serves as a manual for safe design and maintenance. This book is a collection of research about crime prevention and environmental design from the research mentioned before. Luten collected and translated this research into four guidelines that help design, maintain, build and layout safe urban environments. Crime Prevention Through Environmental Design (CPTED) fundamental idea is that it is possible to use knowledge and creativity to design-built environments in ways that lessen or prevent the incidence of crime. The CPTED design process must consider each place in its special context (Crime Prevention through Environmental Design guidelines for queensland, 2007). The four guidelines of Luten give a clear overview of how the physical environment is related to safety.

In this thesis, the four guidelines formed by Luten (2008) will be used to analyse the neighbourhood of Oud Mathenesse. The four guidelines are visibility, accessibility, legibility, and attractivity. Each guideline will be explained and analysed more in depth in the next part of this thesis.

05.

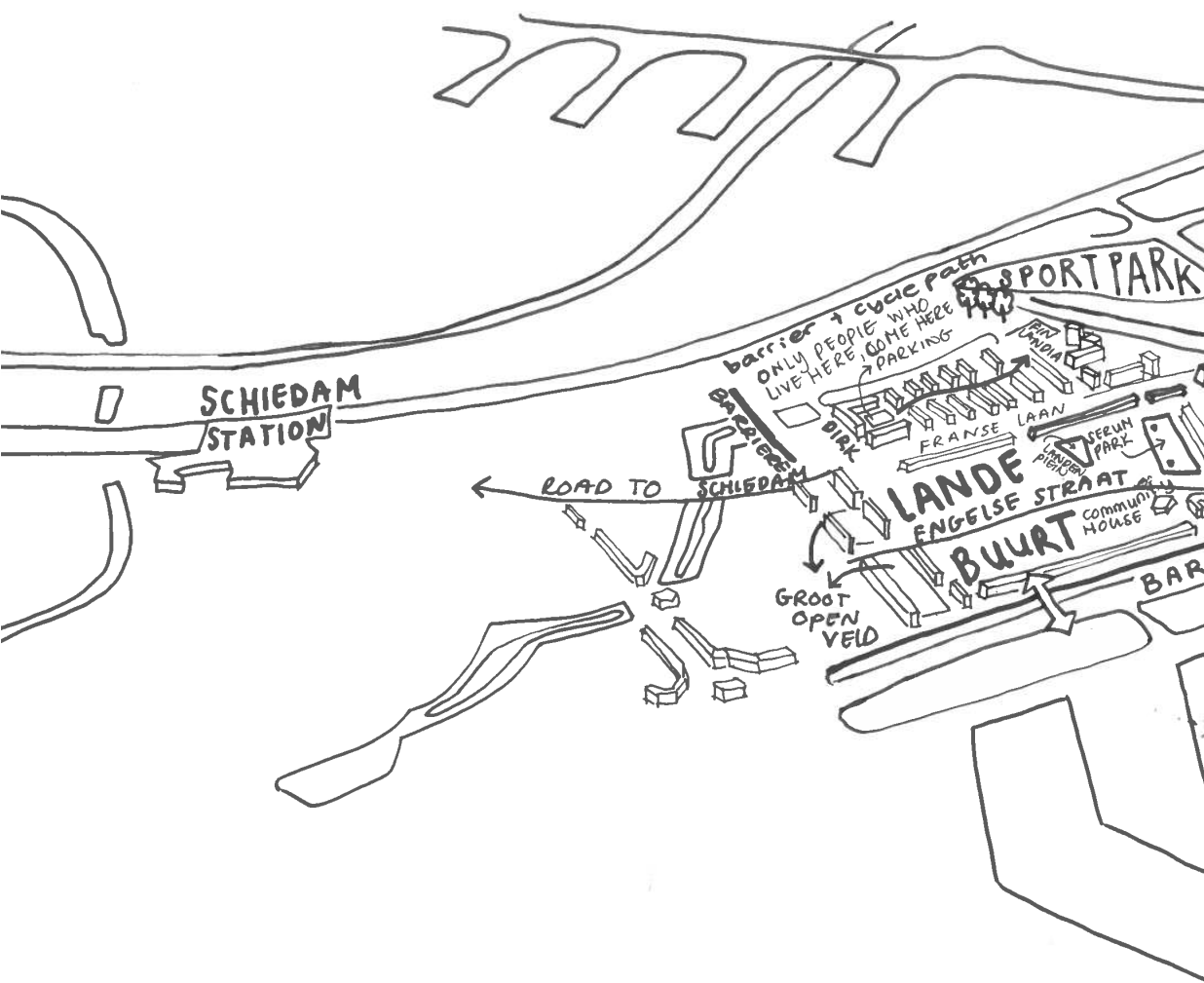
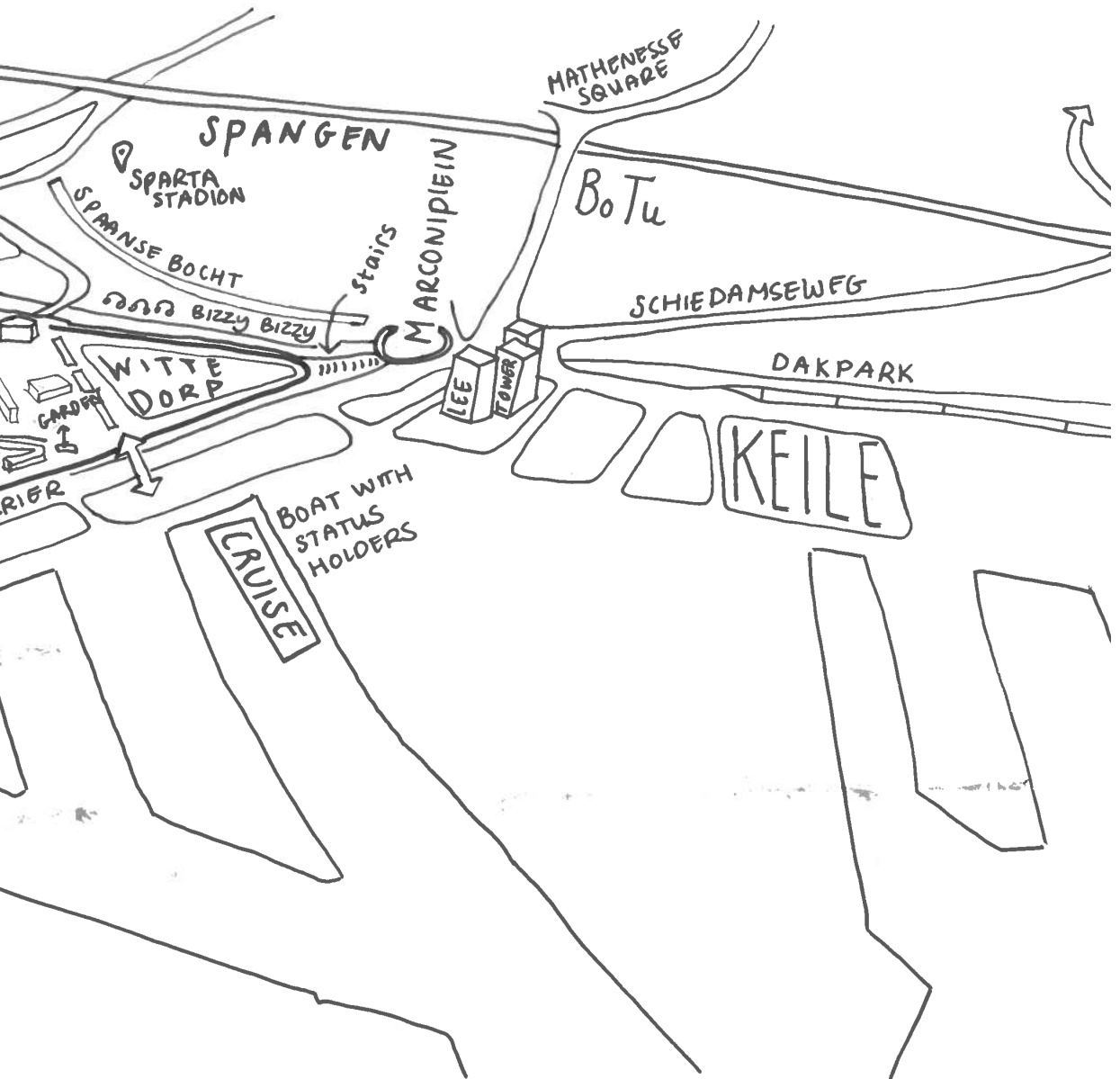


fig 26 | Drawing of Oud Mathenesse and surrounding



Demographics

Research on safety has indicated that areas with specific socio-demographic characteristics often exhibit higher levels of criminality, these characteristics are for example migration background, households, employments levels and income (Baba & Austin, 1989). An overview of the demographics of Oud Mathenesse is collected.

Oud Mathenesse is located at the edges of the municipalities of Rotterdam next to Schiedam and near the Maas. The neighbourhood is situated on the North side of the dike that separates the neighbourhood from the old harbour districts (fig 27).

Regarding the characteristics of age and gender research has highlighted that women often feel unsafe compared to men (Moons, 2024). In Oud Mathenesse the percentage man and women are the same (fig 28). Individuals aged between 15-25 and 25-45 tend to feel the most insecure, this may be attributed to their increased outdoor activities, exposing them to potentially unsafe situations or locations. In contrast, individuals aged between 25 and 45, and those sixty-five and older, tend to spend more time indoors or have resided in an area for a longer duration (Moons, 2024). In Oud Mathenesse, the largest demographic groups are those aged 25-45 and 65 years and older.



fig 27 | Map of location of Oud Mathenesse in Municipalities of Rotterdam (big lined out)

The vulnerable urban areas in The Netherlands often face lower income levels compared to the national average, have lower education levels and lot of residents with migration backgrounds. Regarding income the average household income in Oud Mathenesse is notably lower (24,600), in contrast to the overall income in Rotterdam (27,173) (Allecijfers.nl). Most of the resident in Oud Mathenesse have a middle or low level of education (fig 30) (Allecijfers.nl).

Oud Mathenesse has a diverse resident background, with nearly 70 percent being migrants or descendants from various European countries, Morocco, Antilles,

Suriname, Turkey, and many other countries (Allecijfers.nl). Oud Mathenesse is the new home for a lot of immigrant workers from Poland and Bulgaria (Endedijk & Middel, 2022). The EU – working immigrants are 25% op the population of Oud Mathenesse. Oud Mathenesse is a transit neighbourhood, with 16 percent of Oud Mathenesse residents leaving the area, according to neighbourhood profiles. Additionally, 39% of respondents in Oud Mathenesse expressed a willingness to move from the neighbourhood (DPG Media Privacy Gate, z.d.). Frequent changes in residents within a neighbourhood can negatively impact public familiarity among its inhabitants, hindering the formation of connections with neighbours.

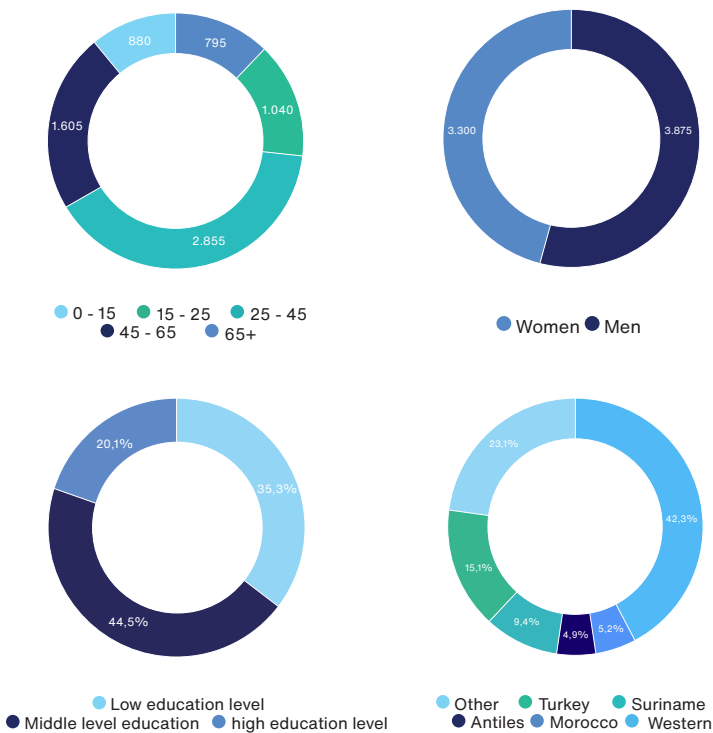


fig 28 - 31 | Diagrams of ages, men/woman, and background (Allecijfers, 2022)

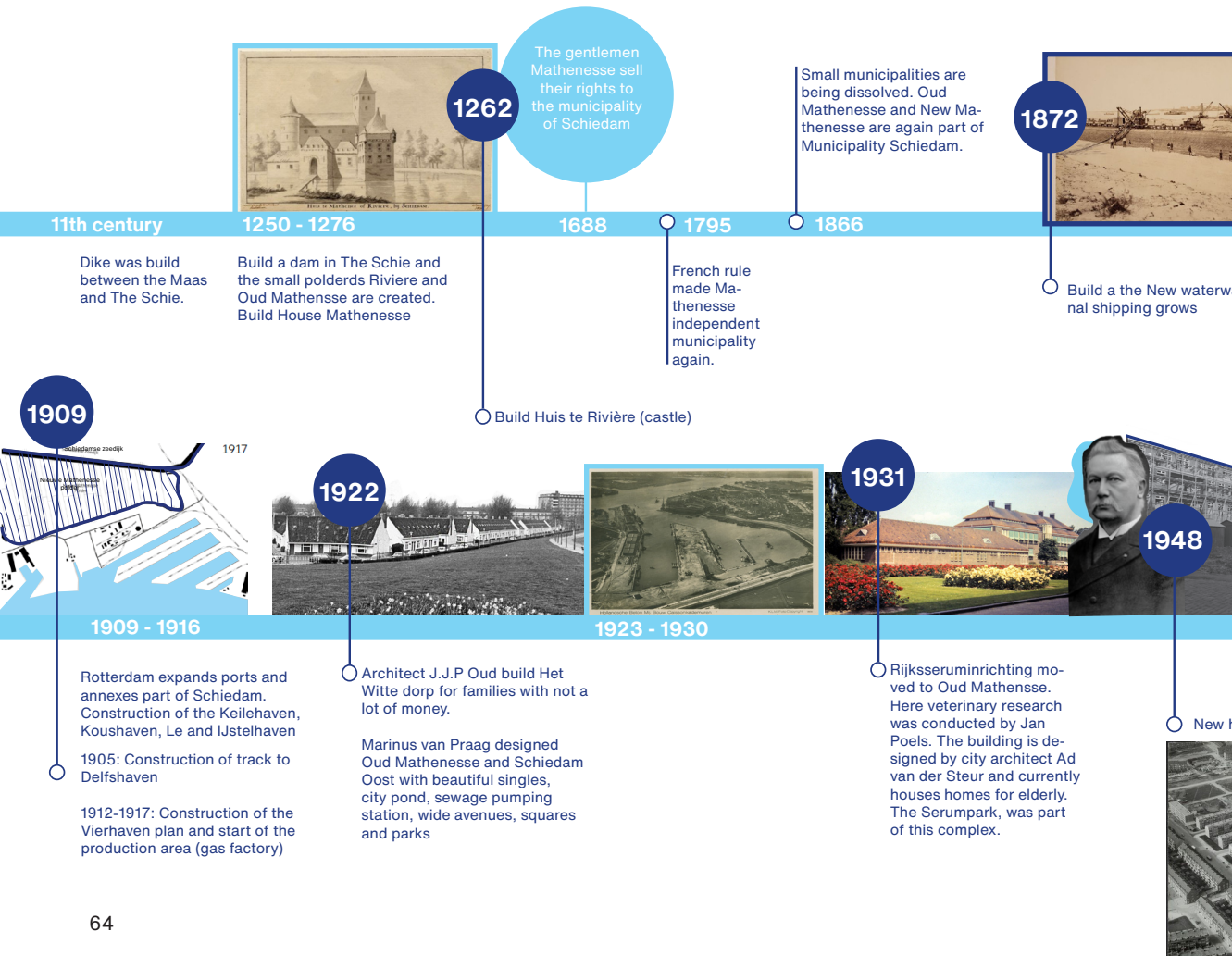
History

Oud Mathenesse is a neighbourhood with a dynamic past. Although once united with Schiedam, the neighbourhood is now separated. There are ambitious plans for the future that will change the urban environment of the surrounded neighbourhoods.

In the 11th century, a dike was constructed between the Maas and The Schie, which still stands today. Thereafter between 1250 and 1276, a dam was built in the Schie, giving rise to small polders named Riviere

and Oud Mathenesse. In 1276, Ambacht Mathenesse, a rural administrative unit, was established, and the Mathenesse family held ownership until 1688 when they sold their rights to the municipality of Schiedam. Oud Mathenesse was part of the municipality until 1795, when French rulers granted Mathenesse independence. However, it rejoined Schiedam in 1866 after small municipalities were dissolved (Mathenesse aan de Maas, z.d.).

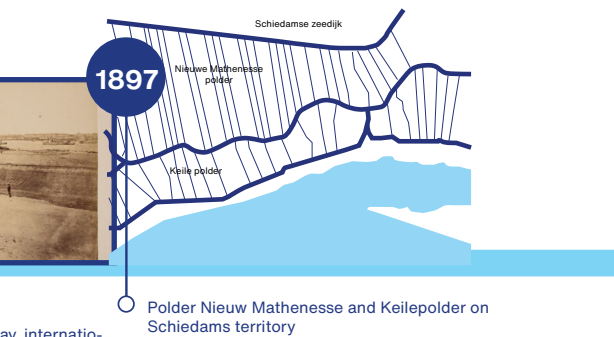
In 1872, the New Waterway was constructed,



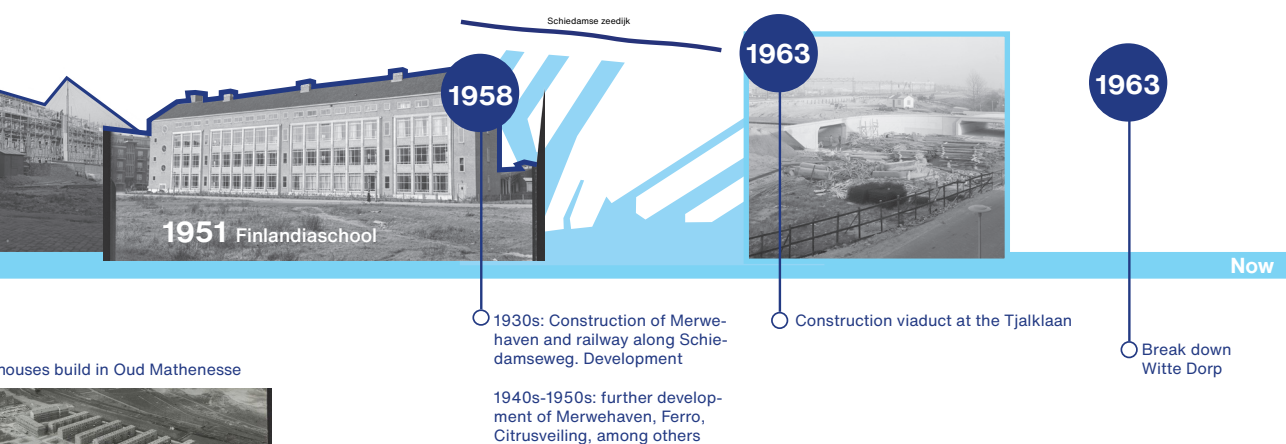
leading to the growth of international shipping in Rotterdam. From 1909 to 1916, Rotterdam expanded its ports, annexing parts of Schiedam, including Oud Mathenesse and Nieuw Mathenesse. The construction of Keilehaven, Koushaven, and Ijselhaven began in Nieuw Mathenesse. In 1922, architect J.J.P. Oud build Het Witte dorp for low-income families, later the houses were torn down and a new design arise based on the same street structure. From 1923-1930, Merwehaven was developed, and Nieuw Mathenesse

transformed into a complete harbour with the Schiedamse dike between old and new Mathenesse.

In 1931, the Rijksseruminrichting moved to Oud Mathenesse, conducting veterinary research. The facility, designed by city architect Ad van der Steur, included a Serumpark and smaller surrounding buildings. The park and buildings are still there today but have a different functions. In 1947, new houses were built in Oud Mathenesse, this is now the Schepenbuurt.



Oud Mathenesse and Het Witte Dorp were once quite residential areas for harbour workers, the neighbourhoods have undergone transformations over the years regarding this identity. Particularly, the Franselaan was once a lively street with a butcher shop, vegetable stores, and bakeries, now there is a decline of these small local stores. Most of the apartments were constructed after World War II, as a results that the quality of the buildings is deteriorating.



houses build in Oud Mathenesse



Image 32 | Timeline with images from Stadsarchief Rotterdam, Mathenesse aan de Maas and Masterplan Merwehaven. (2023). In Gemeente Rotterdam.





The physical environment

In this part the neighborhoods will be analyzed by the four principles: **accessibility, visibility, legibility and attractivity** formulated by Italo Luten (Luten, 2008). The theoretical framework previously delved into various relationships between safety and the physical environment. To comprehend the neighbourhoods and evaluate their performance based on these four guidelines, a thorough analysis is conducted.

Accessibility

The build environment needs to be accessible for desired use and it needs to be closed for undesired behaviour. The definition of accessibility, as proposed by Wijk (2008) is “accessibility of the built environment is the property of outdoor space, buildings and homes that ensures that people can do what they should be able to do according to the destination” (Wijk, 2008 from Luten). Accessibility therefore refers to the ease with which spaces can be used, accessed, and exited. Both physical and organizational barriers play a role in achieving this.

Oud Mathenesse is good accessible via public transportation, with Schiedam station as a hub linking the neighbourhood to Rotterdam Central and Amsterdam Central. Marconiplein stands out as a transport nexus, facilitating metro access to Rotterdam city centre and Schiedam station. The proximity of the A20 highway and the presence of major roads make the area easily reachable by car. However, accessibility by bike and on foot is limited due to significant barriers surrounding the area. Franselaan serves as the neighbourhood’s focal point, yet lacks sufficient crosspoints, with cars often speeding along its lanes. When considering accessibility, it is vital to recognize the diverse needs of various user groups, including the elderly, children, and families.

Part of accessibility is connectivity. Connectivity is the extent to which different parts of the neighbourhood (and, in turn, different neighbourhoods) are “connected” so that movement – especially on foot, but also by bicycle, car, public transport

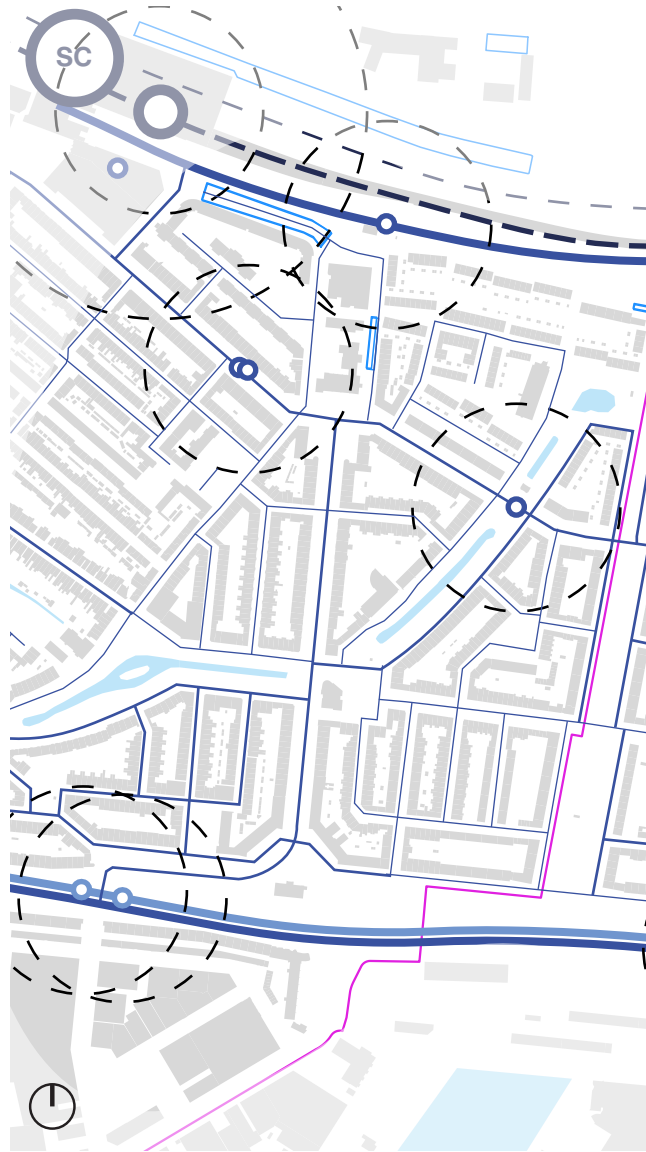


fig 33 | Map of accessibility Oud Mathenesse 1:7500





fig 34 | Connectivity with Rotterdam scale 1:15000



and emergency vehicle – is easy, legible, reasonably direct and appropriately flexible (Crime Prevention through Environmental Design guidelines for queensland, 2007). The connectivity and accessibility strongly influence each other. Especially regarding the new developments in the Merwe haven the connectivity with this new neighbourhood will be an important aspect to create mutual growth for both neighbourhoods. Zooming into the larger city scale of Rotterdam, Mathenesse appears well-accessible by public transportation and car routes. However, when examining the neighbourhood on a smaller scale, issues arise regarding pedestrian and bicycle accessibility.

Visibility

Visibility revolves around the principle of seeing and being seen. Naturally people want to know what is happening in their surrounding and be able to see their surroundings. Clarity, sightlines, lighting, and the presence of people contribute to visibility. Besides visual observation, being seen also encompasses being heard and known (Luten, 2008). In order to encourage the presence of people, neighbourhoods require facilities that will draw individuals at various times throughout the day. The presence of people is not only influenced by facilities, but also by the built environment and resident demographics (Kopinsky et al., 1987). For instance, lacking inviting public or green spaces will automatically not attract a lot of people. Demographically, in area with numerous families, children are typically in school during the day, while parents are at work. Conversely, the elderly may frequent the space throughout the day, while youth tend to gather more in the streets in the evenings. The size of the environment also contributes to the perception of visibility; larger-scale environments tend to foster a sense of anonymity, thus making individuals feel less visible (Luten, 2008).

Sightlines refer to visibility at eye level in the streets towards other people. However, they also encompass the views from within buildings onto the streets and from buildings towards public spaces (Kopinsky et al., 1987). This relationship between security and visibility significantly impacts whether people will utilize the public space. Cars and vegetation can obstruct sightlines both on the streets and from houses to the streets.

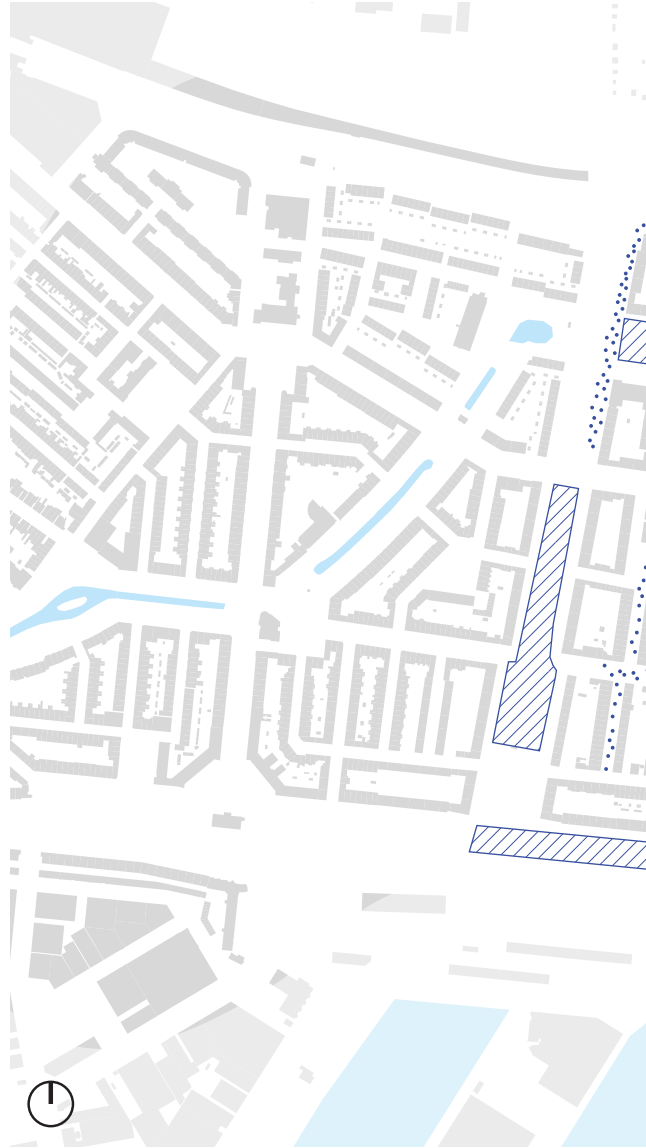


fig 35 | Map of visibility Oud Mathenesse 1:7500

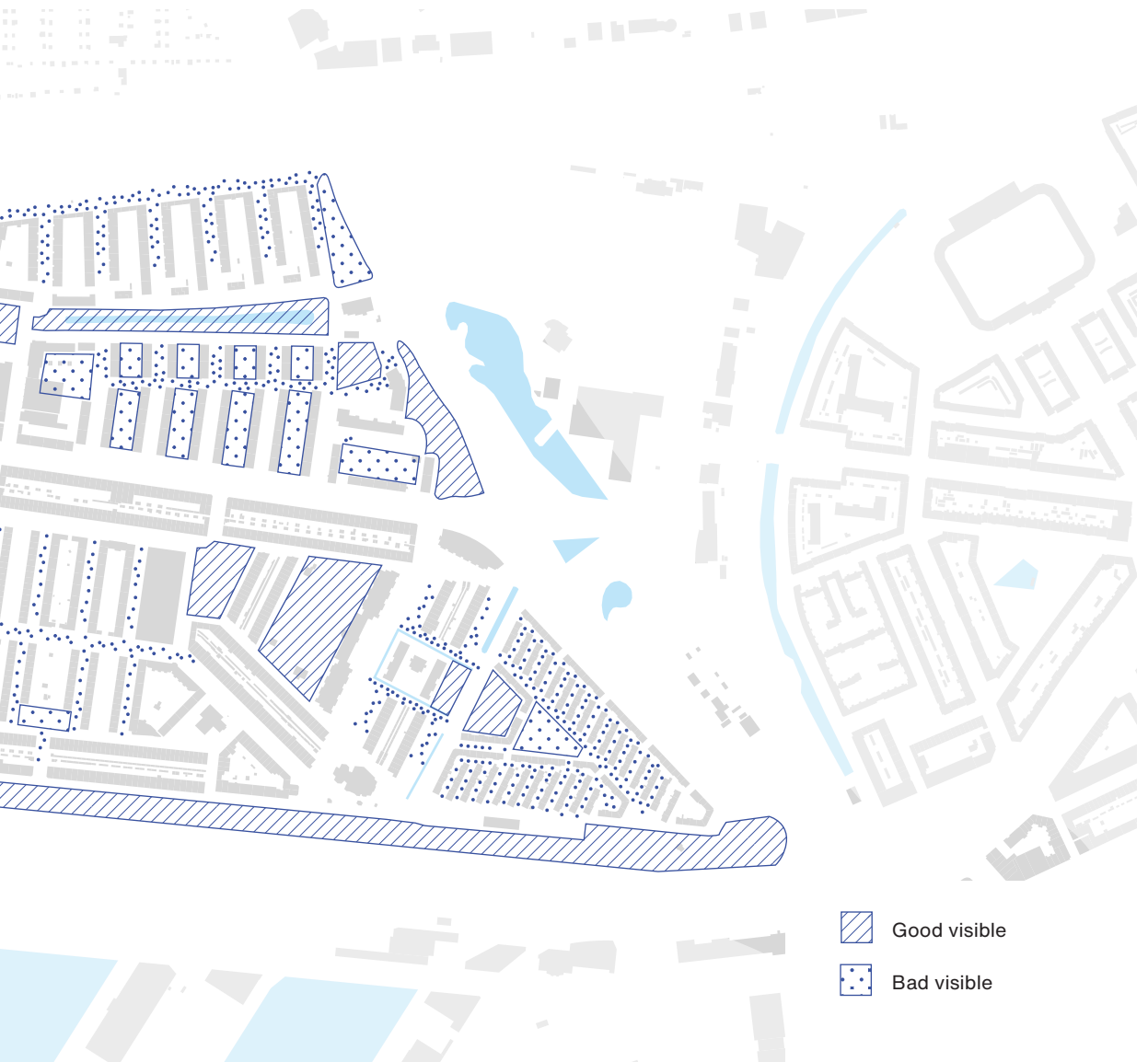




fig 36 | Visibility path Midscheeps

Another aspect regarding visibility is supervision, whether formal (police, security, guards), semiformal (concierge, huismeester), or informal (residents, passengers). The adequacy of informal supervision is contingent upon the availability of services and functions in the area, considering the specific times of day when people utilize services and traverse different locations. Another form of supervision is social surveillance and is closely related to the definition of “public familiarity” as explained in the theory chapter. When there is public familiarity in a neighbourhood individuals feel more in control and ultimately this can improve social control in the neighbourhood.

The concept of false security (*schijnveiligheid*) cautions against relying on visible measures, as a well-lit area may convey a sense of safety without addressing inherent risks (Luten, 2008). Balancing transparency is crucial; excessively clear and exposed spaces may discourage usage, as individuals prioritize anonymity and privacy. Striking the right balance is

paramount to creating an environment that is both secure and welcoming (Luten, 2008).

Through analysis of the area, it becomes apparent that Oud Mathenesse lacks services that would attract people to the neighbourhood and people in the neighbourhood. Regarding the presence of people, the ethnographic mapping showed that there are individuals on the streets but primarily in specific areas. When evaluating visibility in terms of sightlines and human presences through analysis of the area, certain specific locations within the neighbourhood stand out. In figure 36, the areas with limited visibility are indicated by dotted pattern. For example, the path and inner gardens in the Schepenbuurt (fig 37), lack visibility in terms of sightlines and connection with the surrounded buildings. This applies to the pathway leading to the Dirk supermarket (fig 42). The images show how the green, and closed façade creates a sense of enclosure along the path, making it difficult to discern whether there are people in the inner gardens.

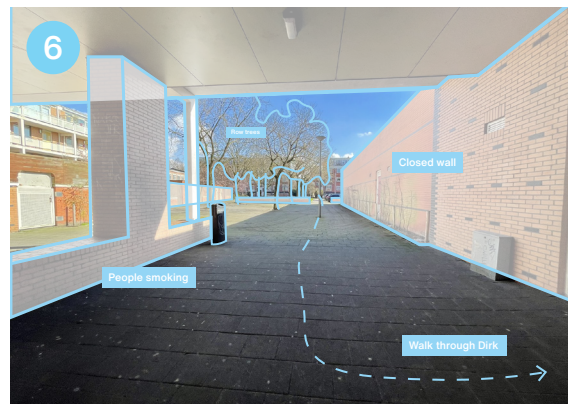
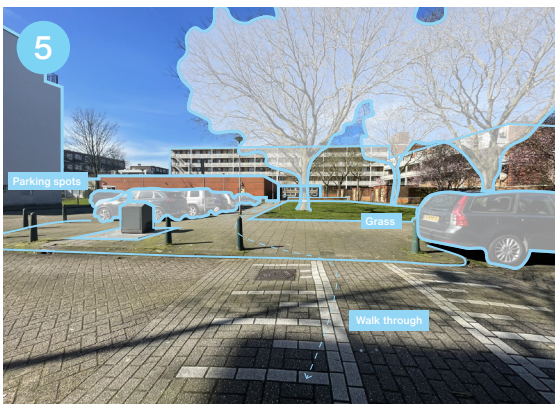
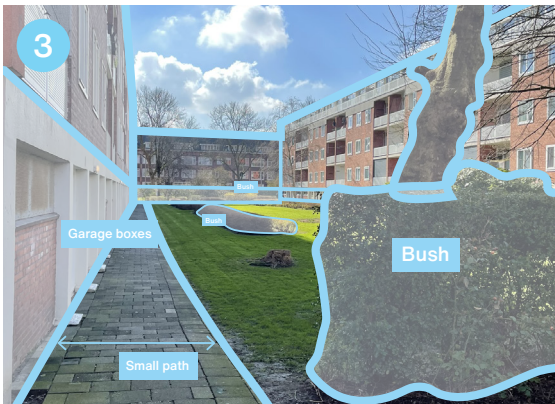
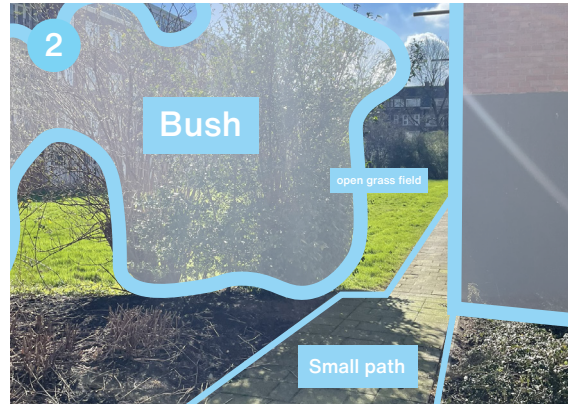
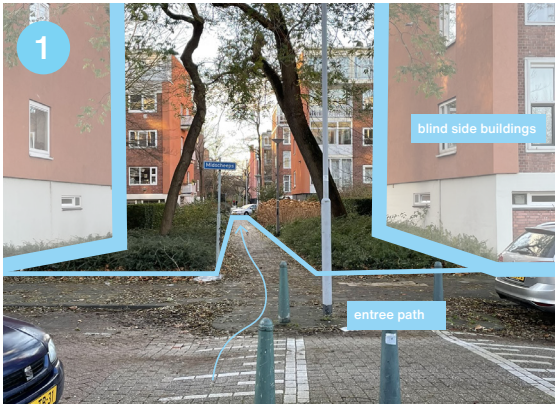


fig 37-42 | Pictures of locations in Oud Mathenesse

The path runs alongside closed facades, adorned with greenery. From this path, the gardens are publicly accessible.

S.6



People use this route as a quieter, greener way to reach the supermarket or Finlandia School. Residents also use this path to access the gardens, where they can enter the cellar to park their bikes.



The bushes and greenery here are trimmed short because people were sleeping in them, leaving behind a lot of trash.

O.9

The gardens are empty and unused, with low-quality greenery and poor maintenance. People preferred the openness of the gardens, as it allowed them to easily monitor for any strangers sleeping there.

S.3

S.9



In the shared cellars, migrant workers slept when they lost their apartments, causing inconvenience for the building's residents. Entering the cellars became unpleasant.



Mattresses, couches, tables, chairs and more trash is dumped the gardens.

O.1

The gardens are rarely used, even in the summer, and residents seldom sit on their balconies.

Legibility

Legibility in urban design refers to an environment that allows people to know where they are and how to get to where they are going (Crime Prevention through Environmental Design guidelines for queensland, 2007). This includes clear pathways for pedestrians and cyclist, contributing to improved orientation and enhancing overall user experience. The logical and clear structure of roads, paths, and corridors is essential for residents, as well as those unfamiliar with the area. Decorative elements and strategic use of colour can serve as effective tools for navigation and orientation. Establishing a clear and coherent spatial layout fosters a sense of order, safety, and understanding of the environment for both residents as passengers (Luten, 2008).

When we look at Oud Mathenesse regarding the legibility, the road structure and spatial organization is notably clear (fig 43). The area has a clear route structure and green structures that help navigate in the area. For instance, the “Landenbuurt” (country neighbourhood) showcases street decorations corresponding to the countries they are named after, contributing to its identity.

However, legibility is also about territories and zoning, the legibility of zoning plays a big role in distinguishing spaces, ensuring that the space can easily be read as private, semi-private, public, or semi-public. This aspect of legibility is referred to as territoriality (Luten, 2008). As mentioned in the theory chapter the regulation of privacy explained by Altman’s studies of environmental behaviour play a role in

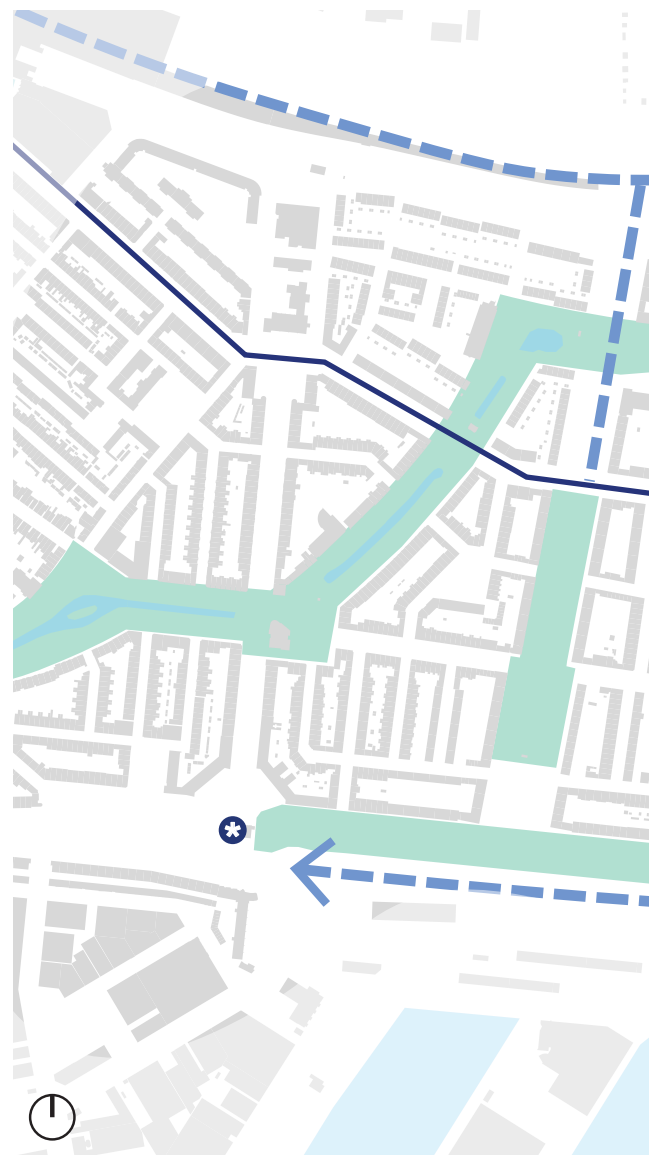
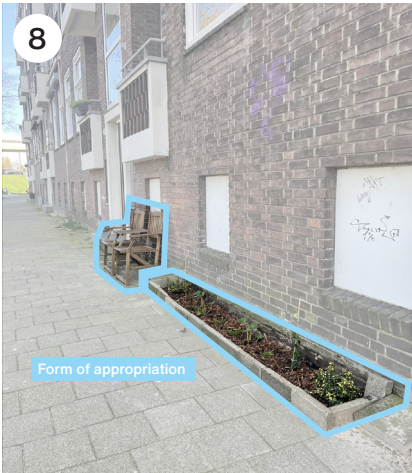
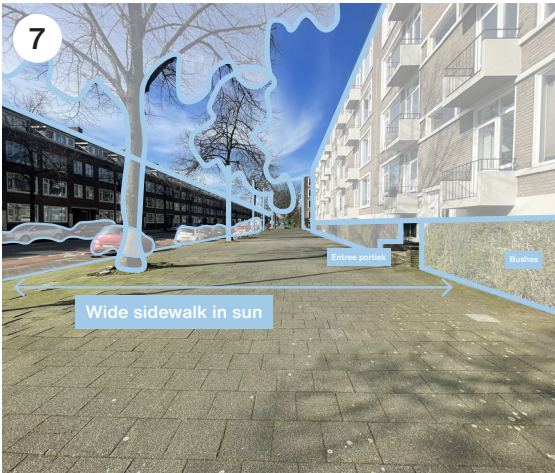
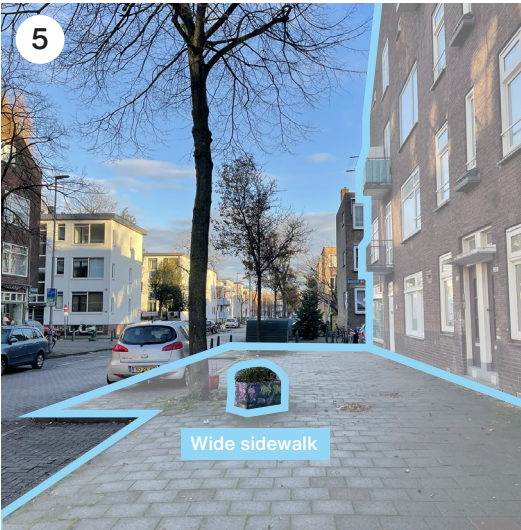
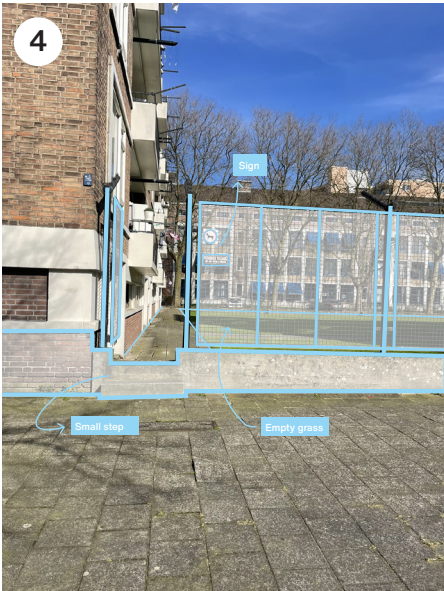
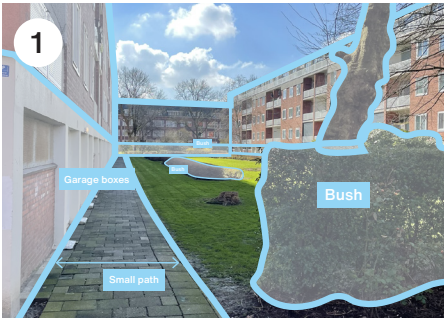
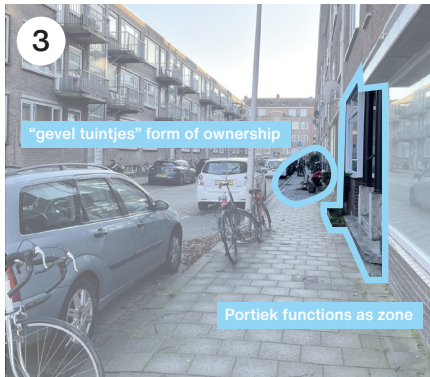


fig 43 | Legibility map Oud Mathenesse 1:7500







Different forms of territoriality Oud Mathenesse

1. Semi-private gardens
2. Showing ownership
3. Portiek transition zone
4. Semi-private garden with fence
5. Wide sidewalk no transition
6. Balconies for of ownership
7. Wide sidewalk small transition
8. Form of appropriation with chairs

order to understand how social behaviour occurs, especially the regulation of privacy is important to feel in control of your private space. Territoriality is important to regulate social interactions and private space. In “Een duurzame leefbare woonomgeving”, van Dorst (2005) mentioned that the urban environment must be able to regulate these social interactions. This can be done by clear zones and the transition zones between private to public. This hybrid zone softens the transition from private to public and provides opportunities to have control over social interactions. Clear territories help organize space and make the environment easier to understand (Van Dorst, 2005).

This territoriality is strongly related with appropriation, emphasizing the importance of knowing and feeling ownership over space. Furthermore, not only knowing who owner of a territory is but also creating a feeling of ownership helps by creating territories and understanding them. A territory is a spatial area as well as a social area (Minoura, 2016). The hybrid zone provides the residents to have control and create places that residents can take ownership over. However, complexities arise in shared living spaces like apartments, where defining ownership and creating appropriation zones become more challenging.

In research of Minoura (2016) she sees ownership as a form of appropriation, where appropriation is seen as patterns of use and engagement with spaces that suggest a relationship between the user of the space and the built environment itself.

Places that are unappropriated do not invite such engagement and are a different sort of territory (Minoura, 2016). This indicates that territoriality is strongly related with the social environment and behaviour and the interaction between the social and physical. When there is ambiguity about a territorial situation this may create confusion about who owns and uses a space, and therefore also how people will behave in this space. As a consequence, spaces with unclear territoriality can create places that are meaningless to residents, not looked after, not used, or activate undesired social behaviour, as result there is no social control or disorder (Minoura, 2016).

Not only clarity in urban form will help understand these territories but the urban form can also create better circumstances and spaces where people will appropriate these places and take ownership. This will eventually result in common maintenance and social control over these places (Minouri, 2016). Establishing good boundaries will contribute to a comprehensive understanding of the area (Luten, 2008). This indicates that well-defined boundaries foster a sense of safety and control. The functional purpose of a place can already clearly communicate through both its designated function and physical layout its purpose. Spaces perceived as “nobody’s land” often lead to a lack of responsibility among individuals (Luten, 2008).

The spatial conditions that are needed to create places that function as social territories are not generic conditions, as already mentioned preferences differ

according to culture, age, gender and site specific. According to Minoura (2016) to produce social territory, it is important to see use and ownership as separate components of appropriation. Use is a more temporary activity while ownership refers to the sense of belonging, which invites residents to personalize spaces through their practices (Minoura, 2016). To create ownership, clear enclosure, boundaries, and entrances, are preferred, this because the people who have ownership want to have a form of control over the space. Use is a more public form of appropriation and requires different conditions such as spacious and open places, where anonymity is preferred (Minoura, 2016). When there is too much anonymity in the area the residents will be less motivated to call out other people on undesired behaviour (Van Dorst, 2005), therefore it is important to find balance in the level of anonymity.

In Oud Mathenesse the dynamics of territoriality and appropriation are complex due to the shared living arrangements. With all houses being apartments sharing front doors or stairways, the boundary between private and public spaces becomes blurred, making the hybrid zone more complex. Appropriation also poses challenges as transition zones are shared among multiple individuals, leading to a more complex form of social regulation. In map 44 and 45 the level of publicness and ownership are analysed through field work. Some places are public or semi-public do have a form of ownership, whereas other while public/semi-public spaces may lack clear ownership, resulting in areas that feel unclaimed or unowned by anyone.



fig 44 | Level of publicness map 1:7500 (60%)



fig 45 | Level of ownership map 1:7500 (60%)

Attractivity

A surrounding need to be attractive and show care and attention. When people care for their surrounding, they will maintain the surrounding and keep it clean (Luten, 2008). Luten came up with six conditions that contribute to creating an attractive environment. The first condition is aesthetic qualities such as forms, scale, texture, décor, colour, acoustics, smell, and music, all of which contribute to individual appreciation. Aligning a place with personal preferences and cultural expectations is vital for individuals to relate their personal identities to their surroundings. Certain universal values, such as green spaces, water features, sunlight, and shelter, consistently hold attractiveness (Luten, 2008).

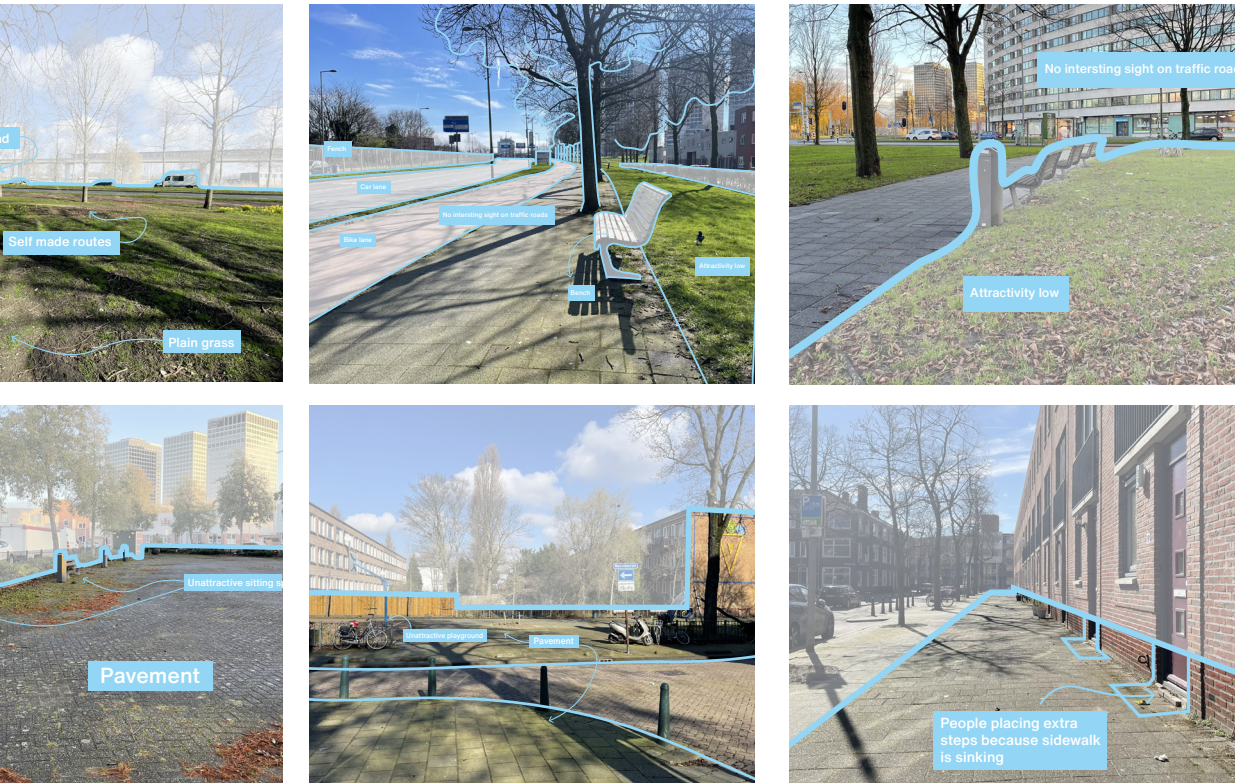
These are very personal conditions and therefore hard to generalize in urban design, therefore the universal values such as green spaces, water features and sunlight have a high value in urban design in public spaces. The personal conditions can be important to create places that want to stimulate ownership, in this way people will feel more related to this surrounding and take care of it. In Oud Mathenesse, while there are patches of greenery, much of it appears neglected, consisting mostly of plain grass. These green spaces hold potential for enhancement to become more attractive. Additionally, there is a lot of pavements throughout the area that could be transformed into verdant spaces. The benches in the neighbourhood are not strategically placed or particularly inviting, leading to infrequent use. Furthermore, aside from public amenities, the neighbourhood suffers from a general



fig 46-53 | Pictures of locations in Oud Mathenesse

issue of litter, with rubbish often found in bushes and on the streets (fig 46 – 53).

Another condition for an attractive environment is the presence of desired facilities or services. This is an essential aspect to establish an engagement for individuals with their environment. In research of Jan Gehl, he noted that the possibility to observe other people will make a place more vital and encourage social interaction and a sense of community (Gehl, 1980). Another case study research, about Crime Prevention Through Environmental



Design in Queensland (2007), they mention the term activity generators which is defined by places that include land uses that encourage the use of the public realm such as outdoor cafés and restaurants, outdoor sporting areas located within open space and clusters of shops. Instead of concealment spaces where it is unclear if it's publicly used or not. In the Oud Mathenesse this activity generators are missing, and the facilities and services are mostly outside the neighbourhood.

Maintenance and management are crucial

conditions for an attractive environment. A clean environment is favourable, while neglected or vacant buildings and terrains serve as potential grounds for decay. Striking a balance is essential; an environment that is spotless may discourage usage, while lively places often exhibit a degree of natural disorder (Luten, 2008). This is related to the broken window theory, this theory argues that the presence of visible signs of neglect, such as broken windows, graffiti, abandoned buildings, loitering, and public drinking can lead to further deterioration if left unaddressed

and can encourage further crime and anti-social behaviour in an area (Ruhl, 2024). Residents may perceive a lack of authority and order as a sign of weak social control in the area. However, it is important to note that there is no clear evidence that this will result in higher crime rates, the perception of safety will be mostly influenced.

The final three conditions for an attractive environment are esthetical-, technical-, and social sustainability. Aesthetic sustainability involves adaptability in building design and surrounding, accommodating changing needs and preferences. Technical sustainability is the robustness of materials and objects, ensuring durability against intensive use, varying weather conditions, and potential vandalism. Social sustainability is tied to a sense of safety linked to the social network of the neighbourhood. Active resident involvement positively contributes to social sustainability (Luten,2008).

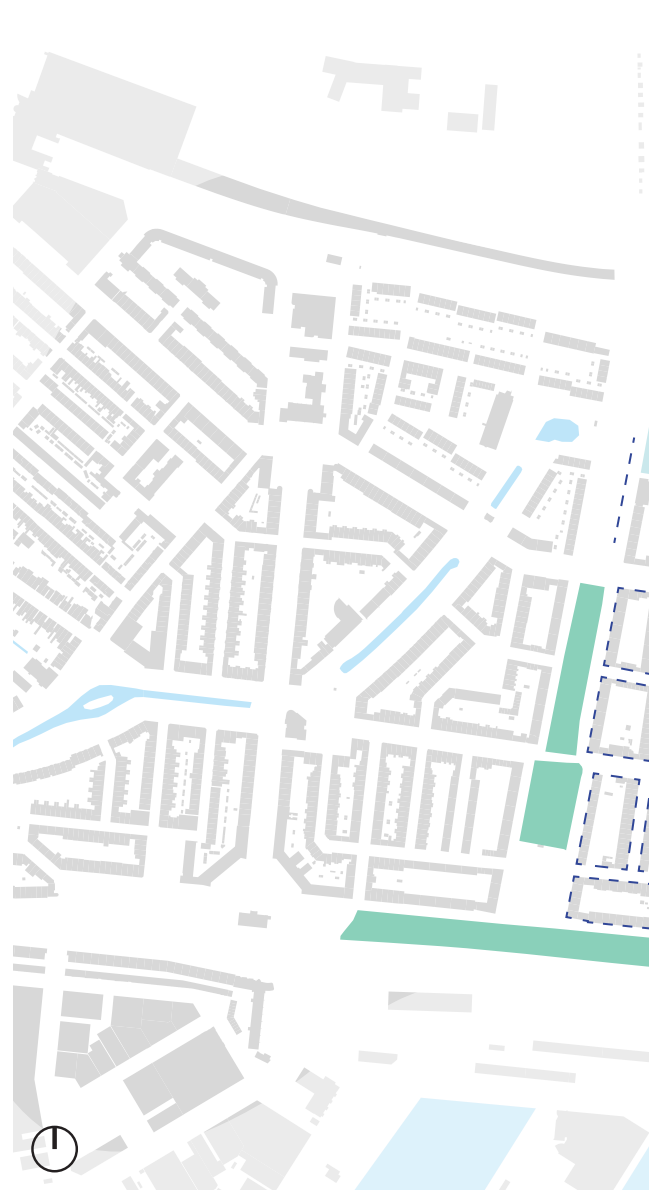


fig 54 | Attractivity map Oud Mathenesse 1:7500







The social environment

In this chapter, the social environment of the neighbourhoods will be analysed through the subjective point of view of its residents. To achieve this the methods of mental mapping and interviews will help to give an idea of the perceived safety of the residents. Furthermore, ethnographic mapping will provide us with valuable insights into the social dynamics and interactions within this neighbourhood.

Social environment

The social environment encompasses all social interactions within the neighbourhood reflecting its culture, identity, social cohesion, networks, and safety. The social environment of a neighbourhood can be examined through two lenses: firstly, from the viewpoint of individual residents, who perceive it as the sum of their interactions with neighbours. Secondly, the perspective of the residents of the community (all the people in the neighbourhood) as one social system (Van Dorst, 2005). Where the collective interactions of all residents form a unified social system. An individual's perception of the neighbourhood may not accurately reflect the overall quality of the community's social environment.

Studying this environment, various methods like ethnographic mapping and mental mapping will be used. To comprehend the social network the neighbourhood newspaper, Instagram pages, and online videos are analysed and studied. The ethnographic mapping will provide an analysis of the broader community, whereas the interviews will capture the perspective of individual residents.

The map (fig 55) shows the social and public places that are available in the area. Oud Mathenesse lacks significant meeting and social locations. There are two elementary schools that exist in the neighbourhood, and there are two more schools across the Tjalklaan, along with two schools in Schiedam. There is one community building (Huis van de Wijk "De inloop") in the area, there used to be two, but the other community building named "de put" has been sold and closed

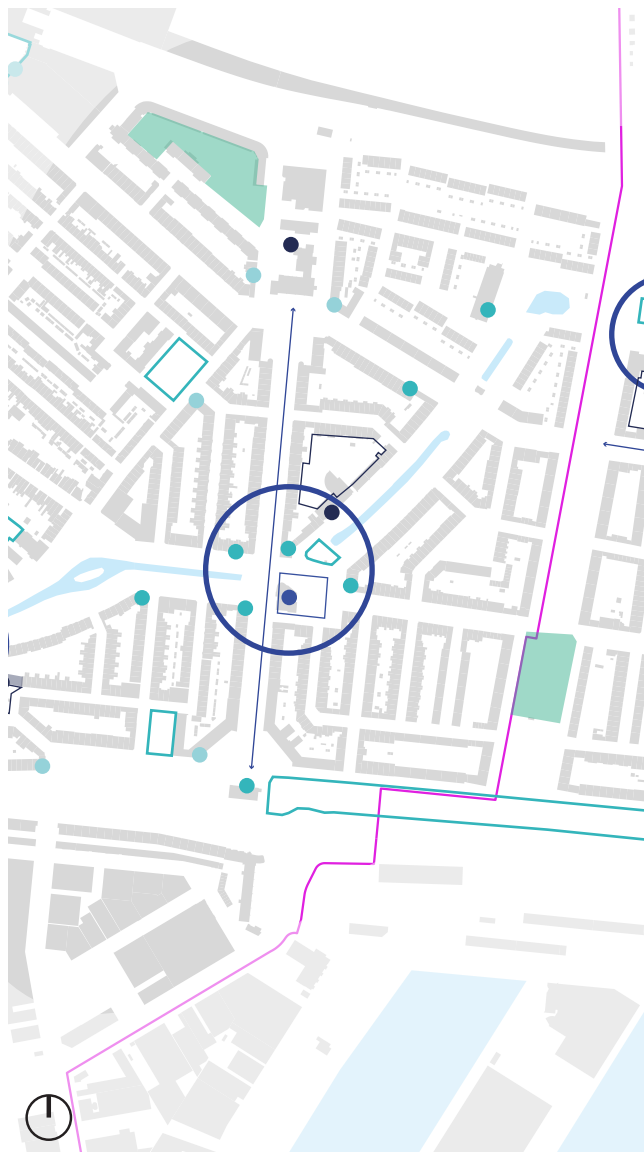


fig 55 | Social environment analysis 1:7500



Amenities

- primary school
- social work
- community centre
- religious institute
- restaurant / café
- supermarket
- cultural hub

Outside space related

- primary school
- social work
- community centre
- religious institute
- playground



fig 56 | Het buitenhuis (Gemeente Rotterdam, 2024)



fig 57 | Casa Blanca (Radar, 2022)



fig 58 | Neighbourhood garden (Own)



fig 59 | Huis van de wijk "De inloop" (Wijkwinkel - Radar, n.d.)

by the municipality. Additionally, there is one mosque and another Islamic centre for religious activities. Alongside the Franselaan there are some cafes, grocery stores, and snack bars that can functions as social meeting place and where people interact.

Besides the community centre "De inloop" there is also a place for the children of Oud-Mathenesse, this is a building in the Serumpark named Casa Blanca (fig 57) and another called "Stichting Jeugdactiviteiten" near the Dirk and het Pinasplein. Het "Buitenhuis" (fig 56) is a container located at the Hogenban parc, located between Schiedam and Rotterdam. This are in total three inside public places in the area where people can gather.

Numerous organizations and volunteer initiatives operate within the neighbourhood. These include a garden group responsible for establishing a new neighbourhood garden near the Huis van de Wijk, a clean-up team, cooking club,

running group, and the “op de Schop!” initiative, focused on renovating and redesigning streets in the area. Another notable initiative is Mathenesse aan de Maas, which aims to foster connections among residents through art, culture, and storytelling activities. These groups gather in public space (garden group, clean-up team, running group) and inside the community centre or at someone’s home.

Community development programs and other initiatives that facilitate community spirit (such as involvement in the planning or renewal of places) can encourage people to feel safe and to be active in their environment (Crime Prevention through Environmental Design guidelines for Queensland, 2007). The analysis of social initiatives indicates considerable resident engagement in shaping the social environment in Oud-Mathenesse. However, the locations that accommodate public functions and social contact, have a low accessibility, attractiveness, and are not clearly visible in the streets. The entrances are unclear and uninviting. Residents often voice the absence of public meeting spaces in the area and these initiatives have struggled to find a place where they can meet and gather.

In addition to the social initiatives, this neighbourhood is dealing with other challenges regarding the social environment. The residential buildings in this area consist entirely of apartments, resulting in high population density within these buildings. Residents often face issues of noise disturbances and are collectively responsible for maintaining shared



fig 60 | Cookbook of neighbourhood (Own)

#MAD MAGAZINE

WIJ MAKEN MATHENESSE AAN DE MAAS! - VOORJAAR 2023 NR. 03



fig 61 | Magazine Mathenesse aan de Maas (Mathenesse Aan De Maas, n.d.)

space such as staircases. Homeowners collaborate through VVEs (Owners' Associations) to manage their buildings and allocate funds for maintenance expenses. However, these VVEs do not function as effectively as hoped or needed, leading to tensions and poorly maintained buildings. Many residents live in crowded conditions, sharing small living spaces for high rents. As mentioned earlier in the problem analysis, the work immigrants only live in Oud-Mathenesse for a few months and then move back to their home country, resulting in a lack of familiarity among residents next to these transit apartments. Only a few residents have a private garden, others have small balconies as outdoor spaces, due to this and the crowded living conditions it makes sense that people seek outdoor spaces and public indoor spaces.

Interviews & mental mapping

Multiple interviews and short conversations on the street helped to capture the resident's perception of Oud Mathenesse. These conversations involved long-term residents who have spent their entire lives in the neighbourhood. What stood out was the abundance of individuals who were born and raised here, fostering a profound attachment to the area and treasuring memories from their younger years. They often spoke positively about the entire sphere of the neighbourhood, its green surroundings, and the diverse ethnics coexisting harmoniously. Many of these residents actively engage in various community groups and initiatives, feeling a sense of duty and belonging towards the improvement of their neighbourhood.

Nevertheless, these residents are aware of the need for improvements of the public

space and the decline of stores along the Franselaan. They voice a longing for improved amenities, particularly the absence of a nursing home for the elderly in the area, a concern that unsettles long-time residents as it necessitates the relocation of older individuals in need of care. Moreover, accessing public transportation, notably the tram, poses difficulties for residents due to limited accessibility. These difficulties are related with the dike where the tram stations are located on, multiple residents draw and mention the dike. One individual proposed a detour through Schiedam Centrum to reach Marconiplein, highlighting the transportation challenges encountered by locals. Various long-term residents feel disappointed with their neighbourhood and are considering moving outside the neighbourhood due to their frustration with the municipality's lack of action.

Another group in the area are young professionals or students between the ages 20 to 35. Many of them gravitated towards the neighbourhood due to its affordable rents and housing prices. They appreciate the peace of the neighbourhood, while being in close proximity to the city centre. This group tends to be more mobile and lacks strong ties to specific places or activities within the neighbourhood. They often go outside of Oud Mathenesse to Delfshaven or the city centres of Schiedam or Rotterdam for social appointments, the only amenities that they do regularly visit in the neighbourhood are the grocery stores. However, they do value the neighbourhood's proximity to Schiedam train station and the metro station, this is visible in the mental maps since all the participants drew the stations. While they

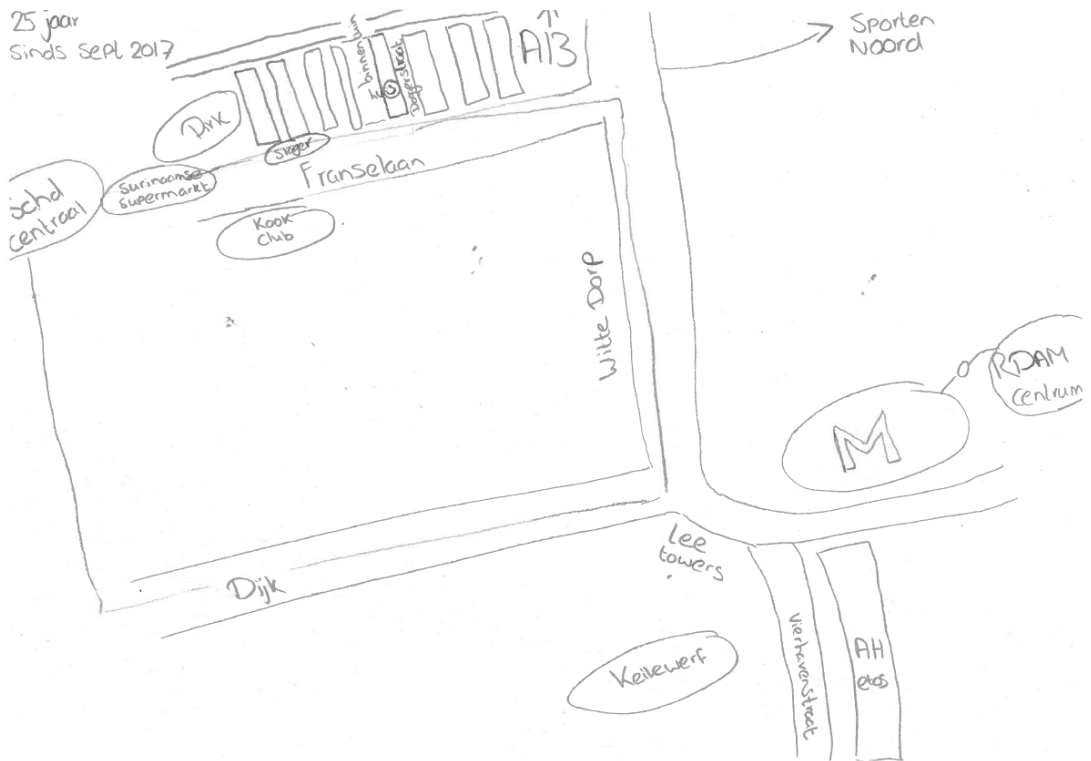


fig 62 | Mental map of person 25 years old, living in Oud Mathenesse for 7 years

may have small talks with their immediate neighbours, they have limited connections within the community and are not actively involved in local activities. Moreover, they share the miss of insufficient amenities, specifically the lack of appealing cafes or coffee spots as a reason for seeking social experienced elsewhere.

Another perspective explored during the research is that of the local police officer. This officer is the designated contact for Oud Mathenesse, focusing exclusively on this neighbourhood. The goal of the local police officers is to get to know the

residents and understand the community's issues and dynamics. To improve social cohesion and inform residents about the police officer's role, they organize neighbourhood events. These events also provide a platform for residents to share their feelings about the community. The following pages document the shift with the local police officer, including drawing that visualizes the conversations, stories, and observation from the shift.



addicts. We meet him, a man with a unique hobby, who grew up here with his parents and still resides in the same place. He is looking for a job but struggles finding one. He is not the only one in the area struggling to find a job, unfortunately. What these people do all day is unclear, but one can imagine that they stay at home in an already crowded living environment, causing inconvenience to other residents. We speak to more people on the street, everyone knows one another and makes small talk with the police officer about the situation in the street. One woman is complaining about how the sidewalk is sinking and the stairs to the front doors need improvement. She is clearly annoyed with the physical state of the neighbourhood.

After more rounds with the bike, more house visits, and some food we continue to the chairmen of a VVVe in the area. He has been living in the neighbourhood for a long time and mentions as well that the neighbourhood has declined. Why we are there today is because he is struggling with a problem; people through rubbish in the gardens behind the building blocks, but not any kind of trash, people dump big mattresses, couches, tables and closets in the backyard gardens. The problem is that the municipality does not come there to pick it up but is the official owner of this gardens, as a result nobody cleans it up. It is hard to communicate with the other residents since they do not speak

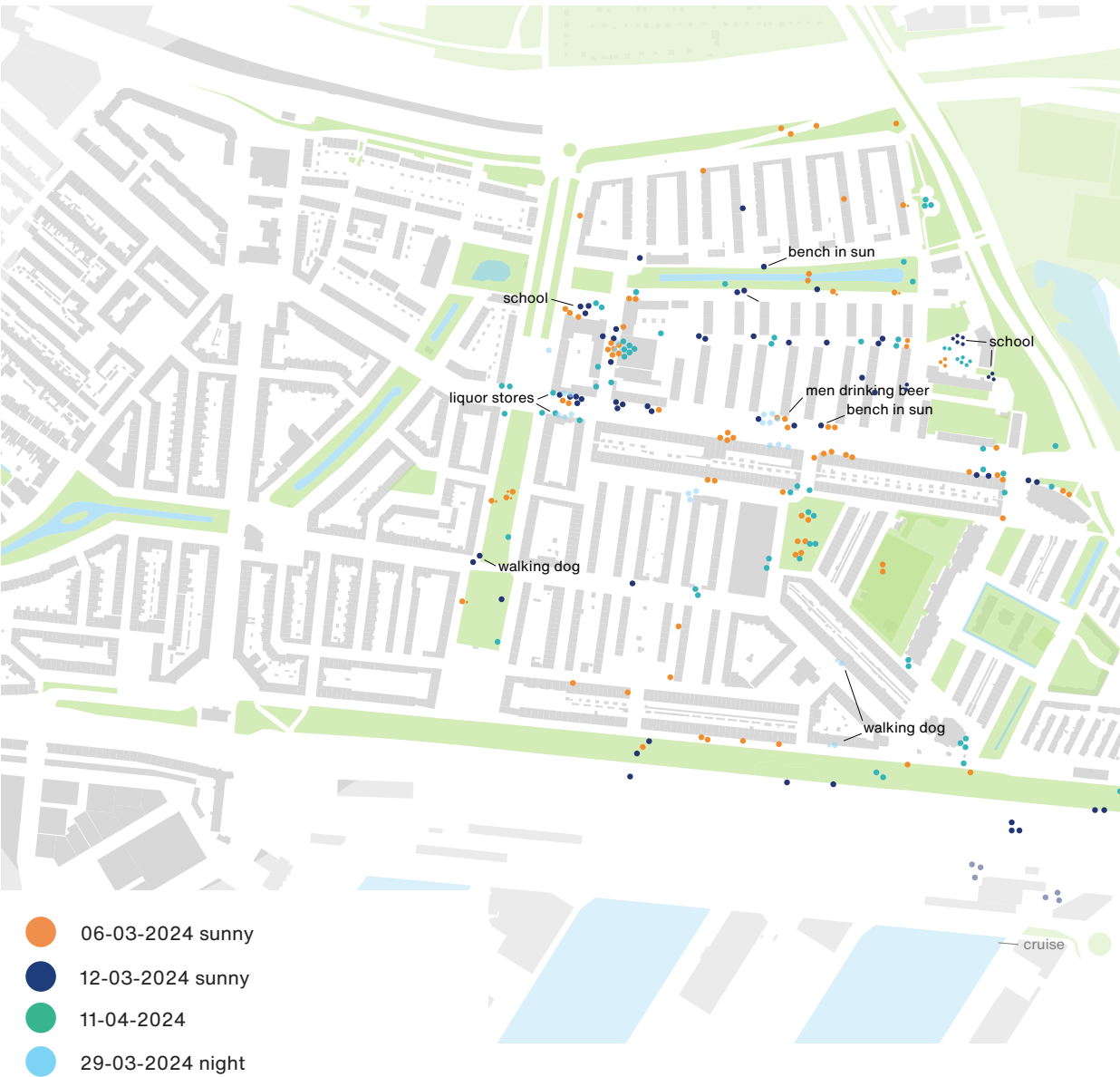
Dutch very well. He also has a different ethnical background and tells that he likes the diversity of the neighbourhood but that it is making it hard to communicate with each other. The girl I interviewed a few weeks before told me about these gardens, the diversity, the rats, and the trash, she also mentioned how people take care of each other and make extra food for their neighbours when someone is sick.

When we leave, we have a look in the garden and see the mattress, the couch, the table and the closet. No wonder no one is using these gardens, it is not well maintained and looks more like a dumping place. In the cellar where people park their bikes, work immigrants were sleeping in the winter because they could not find a normal residence or were kicked out of their apartment. We understand that this man is not feeling so safe here anymore and wanted to talk to the police.

We continue and meet a resident that is really involved in the area and wants to improve the neighbourhood and make it a safe place for all. He shows us his workplace with pride, and we see this pride back in how he talks about the neighbourhood and his optimistic dreams. He believes that Oud Mathenesse can be a nice liveable neighbourhood again.

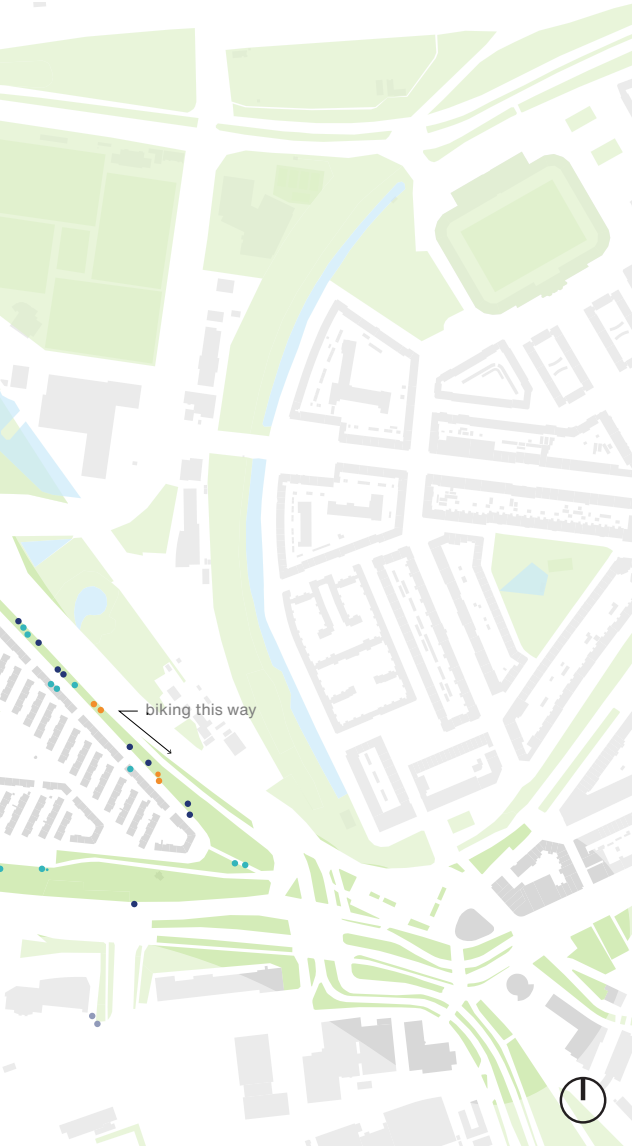
A little after 22:00 we visit the Franselaan, the street in the middle of the

Ethnographic mapping



*Additional fieldwork trips are not depicted on this map to ensure optimal readability.

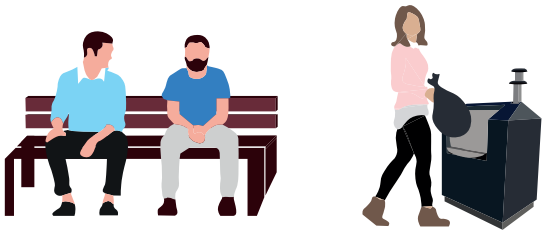
fig 64 | Ethnographic mapping documentation 1:7500



For the ethnographic research, systematic observations, documentations of various aspects of the neighbourhood's physical environment in relation to the social structures, and cultural practises is collected and represented in maps and other visual representations. There are maps created where this qualitative data is collected by observations these social interactions are visualized. This qualitative information of residents will bring the perspectives and knowledge of the residents about their own neighbourhood and social network and help to identify what is observed and what people say.

During the winter months, numerous visits were made to the neighbourhood. During this season, few people ventured outdoors, and rain was a common occurrence. These fieldwork excursions proved valuable for conducting physical analyses of the area. As spring began, new visits were scheduled on sunny days, facilitating better observations as more individuals utilized public spaces. To enhance the research experience during fieldwork, the area was explored using various modes of transportation. This included train travel to Schiedam Centrum, metro rides to Marconiplein, bus rides, cycling, and walking. These diverse means of exploration offered valuable insights into the area's accessibility and provided observations on how people commute to and from the neighbourhood.

During the ethnographic observations, the focus was on who is doing what, whit whom, in what kind of relationship and where this is happening. To start with who is outside during the day; these are mostly parents with children or single men or women. This is understandable since youngster are still in school and most people are working during the day. This people are doing groceries, picking up children, biking, waiting for the bus or walking their dog. Only a few parents on a Wednesday afternoon are playing with their children in the playgrounds and some people are enjoying the sun. This answers the second and third questions because most people are alone or as child/parent relation or sometimes colleges having a lunch break. The majority of this activities are along side the Franselaan, Tjalklaan and around the playground of the Landen square and by the Dirk. As the location was increasingly observed, it became clear that especially in the Franselaan, the central street in the middle of the neighbourhood, there are clusters of specific people at specific locations. The stores play a big role in this separation because the owners have different ethnical backgrounds and grocery routines. The activity therefore does not necessary differ that much but more the location and social relation with the location. Especially during the sunny days, most of the benches in the sunny spots throughout the area were occupied, while those in shaded areas remained empty. It was evident during the shift with the local police officer that even in the evening, some individuals utilized these benches, sitting for extended periods while for example, listening to music.



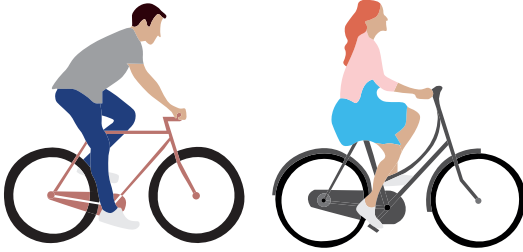
Men sitting on a bench in the sun Through away trash



People on a mission



Waiting for the bus



Biking



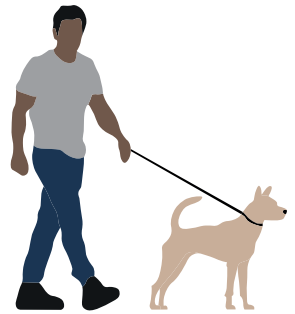
People sitting in portiek in sun



Group of men chatting



Doing groceries



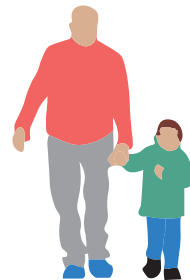
Walking the dog



Kids playing



Woman with baby in car



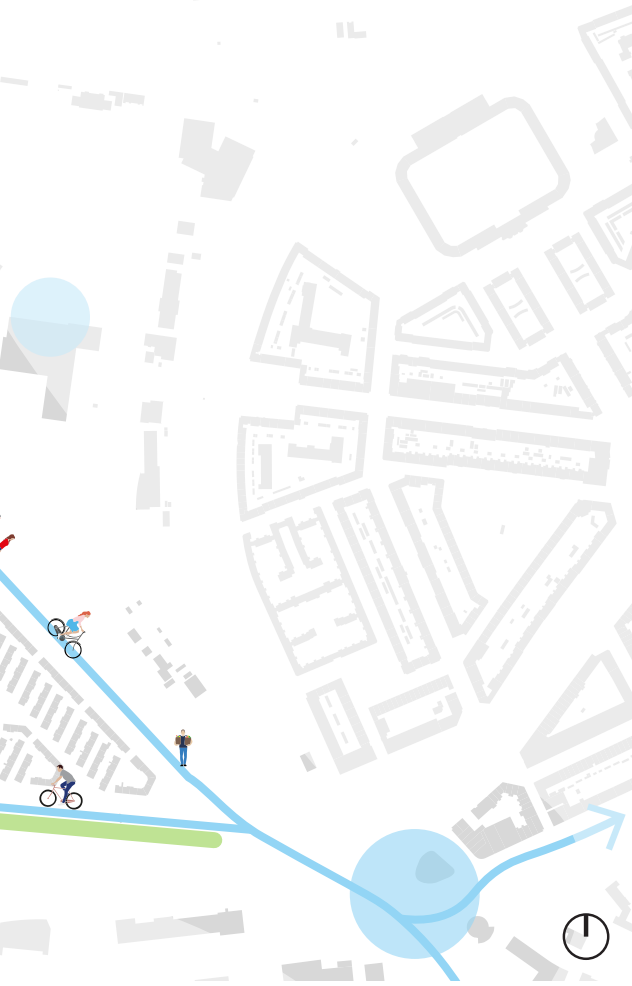
Families walking to school

fig 65 | Activities during the day and behaviour



fig 66 | Conclusion map from ethnographic mapping
1:7500

This map illustrates the predominant activities occurring throughout the neighbourhood during the day. Several streets serve as transportation routes for pedestrians and cyclists, while others, along with the green networks, function primarily as dog-walking routes. Specific locations, such as benches and entryways



of houses, attract people to take a break in the sun. Despite the presence of multiple benches, only a select few are consistently occupied. Similarly, among the playgrounds in the area, only one sees regular use, while others remain largely empty.

The pathway between the Finalandiaschool

and the Dirk is used quite often as quiet green route through the neighbourhood and people mention in the interviews that they like to use this route because it is green and quiet compared to the Franselaan. The Franselaan only has one specific part that has shops and is used frequently, this shops also function as a meeting spot for men, who engage in conversations along the sidewalk.

Mapping these activities can help pinpoint areas for improvement. Gehl (1980) made a categorization of outdoor activities into three types provides a framework for understanding the diverse demands these activities have on the physical environment. The first one are the necessary activities, which are essentially obligatory task like going to school or work, shopping, waiting for transportation. These activities are minimally affected by the physical environment and occur throughout the year, regardless of weather conditions. The second form of activities are the optional activities, such as leisurely walks or sunbathing. These activities are dependent on favourable environmental conditions. The third category of activities are the social activities. This includes interactions with others, conversations, and communal gatherings. This relies on the presence of other people and can spontaneously occur in various settings (Gehl, 1980).

The ethnographic mapping shows that throughout the day most people are doing the necessary activities and only a few the optional activities and the social activities. The optional and social activities happen at a few specific locations.

The café has a terras function but it is very closed of and often empty.

S.1

The narrow sidewalk does not encourage social interaction and makes the area unappealing.

S.8



Lot of crowding at the supermarket The Dirk, lot of cars in the street.



People gather at snackbars as a social inside place. Other residents feel less welcome to this places.

N.5

This is one of the four liquor stores in the street, a function that not all residents really appreciate.



N.1

The bushes here are neglected and filled with trash.

0.9



Cars stop shortly in the street, standing in the way of the bicycles.



The facade lacks a strong connection to the street, affecting its visibility.

S.6

Men gather and drink around benches on Franselaan across from the Polish supermarket, considering it a social meeting spot. However, others prefer to avoid this group and walk around it.



S.8

User groups

During the ethnographic research in Oud Mathenesse, various user groups were identified through observations, interviews, and interactions. These groups often share similar lifestyles, despite differences in ethnic backgrounds and ages. Each group experiences safety and the environment differently, leading to diverse needs and behaviours. These user groups provide distinct lenses through which you can view a situation. In the research, these user groups will be utilized to examine situations and locations from multiple lenses. Yet, hyper diversity is complex, it can lead to more social exclusion when individuals segregated themselves from others who belong to a different class, ethnicity or lifestyle (Fincher et al., 2014 from Peterson & Utrecht University, 2021).

People tend to connect with similar others, with whom they share the same lifestyle, gender, age or ethnicity. This segregation is good visible on the smaller scale of the neighbourhood where these differences are visible in the bars, shops, and cafés in the neighbourhood (Valentine, 2023 from Peterson & Utrecht university, 2021). On the Franselaan, the shops distinctly reflect specific ethnic backgrounds, such as the Polish supermarket. The work immigrants, mainly from Poland, Bulgaria, and Romania, opened up the Polish store to connect with their roots and feel a sense of belonging from their home countries. This conflict with the residents who have been living in Oud Mathenesse for a long time. They express dissatisfaction with the changing shops, feeling disconnected from the new identity of the neighbourhood and unable to recognize themselves in the stores anymore.

The Polish supermarket and its surrounding serve as a social hub for work immigrants, where they gather after work. Similarly, the Turkish store, acts as a café for Turkish men to socialize and chat. While this social aspect is valued by certain groups, others feel excluded and tend to avoid these places. New cultural influences in Oud Mathenesse, such as Polish stores, highlight shifts in the neighbourhood's identity, which may be unsettling for long-term residents. Language diversity on the streets can evoke different reactions, with some finding it enriching while others feel disoriented. This was something mentioned by multiple people during the fieldtrips.

However, the quality of hyper-diversity is that there is no majority anymore and most people do share something. Recognizing the diverse individual experiences in public space is valuable and highlighting the collective experiences can show what people share and help to create a shared identity. Shared experiences can help shape context-specific design principles. The collective perception, interpretation, and interaction with their surroundings have the potential to cultivate a sense of community and shared significance.

Now people share experiences only within their social group and not between these groups because there's a lack of communal spaces for diverse lifestyles to intersect in Oud Mathenesse. Introducing inclusive public spaces like libraries could bridge this gap, providing meeting points beyond specific interest groups. Ultimately, embracing hyper-diversity entails recognizing the evolving identities of

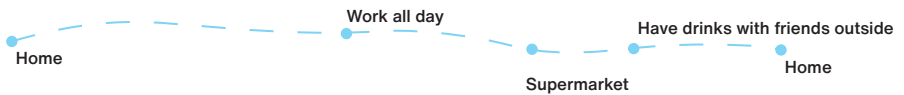


fig 67 | Daily routines of user groups in Oud Mathenesse

neighbourhoods like Oud Mathenesse and adapting communal spaces accordingly.

To comprehend how different groups differ but are also similar to each other, four groups have been established for this research. This can help to generate specific design principles for Oud Mathenesse and understand the different perspectives of the residents.



Elderly

Group

This groups mostly exist of long-time residents, who grew up in the neighbourhood and want to stay in the area. However, this group expressed the identity change of the neighbourhood, which is reflected not only in services or residents but also the buildings and public space has declines its quality.

Different experiences

During the interviews people express the walkability and barriers surrounding the neighbourhood. This is particularly crucial for the elderly, whom neighbourhood walkability is essential as they are depending on the facilities of neighbourhood. Most elderly mention that they don't go out in the evening because they don't have to and rather stay inside.

Shared experiences

Issues such as the trash in the area and the diminishing green spaces are frequently brought up. The elderly expresses a longing for a community centre, since "the put" is closed. Additionally, they express a desire for amenities like a bakery or café for coffee, to enhance their neighbourhood experiences.



Short stay residents

Group

The short stay residents are often work-immigrants who come to the Netherlands to work here with goal to earn money and return home after the project is finished. They live with a lot of people in a house where they share small living conditions. They go to work early in the morning and come home late.

Different experiences

Limited living space prompts these residents to congregate in the streets, where they often socialize over affordable beverages purchased from Polish supermarkets, evoking a sense of familiarity with their homeland. Due to their temporary status, they often do not acquire proficiency in the Dutch language.

Shared experiences

Engaging with this user group proved challenging during the research process. Nonetheless, it's evident that the neighbourhood lacks a visible and inviting community space. For this people their own community serves as their primary social network, making it difficult to connect with people outside this community.



Families

Group

Oud Mathenesse has a sizable population of families, with two primary schools providing educational options for children. Although there are numerous playground, they are more suitable for young children. Ethnographic mapping reveals that schools serve as gathering points for parents to collect their children, fostering interactions among parents.

Different experiences

While the presence of multiple schools and sports facilities is noted, older youth express frustration over the lack of recreational spaces tailored to their age group. The Franselaan characterized by fast traffic, making families and children avoid this street. Given the dense housing situations, outdoor areas play a vital role in children's play and self-expression, an aspect perceived as lacking in Oud Mathenesse.

Shared experiences

The traffic congestion along Franselaan resonates with both families, elderly and starters. The trash in the neighbourhood diminishes the appeal and safety of the surrounding and especially the playgrounds.



Starters/ students

Group

Oud Mathenesse attracts students and young professionals who can afford the rents and housing prices in the area.

Different experiences

This groups does not use many services in the area and may eventually move out. Some having purchased their first homes here and are enjoying the neighbourhood as quiet area in Rotterdam. Their social lives predominantly unfold outside the neighbourhood, appreciating its proximity to public transport and cycling routes to the city centre. They frequent the local grocery store but rarely visit cafés in the neighbourhood. Despite occasional concerns about safety, they generally feel secure in the neighbourhood.

Shared experiences

The lack of services, trash and barriers of the area are something they express as unpleasant. The reason why they don't want to stay here is related to the quality of houses and service in the area.



fig 68 | Focus groups and public places relation 1:7500



During ethnographic fieldwork, mental mapping and interviews, specific locations can be associated with particular user groups. The insights gathered from these methods are translated into the map showed here (fig 68), which illustrates the various user groups and the location they

frequently visit and inhabit. For instance, schools and playgrounds for children and youth and is closely linked with parents who pick them up from school, etc. The singular place where all user groups encounter is the supermarket, likely due to its essential role in everyone's grocery shopping routine.

This map also highlights the routes that are possibly taken between these amenities and identifies potential crossroads where chance encounter may occur. In the theoretical framework, the concept of public familiarity is discussed, emphasizing its role in fostering a sense of safety. Consequently, this map can serve to identify areas and routes where improvements are needed to facilitate public familiarity.

When we extract the map into an analysis of the specific user groups it becomes clear that there are specific locations used only by specific user group. For example, the polish supermarket functions as a social place for only this group and other groups point out that they rather avoid this group. The community centre is an open social space in the neighbourhood but here mostly only elderly come. This can indicate that these places are functioning as a social place but only for a specific user group and therefore other groups don't feel comfortable within these places.

The portiek entrenches function as territories of the residents and social meeting places.

S.3 S.5



People often use the entrance porches as a place to sit in the sun, smoke a cigarette, and chat with neighbors or other residents. However, occasionally these spaces can also be occupied by homeless individuals.



The entrances to the shops serve as social gathering spots for certain user groups. The stores also provide a sense of home for immigrants, making them feel recognized and comfortable.

S.5 O.6



The polish supermarket shows recognition of home for the immigrants and short-stay residents. They stand and chat in front of the store. Other residents who don't have familiarity with the polish culture walk around this groups and mention that the language sounds harsh and they can not read anything in the store.

O.6





06.

Chapter 6.

Synthesis

124. Pattern language

126. Problem map

128. Qualities map

130. Focus locations

Pattern language

Here the use of the pattern language method will be explained. There is a separate pattern booklet where all the patterns are individually explained with theory and the research. To formulate a recommendation and vision for Oud Mathenesse, it is crucial to translate the research on theory, physical analysis, and social analysis into design principles. To translate this into design principles, it is imperative to organize it more concretely, emphasizing practical applications.

To achieve this, the pattern language will serve as a method for organizing

theoretical and design information into a set of patterns. As previously mentioned, this method was developed by Alexander in his book A Pattern Language (1977). Patterns share a consistent layout, describing recurring problems within society or cities along with their core solutions. Alexander asserts that these solutions can be applied countless times, each time with unique implementation (1977). The key benefit of the pattern language for this research lies in its ability to structure theoretical findings and provide practical design principles. Patterns are depicted in a specific format, including an introduction to the pattern's

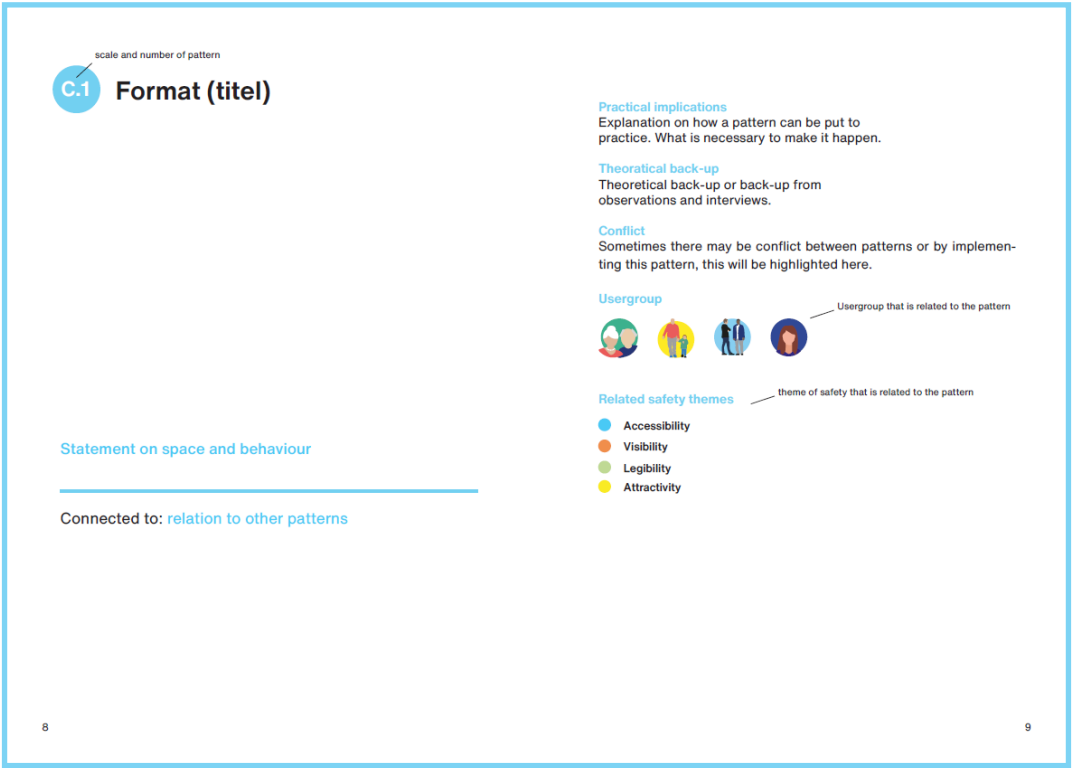


Fig 69 | Pattern example and explanation

context, a statement describing the pattern, empirical background of the problem, a statement outlining the solution, a diagram illustrating the solution, and the relationship of the pattern with others. Additionally, this thesis research examines the four principles outlined by Luten (2008) in relation to each pattern, assessing if the pattern addresses these principles. Moreover, the previously formulated user groups exhibit specific relationships with certain problems and solutions, which will also be reflected in the patterns.

An important expansion of Alexander's (1977) patterns is provided by Salingaros (2000), who introduces the concept of pattern network. In his work The structure of Pattern Languages, he emphasizes the connectivity of patterns as a crucial aspect. Salingaros (2000) asserts that all patterns are interconnected, with varying degrees of significance. These connections may arise from generalizations on a larger scale or from offering alternative yet equally valid solutions to the same problem. It is these interconnections between patterns that give the language its structure, enabling the approach to complex problems. Salingaros (2000) further contends that patterns serve as the essential groundwork for any design solution to engage with human beings, as they facilitate links between social and spatial patterns.

The significance of pattern language structure and connectivity is important in this thesis research due to the interrelation and dependence between social and spatial patterns for effective solutions. For instance, maintaining personal distance

(S.9) to ensure safety and control over personal space necessitates sidewalks capable of accommodating such distances. Simultaneously, social interactions, like casual chats or encounters, occur on sidewalks (S.5). It is imperative that both social situations coexist harmoniously on the street and sidewalks, with design considerations accommodating these needs.

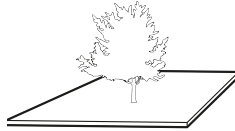
In this thesis, the dynamic interaction between individuals and their social and physical environments is emphasized, highlighting how they actively shape and are shaped by their surroundings. This interaction provides valuable insights and principles for urban design. The pattern field in this context spans from the city to the object scale on one axis, and from public space to public life on the other. Each pattern is interconnected with both public life and public space, but certain patterns prioritize enhancing public life, supported by broader public space patterns such as adequate lighting. As mentioned earlier the patterns derived from the research are compiled in a separate document, organized into a detailed pattern booklet, with each pattern thoroughly described.

Problem map



fig 70 | Physical problem map of Oud Mathenesse 1:7500

O.8 Attractive space



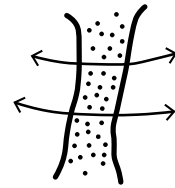
A public space that is attractive and well-maintained improves the feeling of safety and stimulates out-door activities

N.5 Informal inside space



When a neighbourhood has more informal inside space, people can use this as meeting space for social activities and create better community.

C.1 Connecting each other



Porous neighbourhood boundaries create better urban connectivity and social surveillance.

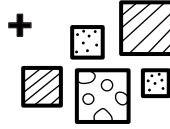
The research findings revealed spatial challenges within the neighbourhood. The neighbourhood's borders isolate it from Rotterdam, with the dike frequently highlighted as a focal point. With upcoming developments, transforming the dike from a barrier to a connector (**C.1**) becomes increasingly crucial. At a broader scale, accessibility plays a vital role in perceived safety. Although green spaces in the area are currently neglected or unappealing, they possess potential in relation to addressing these barriers. The neighbourhood possesses only one community centre and lacks informal inside space for diverse groups of people (**N.5**).

Qualities map



fig 71 | Possibilities map Oud Mathenesse 1:7500

N.1 Adding functions



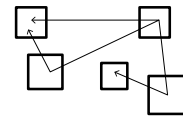
When there are a lot of functions in an area this will increase public life, activate a place and make it less desolated and therefore create higher perceived safety.

N.4 Walkability



If the proximity in a neighborhood is good there will be more movement in the streets and more public life.

C.2 Public space network



By creating a diversity of public spaces at strategic locations this spots can function as a network within a city.

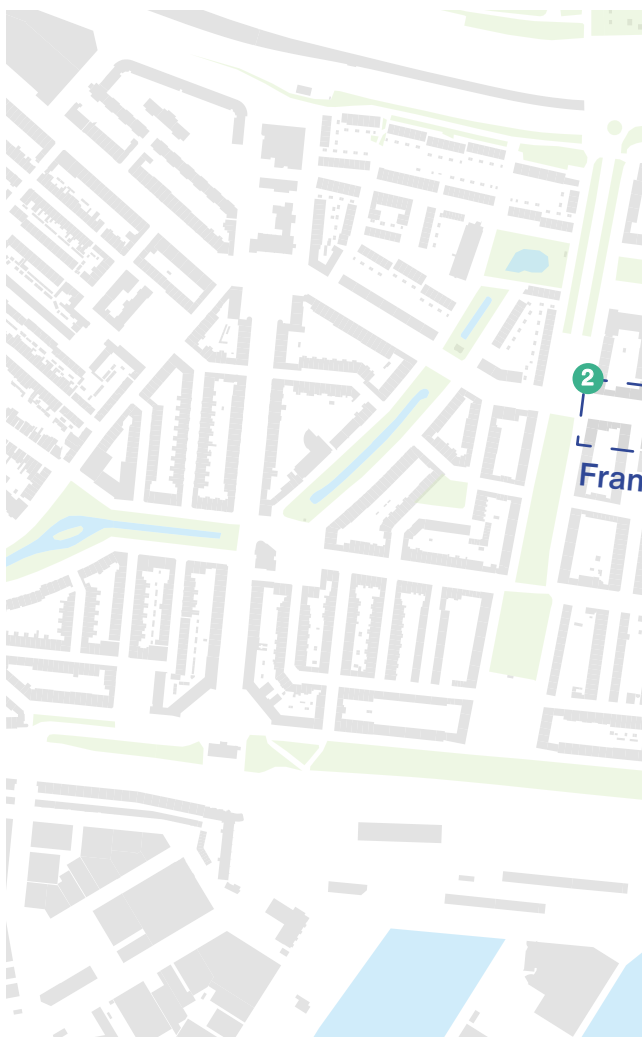
Based on the spatial analysis, it is evident that the neighbourhood possesses certain qualities. The green spaces in the area are appreciated and utilized by residents as walking routes. While the neighbourhood is well-served by public transportation, pedestrian infrastructure requires improvement (N.4). The Landenbuurt features numerous squares and playgrounds, whereas the Schepenbuurt lacks high-quality public spaces (C.2). Enhancing the aesthetic appeal of Franselaan while preserving its diverse cultural identity involves not only highlighting the existing array of ethnic shops but also integrating new functionalities (N.1). This approach would not only maintain the street's unique character but also elevate its overall appearance.

Focus locations

This map highlights two specific locations that will be the focus areas in the vision for Oud Mathenesse. These areas are selected based on their score regarding perceived safety from the theory, analysis, and interviews. The first location is the Midscheeps path, particularly in relation to the inner gardens of the apartment block. The second area is the Franselaan. These areas were selected based on their possibility to positively impact the perception of safety for the residents.

Through a physical analysis of the neighbourhood, The Midscheeps path emerged as a focal point due to its visibility and allure. Conversely, the inner gardens were found to lack attractive greenery, and the ethnographic mapping revealed their underutilization, contrasting with the frequent pedestrian traffic along the Midscheeps path. During interviews with residents these gardens gained more attention due to the stories regarding work immigrants who stayed in the cellars of some of the apartment blocks and the fact that people throw a lot of trash in these gardens and don't clean up. However, both the inner gardens and the path hold promise for transformation into more appealing and secure spaces.

The Franselaan appeared satisfactory during the physical analyses, boasting various stores and cafes while maintaining good connectivity with its surroundings. Even during ethnographic mapping, the street witnessed frequent use by diverse groups, with people engaging in conversations outside stores, utilizing street benches, and awaiting public



transportation. However, during interviews and a day spent with the local police officer painted a contrasting picture. This street offers social gathering spots for specific groups, while other people rather avoid this groups. Historical analyses and interviews with longtime residents revealed that the Franselaan once thrived as a vibrant hub

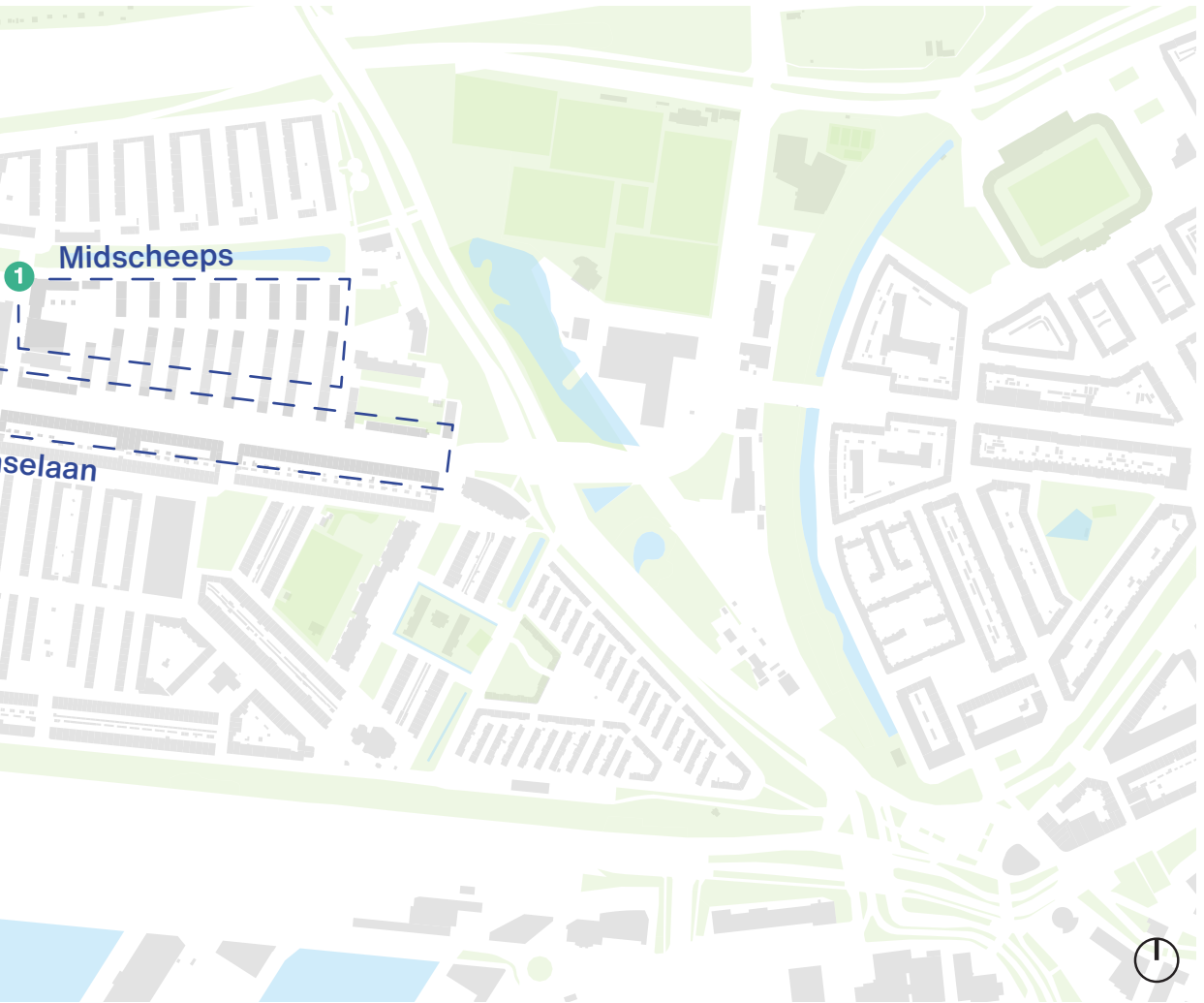


fig 72 | Zoom-in locations 1:7500

with numerous appealing stores, cherished by the inhabitants of Oud Mathenesse. Contrastingly, today, the landscape is dominated by four liquor stores and three kebab eateries. Moreover, the street poses safety concerns for pedestrians due to excessive speeding by cars.

Midscheeps

The inner gardens lack ownership or a form of appropriation, this is visible through the garbage that is dumped in the gardens and underutilization. When these gardens will be kept clean (O.1) this will stimulate people to maintain it better in combination with a more attractive surrounding (O.8) and a place they feel connected with (S.8). The paths in the inner gardens can become meeting places for the residents of the apartments to have a small encounter and connect with other residents (S.5).

The narrow path between the apartments could undergo a redesign to enhance visibility and increase the presence of greenery.

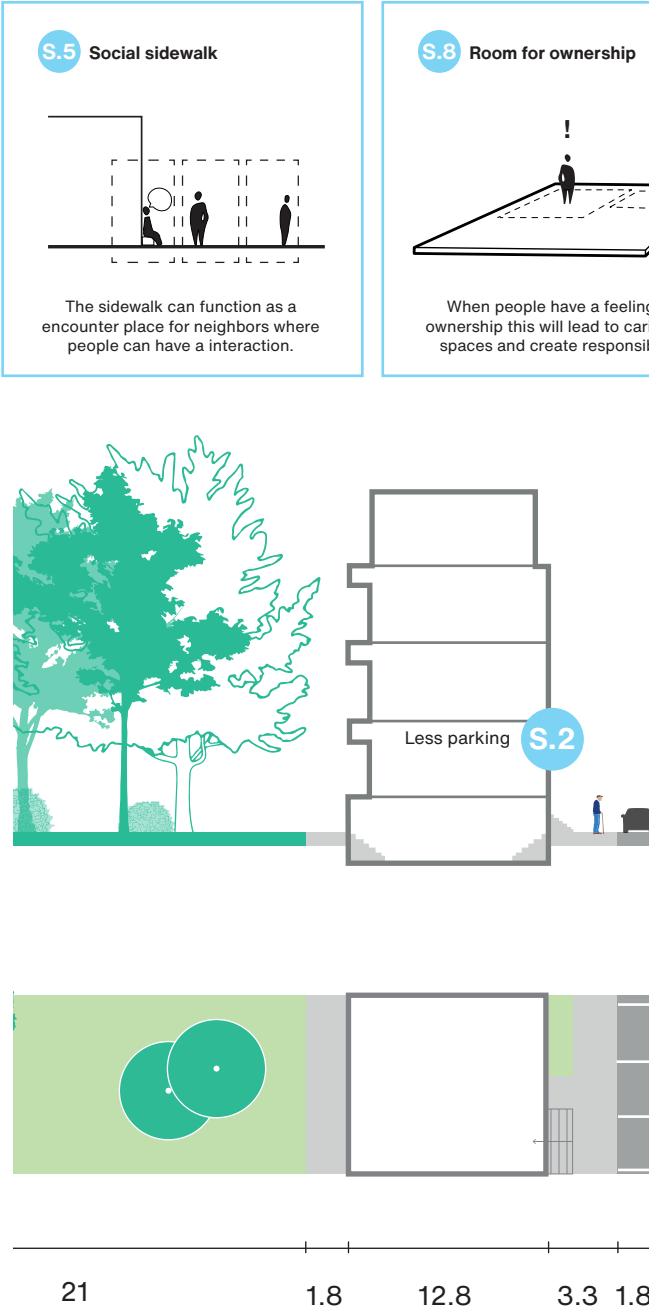

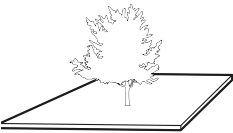


fig 73 | Streetprofile innergardens



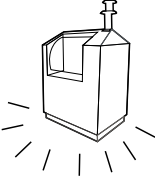
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O.8 Attractive public space



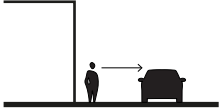
A public space that is attractive and well-maintained improves the feeling of safety and stimulates out-door activities

O.1 Spotless

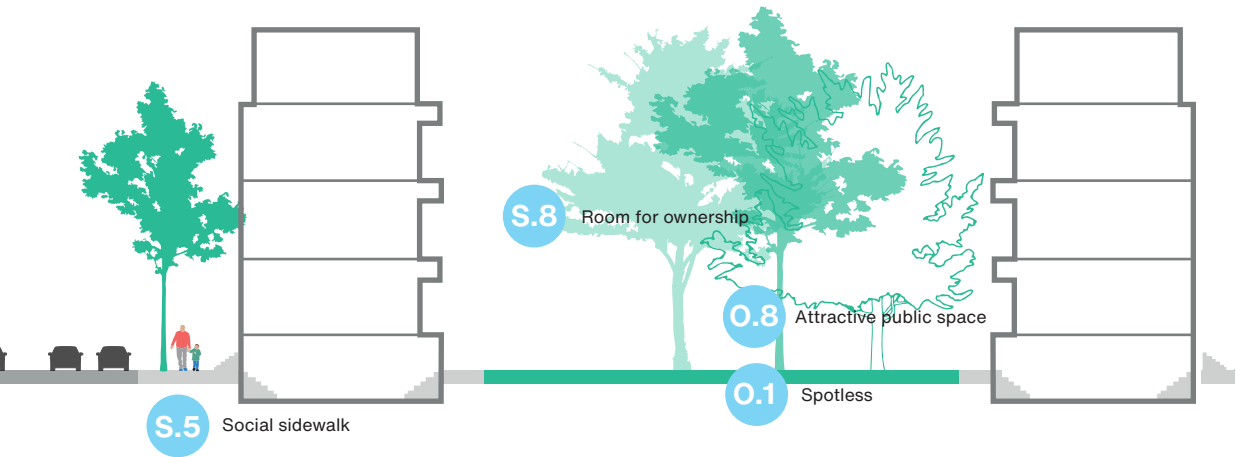


A public space that is clean and well-maintained improves the feeling of safety.

S.2 Less parking



Less cars in the street or strategic parking spaces will lead to better visibility and connection with other side of street



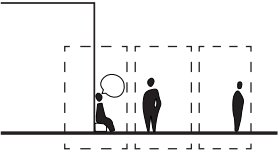
Franselaan

While the sidewalks along Franselaan are spacious, social gatherings on the street can hinder the passage of pedestrians. Redesigning the sidewalk to delineate better zones could allow people to maintain distance while still facilitating outdoor meetings and socializing (S.5). Additionally, certain stores serve as informal social hubs where people gather to chat in front of the shop (N.5). Here too, it is essential to enable adequate distancing (S.9). By creating spill-out spaces, the transition between interior and exterior areas can be improved, clarifying the function of different spaces, and enhancing the overall social dynamics (S.1).

The benches along Franselaan are popular due to their sunny locations and captivating scenery. However, their scarcity in the area could be addressed by providing more seating options (O.2).


All user groups do mention that cars drive to fast through the Franselaan and it's not pleasant to walk for pedestrians, by improving the crossing (S.4) places and the street design this can be improved. This will eventually improve the walkability and public space networks as well (N.4 + C.2).

S.5 Social sidewalk



The sidewalk can function as a encounter place for neighbors where people can have a interaction.

O.2 Sitting and observing



A bench or chair in public place can be located at a place where people can observe and socialize this people feel more in control of surrounding.

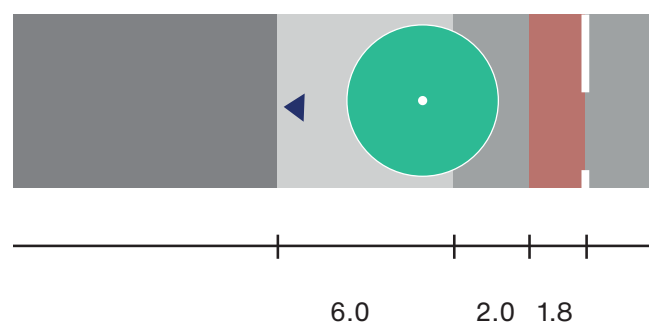
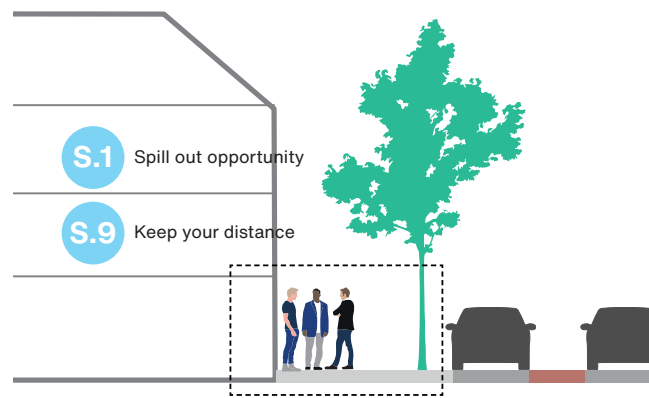
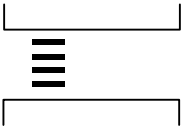



fig 74 | Streetprofile Franselaan

S.4 Safe crossing



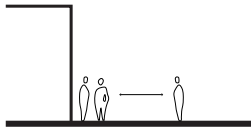
When a street has more safe crossings this will lower the speed and make the street more user friendly

S.1 Spill out opportunity

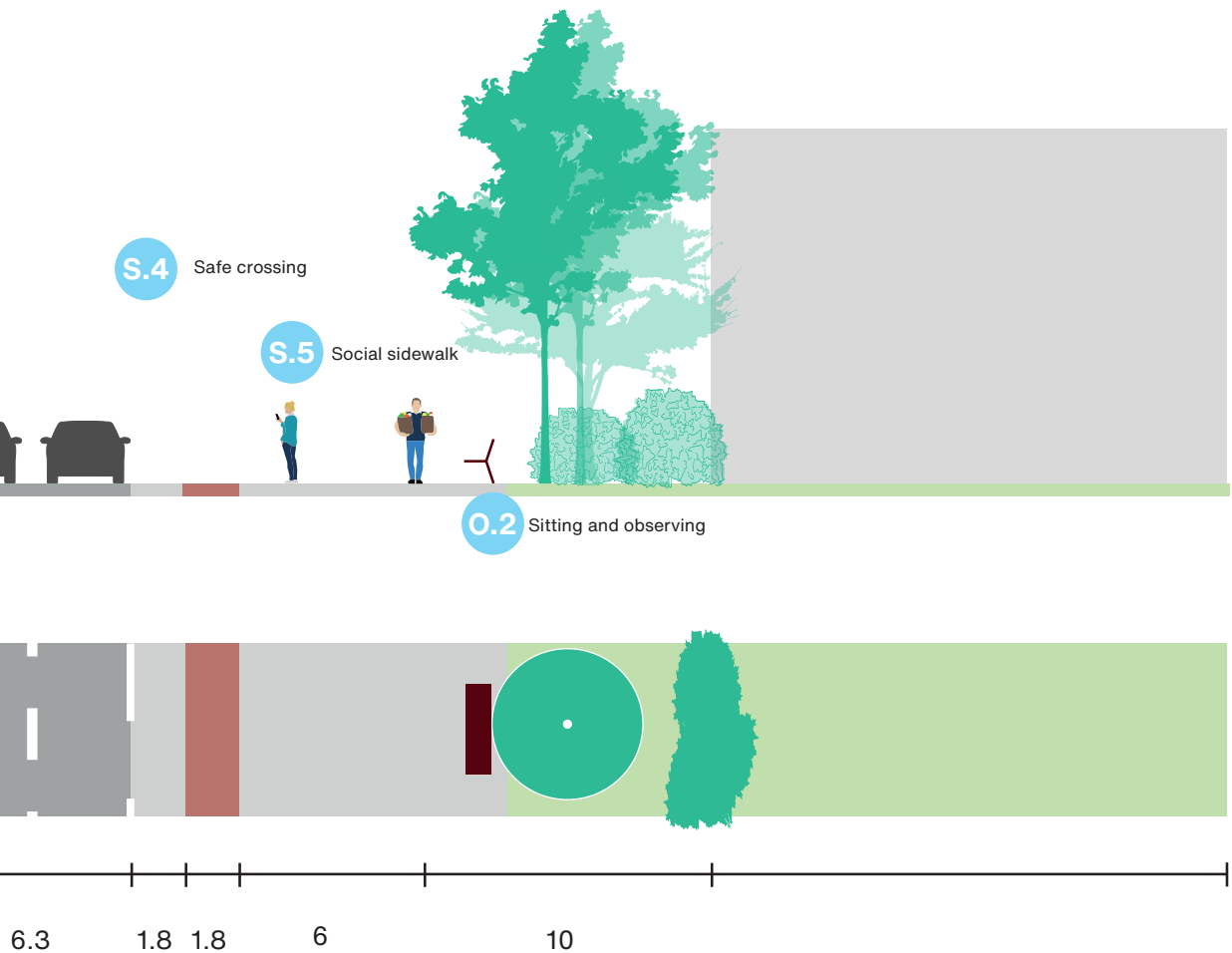


When there is room for spill out, this will make public spaces more visible and more inviting to visit and therefore activates public spaces

S.9 Keep your distance



Individuals seek to preserve their personal space in public settings to manage their environment and maintain a sense of security, thereby asserting control over their surrounding.



07.

Chapter 7.

Recommendations

138. Recommendation for Oud Mathenesse

140. Vision map of the neighbourhood

146. Franselaan

150. Midscheeps

154. Square

Public space and public space

es where
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keep their
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ve the area

3.

Improve walkability and enhance walking and biking networks within the neighborhood, ensuring better connectivity for all user groups with surrounding neighborhoods.

4.

By adding more informal inside public spaces for mixed user groups can create places to gather and create a sense of community. This will improve the public familiarity and therefore the perceived safety.

5.

Improving the quality of public space and green places in Oud Mathenesse will make the residents more satisfied with their surrounding and therefore improve the perceived safety



territories



Better walkability and network of public places



Adding informal inside places



Attractive public spaces

Vision map

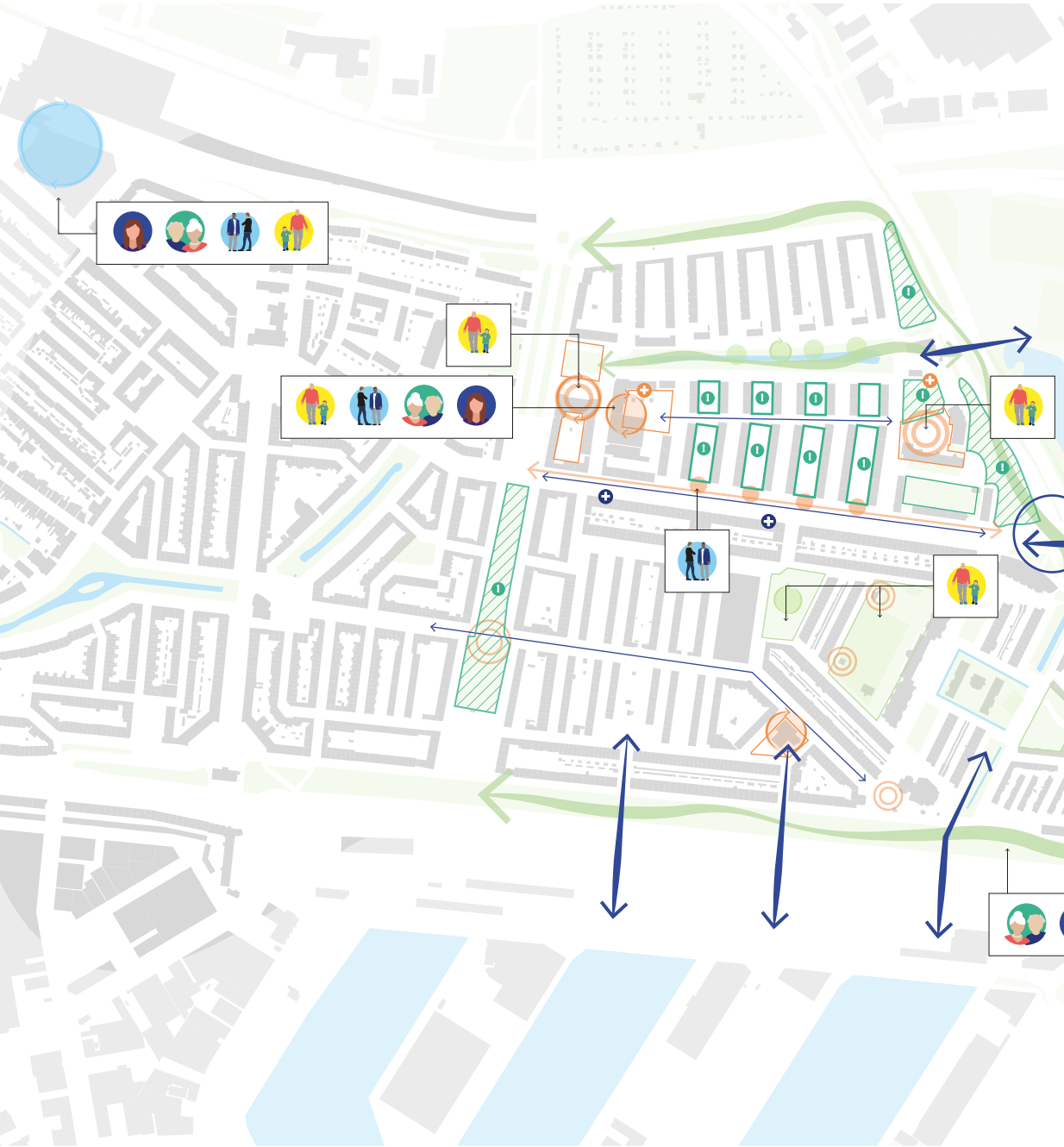
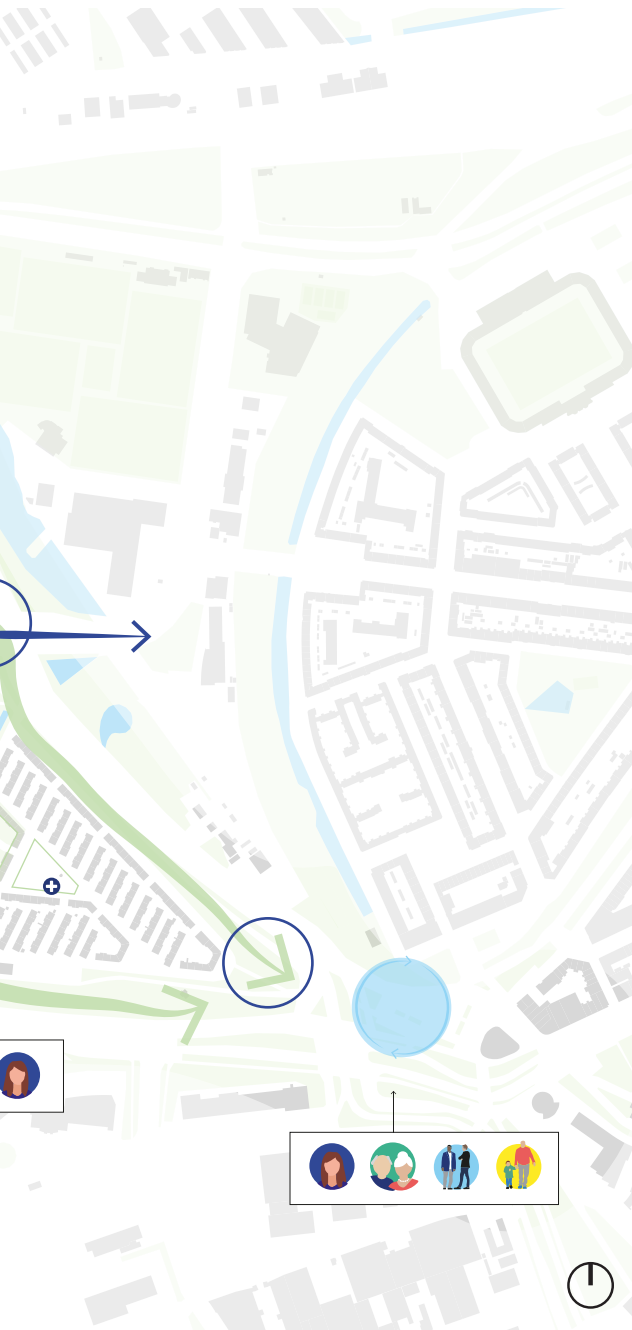
















fig 75 | Vision map Oud Mathenesse 1:7500



-  public green
-  possibility for ownership
-  green playground
-  social
-  possibility for social mixing
-  connection with surrounding
-  pedestrian street
-  social sidewalk
-  green route
-  adding functions
-  adding informal inside space
-  improve green
-  transportation hub
-  green social spaces

In the vision plan for Oud Mathenesse, possibilities for change are identified on a neighbourhood level. Determining strategic locations for the community centre is essential, alongside enhancing connections with surrounded neighbourhoods and identifying areas for improvement. Enhancements to the green and public space networks are crucial to foster better connectivity. Ultimately, to enhance perceived safety, greater attention must be directed towards the eye-level, as people's perception is predominantly attuned to this scale. Detailed design consideration and solutions must be considered into the specific locations to address identified patterns and challenges effectively.

However, the concept of territoriality appears generic, emphasizing the necessity for clearly defined territories and zones to guide behaviour and prevent tensions is of importance to enhance the perceived safety. This holds significance for both Franselaan and Midscheeps, although the application in urban design differs to varying uses of these two locations. As noted by Minoura (2016), distinguishing between use and ownership as separate components of appropriation is crucial for creating social territory. Ownership creates a sense of belonging, encouraging residents to personalize spaces. To foster ownership, distinct boundaries and entrances are preferred, empowering individuals with control over their surroundings. This aspect is particularly relevant for Midscheeps, where multiple residents in two apartment blocks share an inner garden, each with their own entrances. Currently, the central grass area remains unutilized and

impersonal, while the narrow paths adjacent to the buildings serve practical purposes only. The gardens require delineated zones and territories corresponding to specific apartment blocks, with the central grass area serving as a transitional space facilitating connections among diverse user groups and residents. Maintaining separate paths remains essential to make a clear difference between the two buildings.

In contrast to Midscheeps, Franselaan sees specific groups appropriating a zone for a while and moving on, causing the zone to either disappear or change its function. This type of use constitutes a more public form of appropriation and necessitates conditions such as openness and spaciousness for anonymity but also social control (Minoura, 2016). Clear zoning is important here to accommodate these groups' use of space without interfering with pedestrian flows (fig 76 and 77). These two approaches to addressing territoriality in Oud Mathenesse will be visually presented to provide insight into how this approaches can be implemented through urban design.

Midscheeps Inner gardens

When it comes to the inner gardens and the pathways that connect them, attractiveness and quality play crucial roles in enticing people to utilize these spaces. Improving the greenery is essential in achieving this goal. Currently, the paths alongside the apartment buildings are narrow and primarily serve practical purposes, lacking space for casual encounters or relaxation in the sun. Enlarging these paths will make them more welcoming and connected to the apartment blocks. Establishing a connection between both sides of the gardens will enhance connection.

Introducing designated areas for residents to engage in gardening, barbecuing, or sports will encourage ownership and foster a sense of belonging, thereby increasing utilization of the garden space.



fig 78 | Axo of inner gardens Midscheep

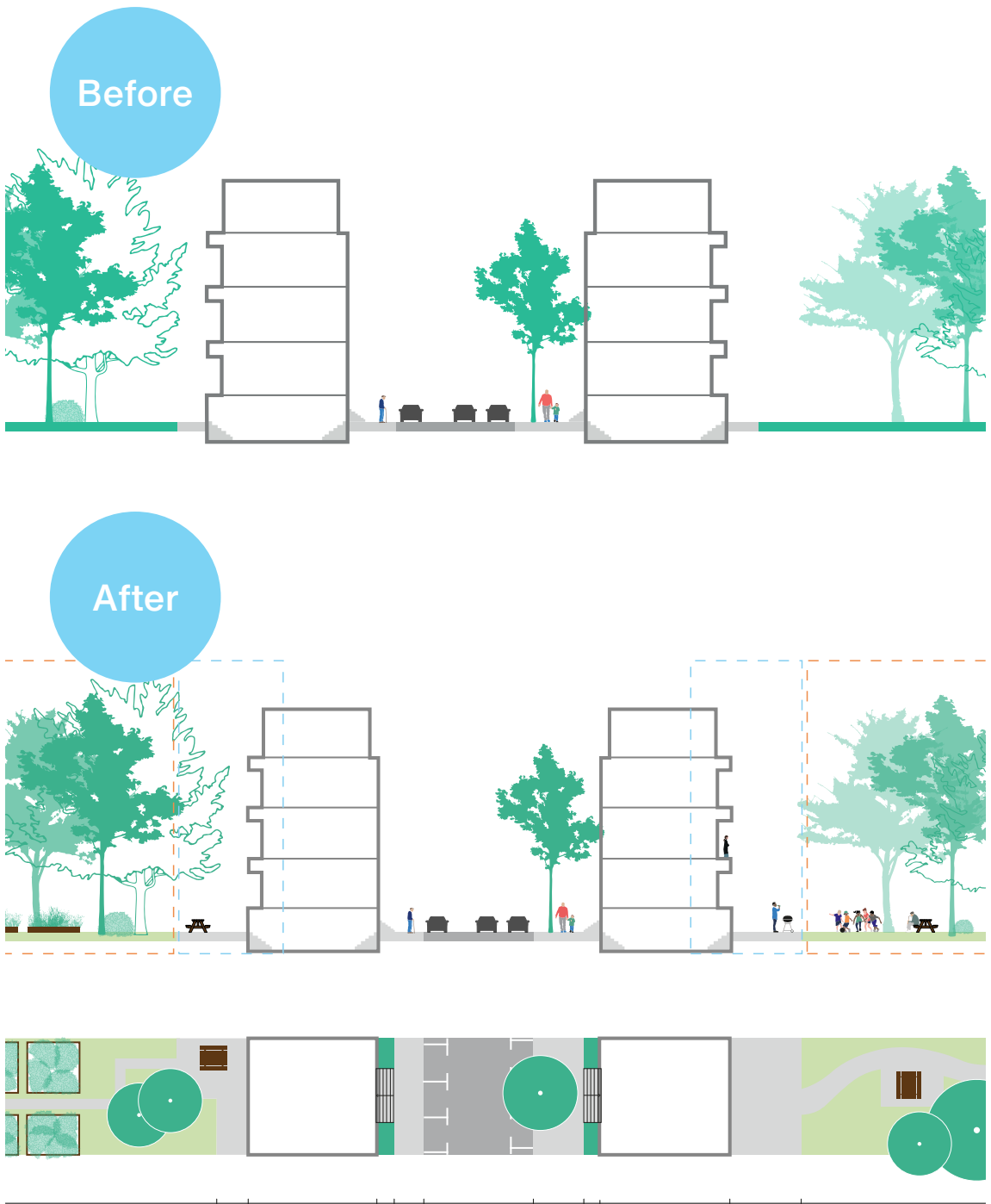


fig 79 | Streetprofile inner gardens before and after

New

Enhancing the greenery within the gardens and ensuring they are aesthetically pleasing and properly maintained will significantly increase their attractiveness and usability.

Expanding the pathways alongside cellar entrances enhances user-friendliness and provides space for residents to interact and engage with one another.

Improving connectivity between the two apartment buildings to establish a seamless link. This involves establishing designated zones where residents can place personal items or engage in activities.

Attractive green

Spotless



Clear territory

Shared identities

Room for ownership

Franse Laan

Drawing from the desired distance measures, a personal space of 1.2 meters and social interaction zone of 3.6 meters must be used as guidelines for the different zones. Both sidewalks of the Franselaan need to have clear territories where social activities are clear separated from the practical sidewalk so people can keep their distance from groups who gather in the street. The differentiation of zones can be done through different material use, physical objects such as green, benches or fences. Additionally, measures must be taken to enhance pedestrian and cyclist accessibility.

The left sidewalk should incorporate designated parking spaces and bike racks while also providing space for with spill out opportunities for the stores where small encounters can happen. Moreover, areas around the house entrances, particularly the stairway entrances, serve as gathering spots for informal interactions. Conversely, the right sidewalk has many benches in the sun but lacks in greenery quality and trash. By improving seating arrangements and the quality of green spaces. This side can become an inviting fusion of seating spaces and green spaces, fulfilling functional and aesthetic needs.

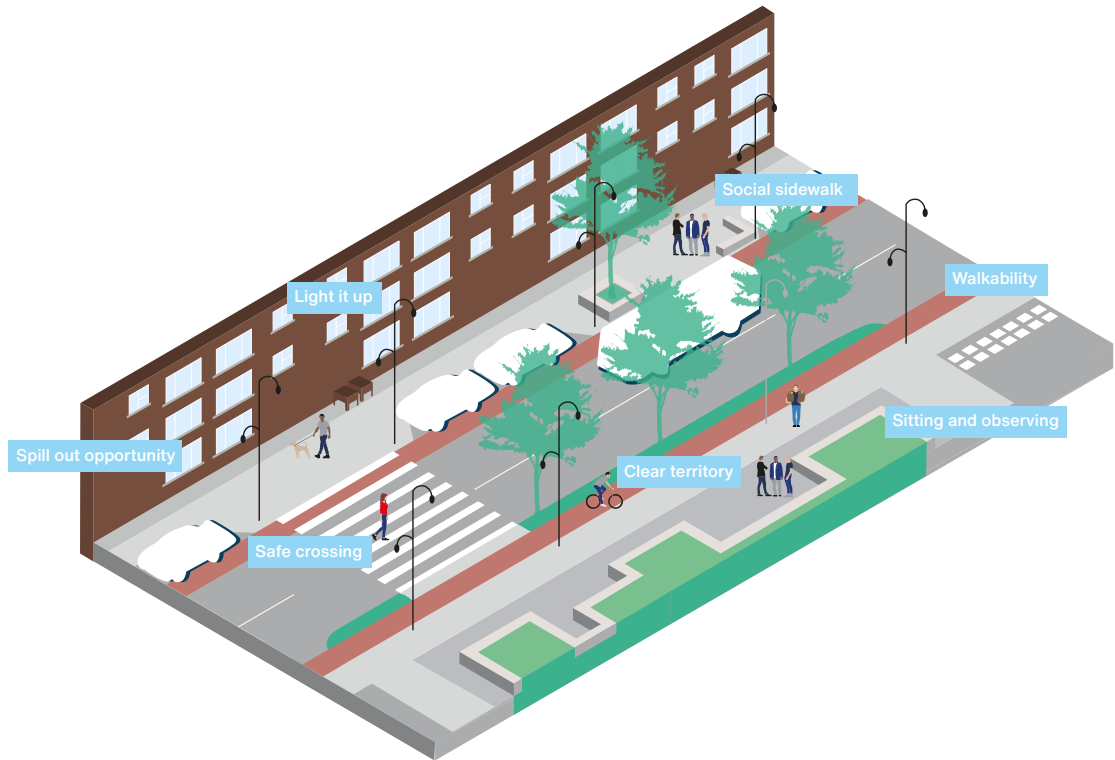


fig 78 | Axo of Franselaan

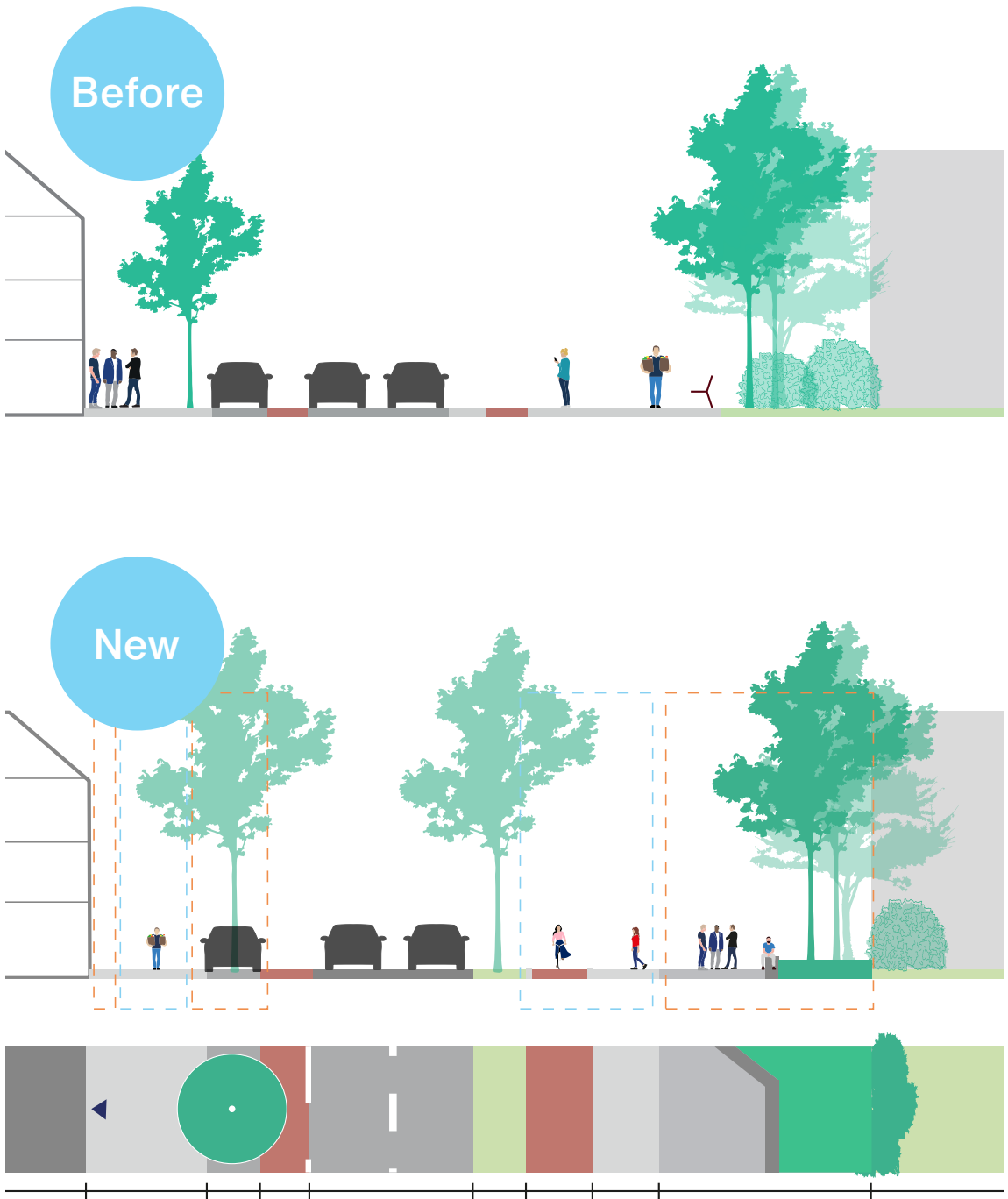


fig 79 | Streetprofile Franselaan

New

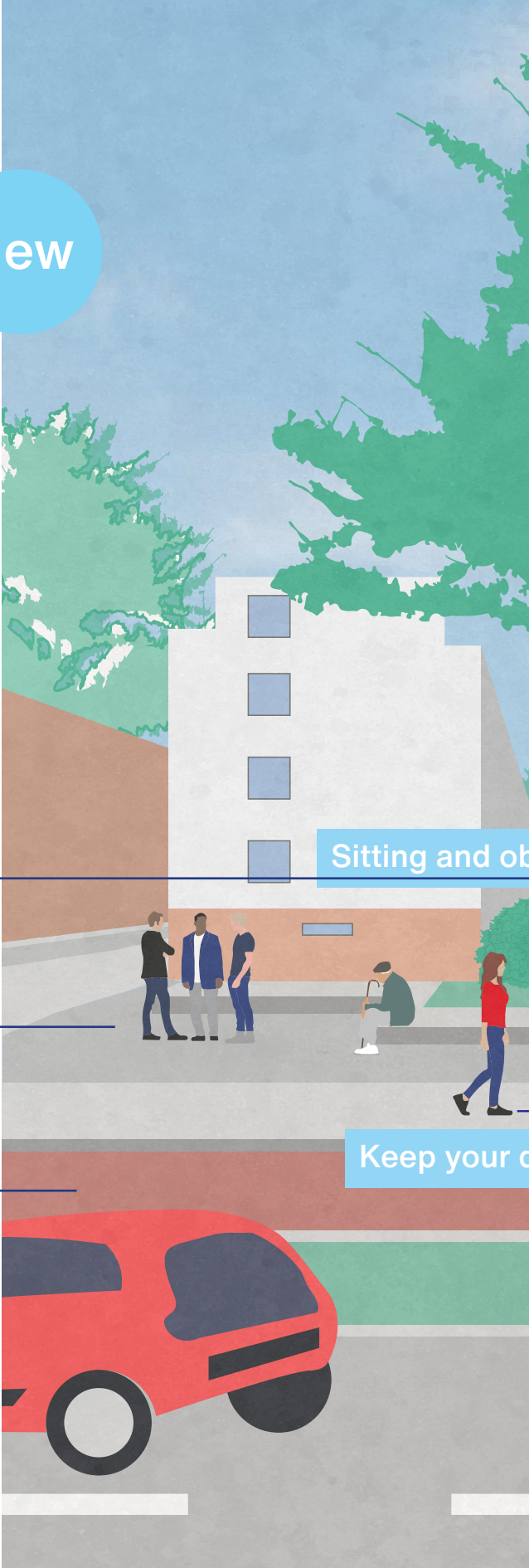
Enhancing the allure of fresh greenery at an elevated level will effectively establish a more robust separation between the inner gardens and the street.

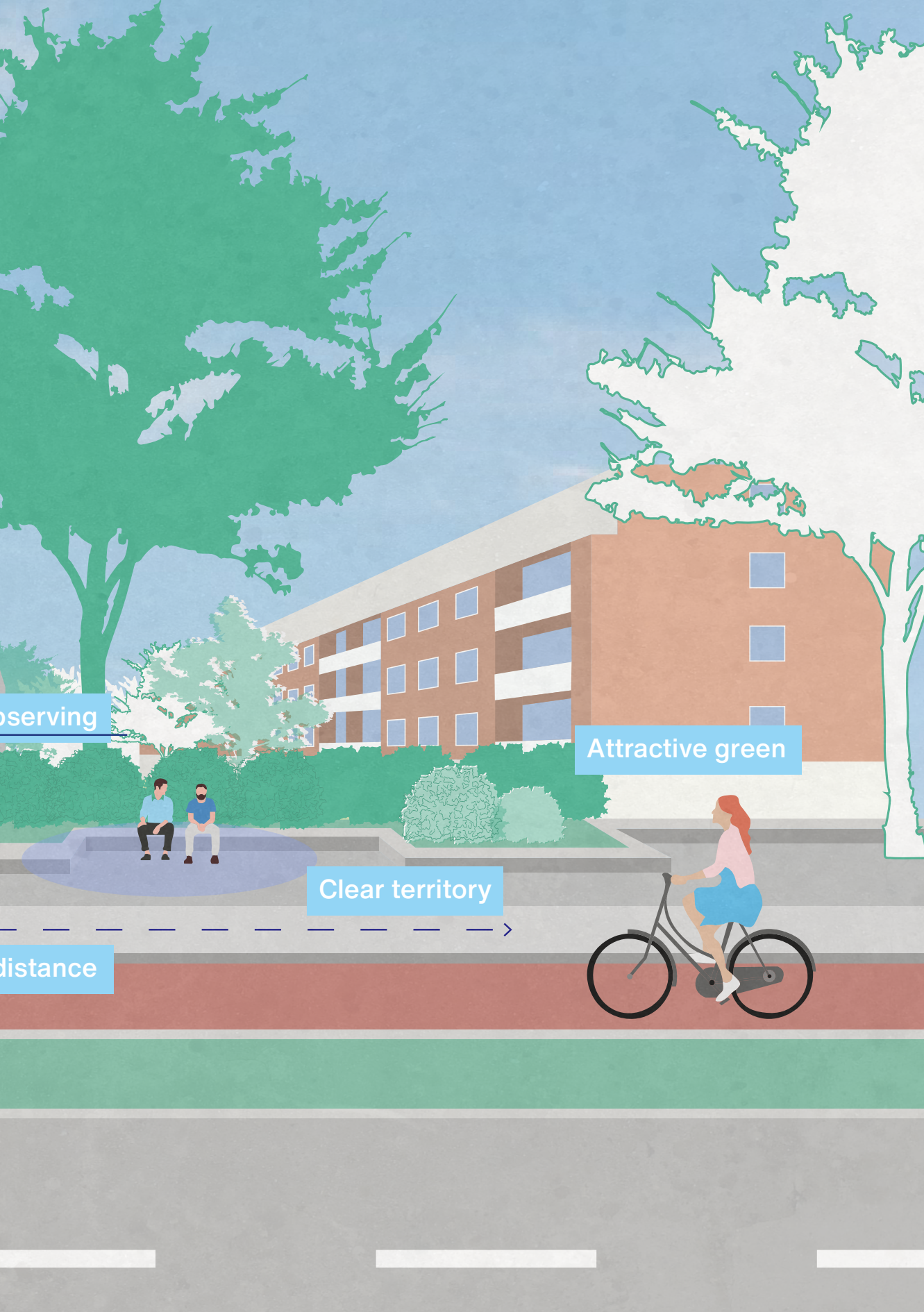
By distancing the seating areas from the sidewalk, a more defined social space is formed, allowing people to gather without obstructing pedestrian traffic.

Implementing a distinct separation between the bicycle lane and the car lane will enhance safety for cyclists along the route.

Sitting and ob

Keep your c





Observing

Attractive green

Clear territory

Distance

Midscheeps square

The supermarket is a frequently visited place in the neighbourhood. However, the entrance and pathways are often crowded with people and cars. By relocating the entrance to the other side, at the square at the end of Midscheeps Path, more space will be created for entering the supermarket and for residents to have brief interactions.

Additionally, the neighbourhood lacks informal indoor spaces for residents to gather. Currently, the only community centre is located in the southern part of

the area. Adding informal gathering places around this square will strengthen the connection between the public building and the square. This new space can become a hub where residents share a common identity. As they develop a connection with their surroundings, it will foster a stronger sense of community.

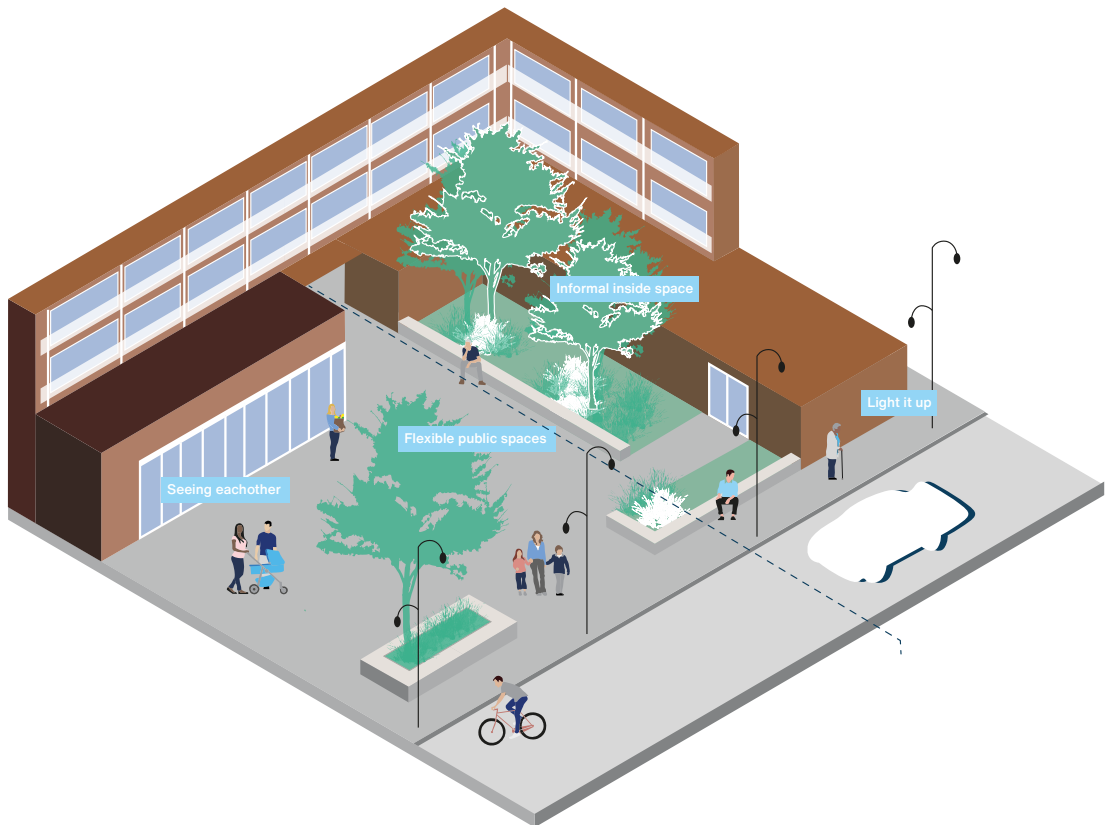


fig 80 | Axo Midscheeps square

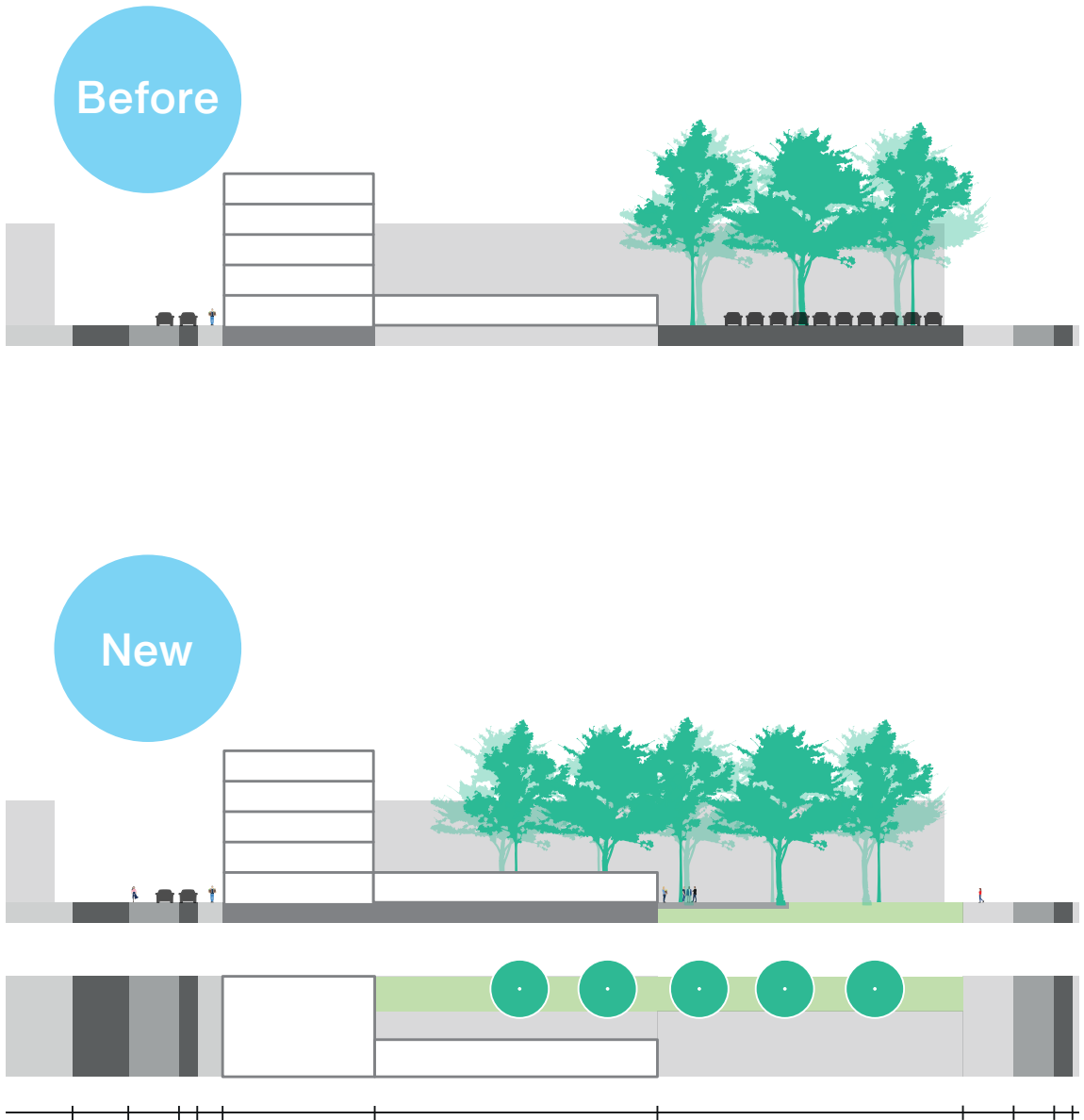


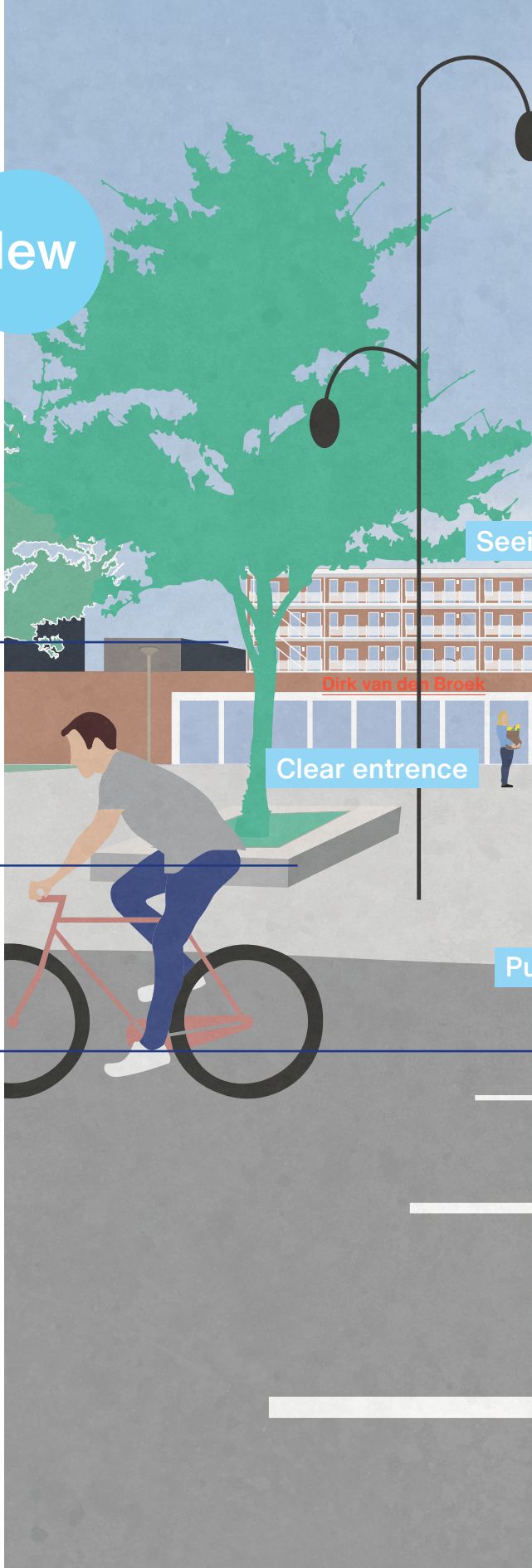
fig 81 | Streetprofile Midscheeps square

New

By relocating the entrance of Dirk to face the square at the end of Midscheeps path, there will be more space for entering the supermarket and for residents to have brief interactions. This change will help minimize crowding.

Reduce the number of parking spots and add more bike parking. Incorporate street furniture to provide seating where people can sit and observe.

The neighborhood lacks informal indoor spaces for residents to gather. Currently, the only community center is located in the southern part of the area. Adding informal gathering places around this square will foster a stronger connection between the public building and the square. This new space can become a hub where residents share a common identity. As they develop a connection with their surroundings, it will foster a stronger sense of community.



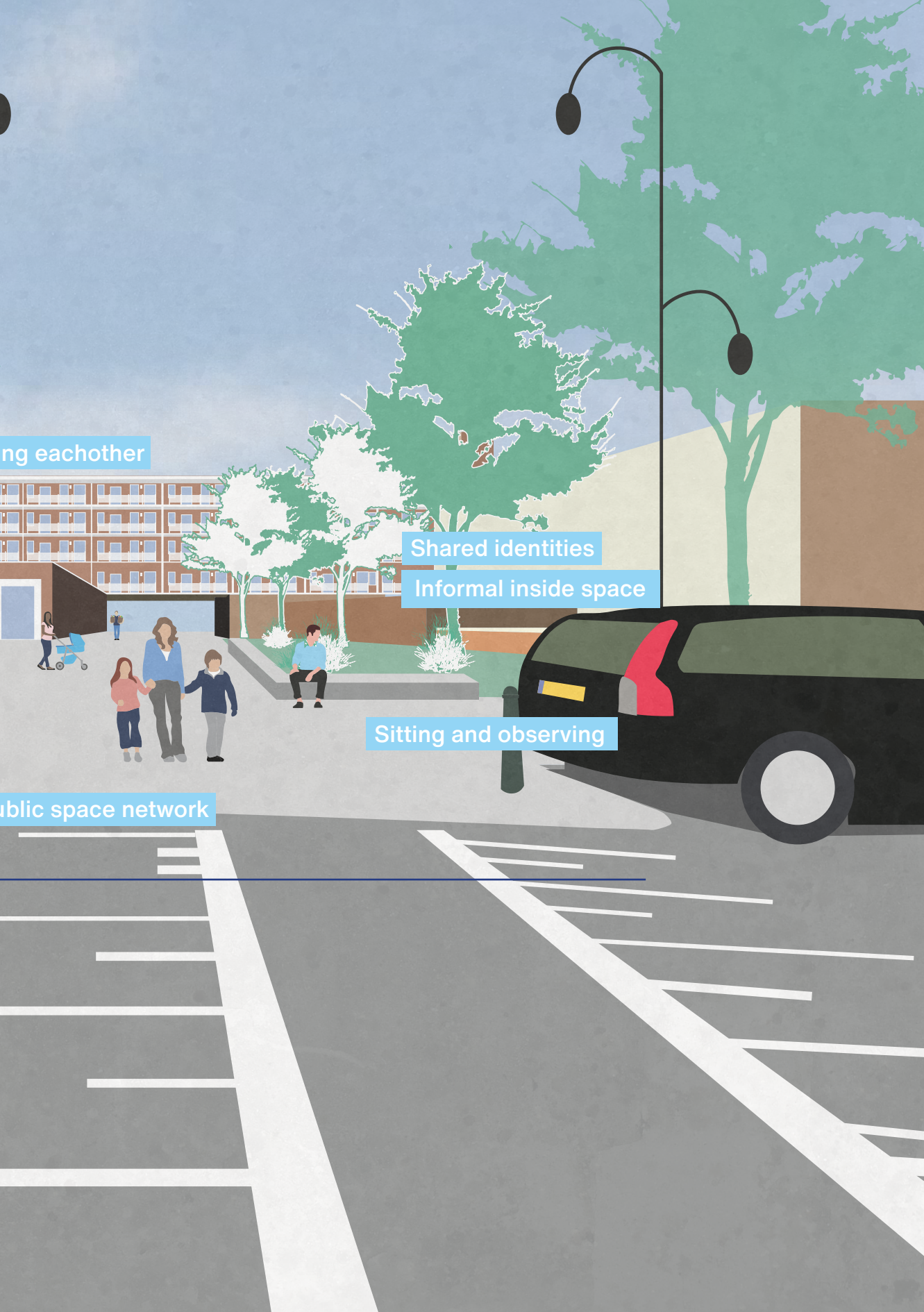
ng each other

Shared identities

Informal inside space

Sitting and observing

Public space network



08.

Chapter 8.

Conclusion

158. Conclusion

162. Reflection

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174. Appendix

Conclusion

Throughout this project, the research aimed to answer the main research questions: “In what effective way can urban design implications improve the perceived safety in Oud Mathenesse in a hyper-diverse society?” To address this question, three sub-questions were utilized, focusing on the physical environment, the social environment, and individuals’ perception of safety. To conclude the research, first this sub questions will be addressed to summarise the key findings. Finally, a more general and context-specific conclusion will be made.

Sub question 1| In what way does the social environment influence the perception of safety of individuals in accordance to literature about subjective safety?

In the first sub question the aim was to get a better understanding in what ways the social environment has influence on the perceived safety according to literature and theories about subjective safety. The perception of safety is significantly shaped by the social environment, this is particularly clear in cases of mistrust, where individuals are not able to anticipate others actions due to lack of contextual understanding within their own social framework. To achieve informal surveillance conducted by residents, public familiarity among them needs to increase, as it can foster social surveillance and a sense of security within communities. However the concept of public familiarity is abstract, encompassing various interpretations and applications in urban design tailored to diverse populations. To effectively study and enhance public familiarity within

an neighbourhood, a comprehensive understanding of residents’ activities and behaviour is crucial. The methods of ethnographic mapping, interviewing and mental mapping were essential methods for translating theoretical understanding into practical urban design solutions, to foster public familiarity effectively.

Additionally, social behaviour plays a big role in shaping perceptions of safety. Maintaining personal space and avoiding overcrowding are crucial in empowering individuals to feel in control of social situations. The physical environment influences social behaviour and interactions, capable of either fostering or hindering specific social dynamics. It is important that the physical environment can react on this social behaviour forms in order to create a safe environment. The literature study helped to understand how social behaviour and environments may influence the perceived safety, this theories were used during the fieldwork and mapping to relate the theory to the observations and take conclusions. However, the different theories used in this thesis originate from different historical periods, contexts, and regions around the world. The work of Irwin Altman, primarily focused on America in 1975, provides a foundational perspective. Both the temporal and societal contexts of this research differ significantly from today’s. Consequently, incorporating additional methods into this thesis was vital for exploring perceptions in a hyper-diverse society.

Sub question 2 | To what extent does the physical environment influence the perceived safety in Oud Mathenesse?

Luten's (2008) four principles—accessibility, visibility, legibility, and attractivity—offered valuable insights into how the physical environment influences perceptions of safety within the neighbourhood. These principles were analysed in the context of Oud Mathenesse and helped to identify specific areas and places in the area that scored low on these principles. By analyzing these principles in the area, the subsequent interviews provided a clearer understanding of how people experience their surroundings and how they link these experiences to spatial elements. The physical analysis helped as a foundation. However, certain principles were highlighted more frequently during interviews than others. Visibility, accessibility, and attractiveness were often mentioned, likely because they are more easily understood. In contrast, legibility—relating to the spatial element of territoriality and its impact on social behaviour—presents a greater challenge for direct translation into urban design. Despite its complexity, legibility was one of the most frequently cited issues in Oud Mathenesse, underscoring its significance and difficulty in urban planning.

Accessibility

Oud Mathenesse is good accessible by public transportation, with Schiedam station and Marconiplein and good accessible by car with the A20 close by. However, barriers hinder pedestrians and cyclist access, notably along the

Franselaan and the dike, where limited crosspoints and fast-moving traffic pose challenges. Considering the diverse user groups, ensuring universal accessibility is crucial, accommodating varied needs such as those of the elderly, students, and families.

Visibility

Assessing sightlines, and human presence reveals specific locations with higher potential for perceived unsafety. Oud Mathenesse lacks services to attract people, affecting the presence of people in the area. People do mention the lack of lightning in the Franselaan, where in the evening groups gather on the sidewalk.

Legibility

Oud Mathenesse exhibits clear road structures and spatial organization. However, especially the complex dynamics of territoriality and appropriation arise from shared living arrangements, blurring boundaries between private and public space and complicating social regulation. This issue is closely related to the behaviour of appropriation and ownership. In a densely populated neighbourhood like Oud Mathenesse, where outdoor living spaces are limited, this appropriation can cause tensions and significantly impact perceptions of safety and liveability.

Attractivity

Although Oud Mathenesse has green spaces, many are neglected or bare, presenting opportunities for improvement. Increased greenery could enhance attractiveness, as could strategically placed and inviting benches. Besides

the public spaces there is a lot of trash in the neighbourhood, impacting overall attractiveness.

This analysis highlighted areas within Oud Mathenesse that may be perceived as unsafe and helped to focus more on specific areas for further research. It's not just specific locations that provoke this perception, but also the overall liveability of the neighbourhood which can lead to situations that residents find undesirable. When the environment doesn't align with residents' preferences, it contributes to a decreased sense of safety. This spatial analysis provides insight into perceived safety in Oud Mathenesse, but to fully understand residents' perceptions, a social analysis is also required. These four principles alone are not valuable enough, as their relationship with the social environment is crucial. A place may score well on these principles, but social behaviour tensions can immediately affect perceptions, undermining the area's overall evaluation.

Sub question 3 | What is the relationship between the spatial and social qualities of Oud Mathenesse and the perception of safety?

The neighbourhood lacks sufficient public amenities which residents mention as a negative point of the neighbourhood. While analyses from articles, websites, papers, and Instagram accounts may suggest a strong sense of community, a closer examination through interviews and ethnographic mapping paints a different picture. Social networks within specific groups or demographics are strong, but

interactions and trust between these groups are limited. Various factors such as identity, cultural values, language barriers, and lifestyles differences contribute to these tensions.

Due to the high population density, resident frequently share spaces with unfamiliar individuals, leading to both tensions but also positive neighbourhood interactions. However, communal spaces often lack maintenance and care, with certain groups favouring more visible areas such as the streets this annoys the others and make people feel unsafe or uncomfortable. The absence of suitable spaces for public gatherings and places that have the potential for appropriation are not appropriated. Specific groups go to specific locations and don't interact.

The neighbourhood's identity has undergone significant changes over the years, with long-time residents mentioning that the neighbourhood has declined. The absence of a shared identity and conflicting desires among different groups the neighbourhood is facing more social challenges. To address these challenges, the area requires not only redesigned public spaces but also more social and inclusive venues to foster a renewed sense of community.

Context-specific conclusions

To answer the question "In what effective way can urban design implications improve the perceived safety in Oud Mathenesse in a hyper-diverse society?", a pattern language was developed to translate

the findings from the sub questions into design principles that helped to formulate a vision and recommendations for Oud Mathenesse.

The research underscores that urban design holds significant potential to enhance perceived safety in Oud Mathenesse across various dimensions. Leveraging a tailored pattern language designed specifically for Oud Mathenesse offers design solutions for the area. These design solutions can be applied in the specific areas identified through the research, where safety enhancements are required. While generic enhancements to the neighbourhood's public spaces are crucial, the more nuanced, intangible implications are deeply intertwined with social dynamics and communal identity. These aspects, intricately linked to shifts in social behaviour and shared identity.

Given the densely populated households in the neighbourhood, outdoor spaces play a crucial role regarding safety and liveability. Together with the hyper-diverse and transit-oriented nature of this locale, prioritizing the enhancement of public spaces, considering them as extensions of residents' homes will be of great value for the neighbourhood. Embracing the identity of the area and acknowledging its rich diversity, even if understanding every ethnicity may not always be achievable, is a positive step. Establishing shared communal spaces has the potential to foster a sense of pride among residents. There's a need for additional informal indoor venues like libraries or cultural centres. Enhancing these amenities within the neighbourhood

would strengthening local connectivity and cohesion.

However, sometimes spatial interventions alone are insufficient and institutional change is needed to support use. Such changes are crucial as mere spatial adjustments may not effectively shift the neighbourhood's perception. When residents witness proactive measures undertaken by the municipality and law enforcement, it instils confidence and a sense of value within the community. This observation arose frequently during the visit with the local police officer: many welcomed his presence on the streets. However, it's important to note that not everyone in the neighbourhood shared this sentiment, as some individuals expressed discomfort with his presence.

General conclusion and discussion

In the research, three main objectives were outlined: expanding knowledge on perceived safety within the context of hyper-diversity, utilizing human-centred methodologies, and adopting an interdisciplinary approach.

Hyper-diversity is a new context in our society and in urban design. The intricate overlaps between various ages groups, genders, ethnicities, and lifestyles within hyper-diverse communities render it challenging to attribute specific outcomes to distinct groups. Despite inevitable tensions, diversity within hyper-diverse communities offer potential for fostering a more inclusive environment. Acquiring deeper insights into the diverse groups within a particular context and

understanding their spatial utilization patterns are essential for comprehending hyper-diversity and informing design strategies. Ground-level research is needed to grasp how individuals interact with space and their preferences regarding this space and to study groups that are more invisible. Research and outcomes are context-specific, necessitating thorough investigation into each specific neighbourhood. Diversity is dynamic and constantly evolving, so solutions effective today may not work in the future. Continuous research and exploration of new methods for studying diversity are essential to keep pace with these changes.

Conducting ground-level research entails employing human-centred methodologies, which, though valuable, present challenges in drawing conclusions due to the absence of a clear majority in results. These methods may privilege certain voices or observations over others, leading to an unequal representation of perspectives. While ethnographic mapping can aid in capturing diverse user experiences, genuine understanding necessitates direct engagement with individuals, which can be time-consuming and challenging. A combination of ethnographic mapping and interview/mental mapping techniques can offer a comprehensive approach to capture a wide range of perspectives. These methods provide a more detailed and precise examination of the specific context, essential for understanding the relationship between the social and physical environment. By focusing on social use rather than just spatial qualities or potentials, these methods help identify key

areas for improvement. They are crucial for studying the social life of a neighbourhood and understanding its dynamics.

Interdisciplinary research within urban design, involving fields such as sociology, anthropology, and environmental psychology, holds immense potential. These collaborations provide insights into the complexities of hyper-diversity, as well as broader social behaviour and the impact of urban environments on well-being. While as an urban designer, you can gain knowledge from these disciplines, inherent bias may persist. Collaborating with individuals outside the field can lead to fresh perspectives and innovative research methods and solutions. When researching social topics in the field of urban design, interdisciplinary research is mandatory for gaining a comprehensive understanding. As an urban designer, the strength lies in translating research from other disciplines into spatial terms. This approach helps create and understand a better relationship between social environment and the physical environment, ensuring they are more effectively integrated.

To study hyper-diversity, using human-centred methods and an interdisciplinary approach is needed to capture the subjective point of view diversity brings along. In this thesis this objectives really helped to deal with the hyper-diverse context.

Reflection

In the reflection I will reflect on my graduation year by addressing various questions about my professional development, the process and the transferability of my graduation thesis. I will particularly focus on how my thesis topic related to my master's program, the connection between research and design, and the broader relevance of my research in social, professional, and scientific contexts, as well as its transferability.

What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

My thesis revolves around the theme of perceived safety in the urban environments within the diverse neighbourhood Oud Mathenesse. One of the aims is to employ human-centred methods and establish a connection between social sciences and urban design. By utilizing specific methodologies, the aim is to gather subjective insights into the neighbourhoods and understand how people perceive the built environment.

The topic of the studio Urban Fabrics is 'embracing plurality – growing porosity,' which emphasizes embracing diversity and fostering increased porosity within the urban fabric. Regarding my thesis embracing plurality can be related with the hyper-diverse quality of the neighbourhood Oud Mathenesse. Growing porosity can be seen as a vision in designing the urban fabric. How can we design porous cities is something that does not have a

simple answer and therefore research and methods how to do design for these porous and open cities is becoming more central in the field of urban design. Hopefully, my thesis will be a small addition in embracing plurality and discovering how to design for this plurality.

Within the Master track Urbanism interdisciplinary research and methods are key elements. This thesis touches, sociology, anthropology, environmental psychology and uses mixed methods to comprehend this different research fields. The shaping of cities and other areas carries implications for variety of issues, making urbanism a dynamic field that continuously evolves. As we navigate different time periods, the methods, designs, and approaches within urbanism must adapt. While the theme of my thesis addresses an enduring need (safety), the way in which designers respond to it have evolved over time, reflecting the changing societal landscape.

What is the relevance of your graduation work in the larger social, professional, and scientific framework?

Liveability and quality of life relate to the needs of people and the development of the individual in relation to the environment in a broad sense (Van Dorst, 2005). Furthermore, by addressing the context of hyper-diversity, this research also contributes to broader discussion of social equality and inclusivity. In cities where the population density is getting higher, creating a safe environment for everyone is complex. In Rotterdam more

than half of the residents is non-western. Professor Van de Laar of History, Culture and Communication stated that cities been changing so much that it is difficult to say who is majority and Rotterdam is become a city of minorities (#4 de Meerdere Minderheid (Superdiversiteit), 2022). He mentioned that when a population is so diverse with so many minorities it is difficult to make policies, the same can be said about designing for this diversity. Therefore, one of the aims of this thesis is to use human-centred methods to enhance the understanding of user experiences, preferences, and needs in various contexts and of a diverse range of user groups to improve the quality of the public space. By doing qualitative research in the form of interviews, observations, and mental mapping it tries to capture the subjective safety of the residents.

Regarding the scientific relevance this thesis contributes to the existing knowledge regarding the design of social environments and the perception of safety. The current body of knowledge on social safe design and perceived safety is there, the context of hyper-diversity brings a new perspective in this research field. This thesis will try to investigate more bottom-up methods in the research field of urban design, where the focus is on the experience of the user (residents). Our current society and cities are changing to more hyper-diverse societies and the cities are denser then ever. Therefore, it is important that the way we do research also becomes more diverse. Demographic shifts are continuous, and environmental design is an ongoing process, similar to the

evolution of diversity.

This thesis aims to improve the perceived safety of current residents in Oud Mathenesse. As the population continues to change, ongoing research and adaptive methods are necessary to understand diversity and develop solutions that work for new generations. Expanding upon existing knowledge in urban design and perceived safety, this thesis demonstrates the crucial role of qualitative methods in gaining a deeper understanding of varied safety perceptions. While current theories provide a solid foundation, conducting on-the-ground research is essential to comprehending the diverse subjective views of residents.

What is the relation between research and design in your graduation project?

This research thesis emerged form a mix of methodologies, incorporating literature review, analysis, mapping, and interviews. To translate the findings into design principles, a pattern language was developed. This method organizes theoretical insights and design concepts into a coherent set of patterns, proving invaluable in structuring theoretical insights and providing practical design guidelines, especially in navigating the complexities.

Each pattern within the pattern language addresses a specific problem and its corresponding solution within a given context, sometimes complementing or conflicting with one another. This dynamic is visualized through a pattern field, highlighting how patterns may interact or diverge. The pattern language helped

to formulate the theoretical findings into design guidelines for Oud Mathenesse. Especially the aspect of the pattern field and the relations between patterns helped to create sets of patterns that can be implemented in specific areas in Oud Mathenesse.

Given that the research delved into the social and physical environment, the pattern language proved to be a suitable method for recognizing patterns in terms of social behaviour in relation to the physical environment. With the knowledge of the pattern language, it became easier to translate observations and conversations into behaviour patterns related to public space and how urban design could potentially modify this behaviour or alleviate tensions between different forms of social behaviour. For instance, conflicting social behaviours such as personal space, as outlined by Altman (1975), and territoriality were evident on Franselaan in Oud Mathenesse. Here, specific groups claimed a space, forcing others to navigate around them to preserve their own personal space.

The pattern language facilitated the formulation of recommendations and visions for Oud Mathenesse, providing design principles for urban designers and planners tailored to its unique context. At the beginning of this year, I mentioned to my mentor I was not planning on making a detailed design and wanted to focus more on my research methods. The method of the pattern language showed me that design solutions can be implemented in multiple contexts, but the way they are combined is crucial for successful design and are

context specific. Additionally, a pattern offers a design solution, but there are still numerous ways to implement it. This is why I preferred to stay at a conceptual level rather than diving into specific designs. Nevertheless, my education in design helped me to formulate and test patterns and explore options for improving perceived safety. Using design as an exploration of possible solutions helped me in arriving at a more precise recommendation for Oud Mathenesse.

How do you assess the value of your way of working (your approach, your used methods, used methodology)?

In conducting this research, my aim was to employ a diverse range of methods, particularly those that allowed for subjective insights to capture residents' perceptions of safety. Ethnographic mapping, interviewing, and mental mapping were chosen to delve into the subjective viewpoint of the residents, offering qualitative data essential for the results and to translate research into design. However, a challenge of this methods is the need for a significant number of responses to achieve a level of inter-subjectivity. Moreover, engaging with diverse perspectives is crucial in the context of hyper-diversity explored in this thesis. Yet, establishing connections with residents, particularly when one is not from the neighbourhood, can be challenging.

This limitation was indeed a significant factor in this research. Not being a resident of the neighbourhood and lacking acquaintances in the neighbourhood posed a challenge. I began by reaching out to individuals willing to engage in discussion

and draw mental maps. Each person I spoke to, led me to another contact, extending my network and expanding possibilities for engagement. This process proved me to be one of the primary challenges of my thesis. Nonetheless, sometimes the willingness of just one person can catalyse a productive process, this was the case with the local police officer who enthusiastically invited me to join him on one of his evening shifts through the neighbourhood which opened many doors for me and help to understand the area and especially the residents. It was this experience that reminded me why I wanted to use subjective methods in the first place. Capturing the everyday experience of residents and empathizing with their realities are insights I will carry forward into my future as a professional. Personally, accompanying the police officer on his shift proved immensely valuable in understanding the direct impact of architectural and public space design on residents' lives. While urban designers cannot single-handedly resolve every issue, recognizing how our design choices shape people's daily lives is a lesson I will certainly carry forward with me.

Reflecting on the method of mental mapping, it became evident for me that its effectiveness is enhanced when there is already a solid foundation of various groups willing to contribute to your research. This method requires explanation and trust to encourage participation. While I recommend utilizing this method, the process of engaging individuals to collaborate on the project can be challenging, particularly when undertaken independently and within a specific timeframe. I learned that setting

up research isn't easy; it takes time, effort, and stepping out of your comfort zone while keeping an open mind.

In this research, the individuals I did manage to engage with may have been more willing, potentially biasing the outcomes of the research outcomes, as I couldn't capture the insights from all user groups within the neighbourhood. While mental mapping and interviews provided valuable information, ethnographic mapping was a more successful method to capture all groups. It showed the value of simply observing what's happening, even people who are hard to reach and talk to.

Initially, my intended use of the methods didn't precisely align with how they shaped my research process. However, employing these methods led to unexpected experiences, opening new doors and providing unique insights that profoundly influence my research and my graduation year.

How do you assess the value of the transferability of your project results?

The findings, hold relevance for the upcoming developments in Oud Mathenesse. Given the proposed initiatives for Merwehaven, ongoing developments in Schiedam, and the sewer system renovation, this study stands to offer valuable insights regarding perceived safety that can be used in these new developments plans. Of particular interest are the Franselaan and the inner gardens, which present promising focal points within the neighbourhood with potential. The development of the pattern

language offers design implications that can be applied to other neighbourhoods, cities. However, some of the patterns are specifically for Oud Mathenesse and may not be accurate for every location. The pattern language can be a good foundation for other research about perceived safety in different contexts.

When considering the applicability within the context of hyper-diversity neighbourhood, the findings underscore the significance of community and identity, within such a setting. Addressing the implications entails more than just urban design; the municipality does have a considerable influence in supporting this neighbourhoods. In neighbourhoods characterized by high diversity and lower levels of liveability, it is crucial to conduct thorough studies to understand precisely what is occurring. This can be highly nuances, such as the presence of Polish men congregating in front of a Polish supermarket – an activity that may generate discomfort for others and foster feelings of insecurity. A neighbourhood like Oud Mathenesse, in particular, would benefit from a community centre and increased outdoor spaces due to its dense living conditions. Exploring the interplay between the social and physical environments can provide valuable insights into people's needs and behaviours. Every behaviour is driven by an underlying need, and prioritizing the identification of these needs over merely addressing the behaviours can lead to the creation of more favourable environments. The methods employed in this thesis are highly applicable to researching perceived safety

in other contexts because they facilitate the examination of the subjective interaction between social and physical environments.

However, one aspect this research overlooked was an assessment of the residents' pattern language or design preferences. Addressing this diversity and fostering experimentation and co-creation through participation could be solutions, as involving residents allows them to voice their opinions and visions for their living environment. Nonetheless, some individuals may not readily engage in these sessions. Additionally, it's essential to clearly explain what urban design is to residents, so they don't just advocate for better street lighting for example. Exploring how to effectively implement co-creation and participation in a hyper-diverse context would require an entirely separate thesis research.

What key insights did discussions with your mentor provide?

Many analyses are shaped by our own perspectives and experiences as urban designers, which, while valuable due to our education and life experiences, can also introduce bias. Through discussions with my mentors, I've come to appreciate both the value of these biases and the importance of learning to set them aside when necessary. It's worth noting that certain groups and experiences may be overlooked in research because they don't respond, are less visible, or don't speak the dominant language. Understanding these perspectives remains a challenge, particularly for outsiders seeking to engage with them and learn about their needs.

This process requires both time and trust. However, as an urban designer, we are trained with the skills to understand our environment and understanding the social environment in relation to the physical is equally important for capturing diverse perspectives. In this context, my bias should not lead to premature conclusions. Nevertheless, given my education in comprehending these environments, I can also trust my bias to some extent.

Furthermore, I've come to realize that residents primarily seek attentions and care for their surroundings – a municipality that genuinely attempts to comprehend their issues and engage with them directly. The manner in which design and changes are introduced to the area is crucial, as the process of involving residents in these decisions. I've observed that people take great pleasure in discussing their surrounding.

What aspects of documenting and visualizing data pose challenges?

Throughout my fieldwork, I encountered difficulties in effectively documenting and visualizing my findings. Often, individuals may articulate similar opinions in slightly different ways, and sometimes these expressions may not directly relate to physical or urban aspects, yet they can be linked to personal experiences. Additionally, seemingly minor details mentioned by individuals can hold significant impact for them. These casual conversations, whether in the street or during the shift with the local police officer, were not always easy to effectively capture or structure in writing. Consequently, this occasionally posed

challenges in organizing the results or presenting quantitative summaries of the interviews. Furthermore, certain narratives are deeply personal and thus somethings I couldn't transcribe due to privacy concerns, yet they still influenced my perspectives and the conclusions I draw. Addressing this complexity and translating it into visual representations is challenging and may require different methods, tailored to the specifics of each project. For next projects I would like to delve deeper in the methods of documenting and visualizing interviews and ethnographic findings while preserving their depth and significance.

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Appendix

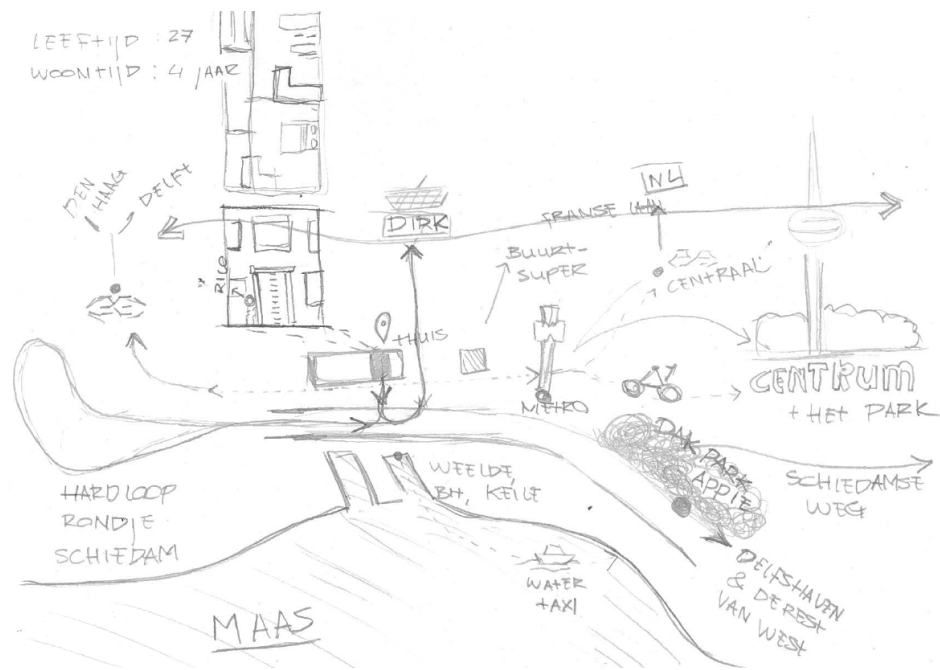


Fig 82 | Mental Map usergroup 20-30

Noa - 27 jaar - 4 jaar

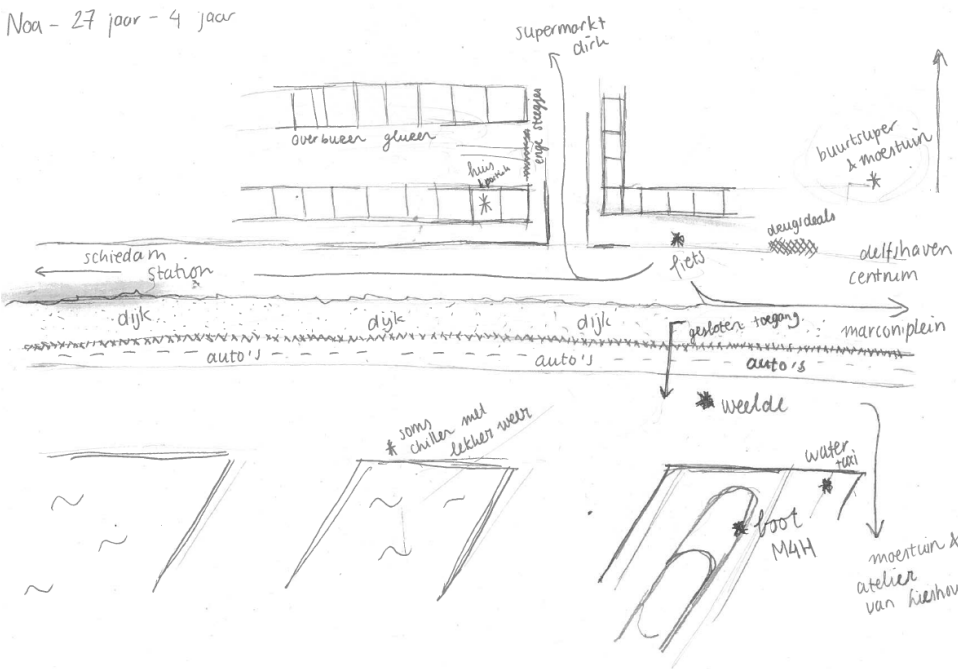


Fig 83 | Mental Map usergroup 20-30

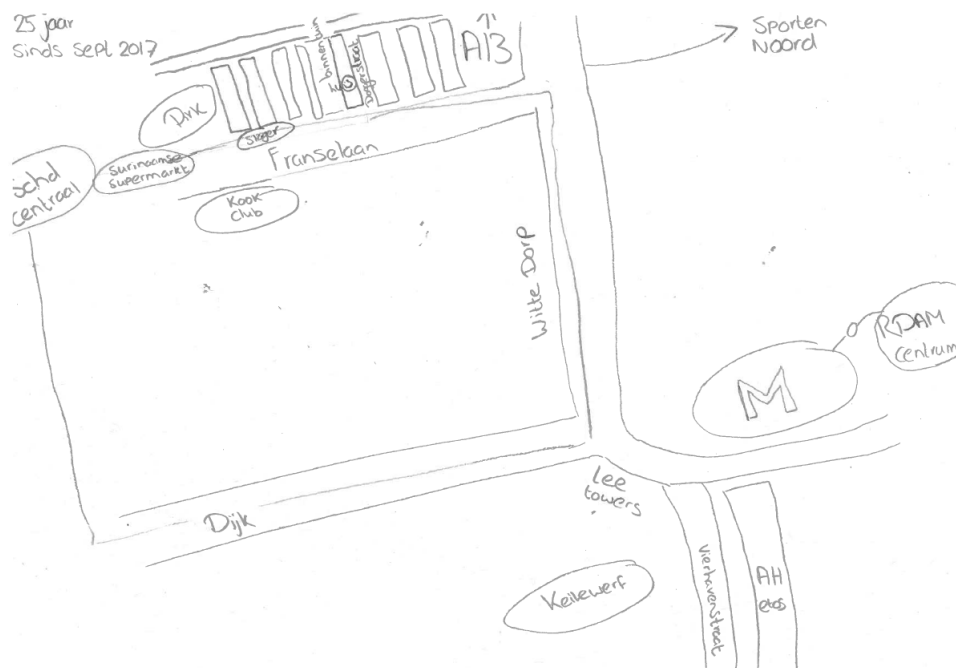


Fig 84 | Mental Map usergroup 20-30

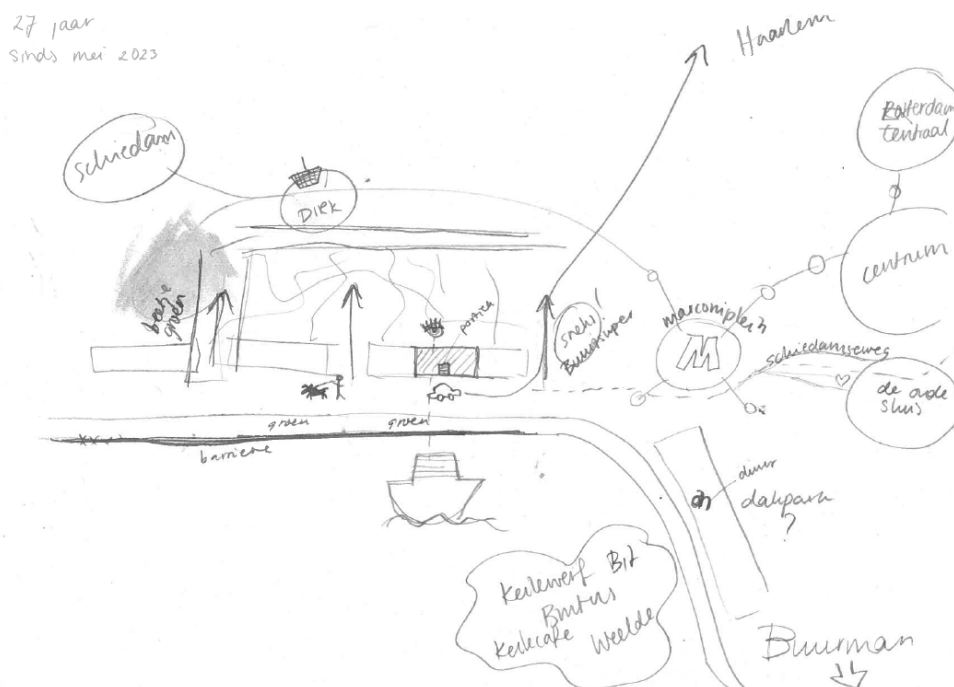


Fig 85 | Mental Map usergroup 20-30

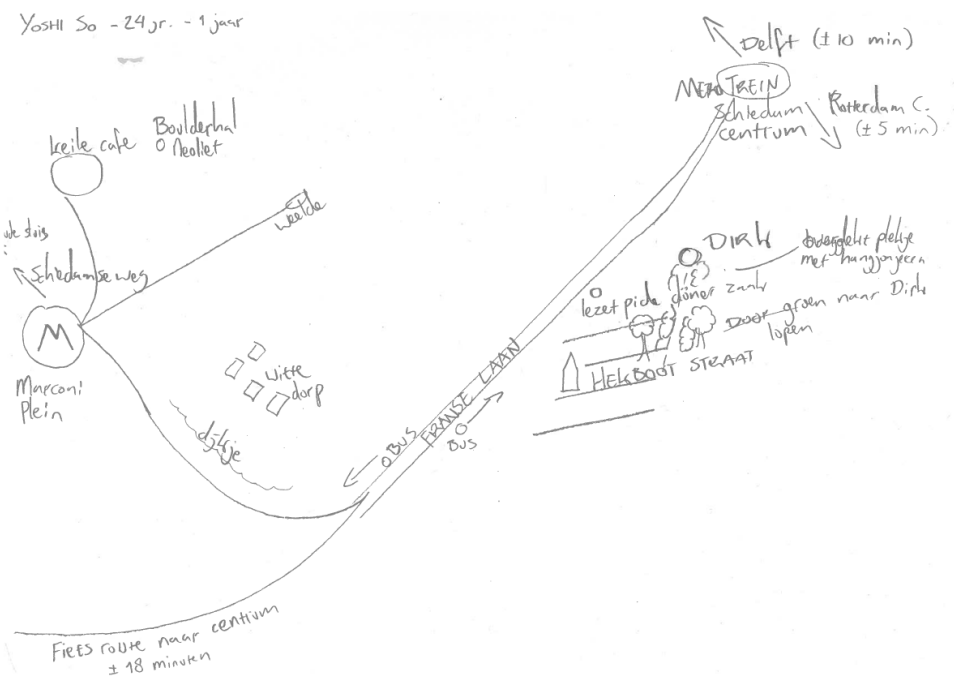


Fig 86 | Mental Map usergroup Elderly

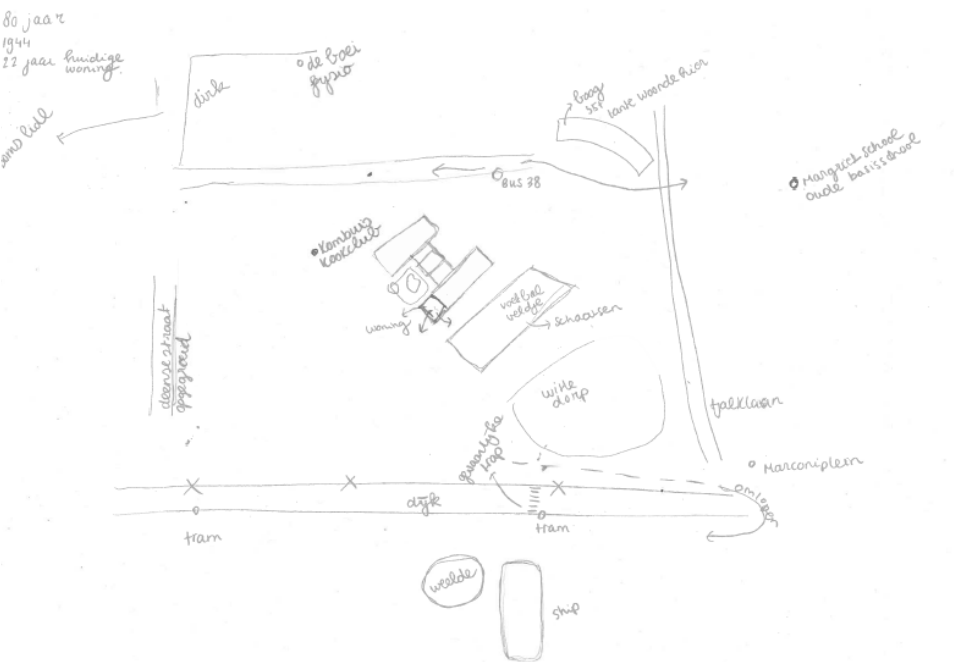


Fig 86 | Mental Map usergroup Elderly



