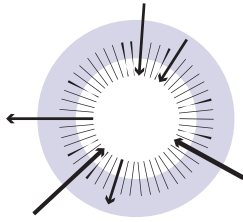


Towards sustainable urban development for a socio-economically mixed neighbourhood and liveable Spangen, Tussendijken and Bospolder.







## PREFACE

From just after the - hopefully - last 'corona summer' I started drawing up my latest research and design project for my master's degree in Urbanism at TU Delft. After years of energetically working on the building environment and design assignments in both the bachelor's and master's degrees, this period is coming to an end. With my love for the human side of urban design and research I wanted to crown this time and a subject that is (literally) close to myself.

When the first year of my MSc1 in Urbanism started, I quickly came into contact with Rients Dijkstra and became fascinated by the world of urban design. Also in this last academic year, I started the year by the coaching of Rients and Victor Muñoz Sanz in the Delft Approach workshops in which I learned and improved techniques for quick action design. This is followed by an intensive period of thesis supervision. I especially admire is the always critical and sometimes less nuanced opinion of Rients. This always started instructive dialogues. It taught me so much about standing up for my own beliefs and desires. Without his help, insight and belief, I would not be where I am today. I am extremely grateful for that.

I am also very grateful for the insights and broad knowledge of my second mentor Maarten van Ham that made my project stronger and realistic. Maarten is close to the subject of segregation and has given me several insights that I would carry with me in my future life. Hopefully and most certain it will bring me closer to designing and thinking about strategic approaches bringing together different socio-economic groups peacefully and harmoniously.

Finally, I would like to thank the people who have made these last, unique corona and study years wearable and motivated me to continue developing myself and my ambitions. My family and friends, far or near, have always been a beacon and provide an inspiring work environment. Thanks for listening to my chatter about neighbourhood identity and realising a diverse and liveable neighbourhood.

Thank you all so much.

Eelkje Pries  
Rotterdam, June 21, 2022

A person in a white shirt is holding up a large white board. On the board, the words "WIS" and "DE" are written in a stylized font. The person is standing in front of a dark background. The text "We vergaten dat we stadse wezens waren" and "We vergaten jou, Rotterdam" is overlaid on the image.

***“We vergaten dat we stadse wezens waren  
We vergaten jou, Rotterdam”***

- Dean Bowen, 2020 (Appendix 10.1).

**Exodus** - Exodus is a mini movie of a poem that takes a critical look at the Rotterdamwet, a law that has made it possible since 2006 to refuse residents in specific neighbourhoods below a certain income or education level. This gentrification – the sociological term for the economic upgrading of neighbourhoods that eventually leads to the displacement of people with lower incomes – has progressed so far that the city is gradually becoming unrecognisable. He not only blames Rotterdam for forgetting its inhabitants, but also blames himself, the inhabitants of the city and the viewer (Glasbergen, Reekers, Maas & Van der Zouw, 2020).





## ABSTRACT

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Improved liveability in the neighbourhoods Spangen, Tussendijken and Bospolder is desirable. A more socio-economically diverse population partly contributes to this. Gentrification makes wealthier residents move into the neighbourhoods in a short period of time. Yet, it causes a decrease in affordable housing and a chance of the disappearing of physical and social neighbourhood identity. Which means that current, less wealthy residents no longer feel attached to the place and that wealthier population groups want to settle in increasing numbers. This demonstrates unsustainable urban development by creating a re-segregated neighbourhood.

This thesis examines if and how urban design can contribute to a socially sustainable way of urban development for the improvement of liveability and the creation of a stable socio-economically diverse population with a preserved and reinforced neighbourhood identity. By research and design three important phases of the course of gentrification related to urban design are established. The urban approach to these phases forms the starting points for redesign: Stabilise the amount of social housing for socio-economically diverse inhabitants, create vibrant, liveable and stayable public spaces designed for slow traffic and preserve or reinforce the typical economic program of small-scale enterprises with affordable products. These are placed in current, upgraded axes with potential for liveliness and in developable public spaces with a reduced liveability. Fitted into current broken program routes and future urban development in the vicinity creating resilient urban design. The design is a hypothesis for improving social sustainability based on urban design. Because of this focus, much of the problem of (extreme) gentrification is left aside. Policy-making on urban renewal and responding to trends in housing requirements play a major role in these unsustainable urban developments.

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keywords: **liveability, neighbourhood identity, socio-economic diversity, sustainable urban development**

## **Colophon**

### **P5 Report**

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June 2022

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Image 1. Scene at 0:23 from the mini movie Exodus (van Doezelaar, 2020).

# Introduction

1.1 Introduction

1.2 Development of the theme

1.3 Motivation

**Introduction**

This first chapter of the thesis will consist of a short introduction about the research theme. It is followed by the description of the development of the theme and how it is narrowed down to the final leading theme. It is about the contradiction in gentrification and the beginning of the deepening of answers to a better form of urban renewal. It is supported by my personal motivation, social and scientific relevance and by ethical considerations. It concludes with an explanation of how the rest of the thesis is structured.



# 1.1 Introduction

Rotterdam is hip and happening. One slum after another is transforming into a neighbourhood with owner-occupied homes, trendy coffee shops, galleries and organic shops. In Exodus Bowen Dean describes the exodus of the less fortunate fellow man and a philosophy that this fellow man has forgotten. Rotterdam is diverse and it is precisely this diversity that makes our city its own. If we forget to stand up for them, we lose our city, said city poet Dean Bowen (Glasbergen, Reekers, Maas, & van der Zouw, 2020).

Dean Bowen writes about his idea of gentrification and how current residents seem to have less and less right to parts of the city where they used to live. He also writes about the extreme rise in rents

which is for him a clear indication of how the city is changing. He says about this: “I think we all have a responsibility to explore what that means for preserving the soul of the city”. By which he implies that this soul is being taken off little by little.

This phenomenon of gentrification intrigued me and has been the reason to do research into this theme and write this thesis. My personal fascination with gentrification is that there is this kind of contradiction in it. By ‘improving’ certain urban aspects of the neighbourhood to create a better liveability, injustice was done to the spatial right for social and economic minorities. This will put socio-economic inclusiveness at risk.

## 1.2 Development of the theme

The subject of this thesis has been pushed in different directions several times to find the pain point of the problem. Below is an explanation of how it initially went from the phenomenon of gentrification, to an attempt for inclusive designing to the concept of social sustainability - being an overarching theme.

### 1.2.1 Gentrification and segregation

Initially, the problem statement started with the concept of gentrification. Gentrification is basically the renewal and renovation of old, dilapidated buildings in a city. This is often close to the center. The poorer people are often driven out of the city center because the rents become too high for them to pay. Cody Hochstenbach (2017) points to how gentrification has become mainstream. When he started working on his dissertation on gentrification in 2013, it was still an obscure concept. At least in the Netherlands. The term was especially known among the professions social geography, sociology or planning. He emphasises the fact that he has to explain to other professions that it concerns the upgrading of old city neighbourhoods in which poor residents make way for rich newcomers. But during his research he has seen this change rapidly. Media and local politics have taken on the subject.

As mentioned before, this concept of upgrading the neighbourhood seems to lead to a contradiction. By 'improving'

the urban qualities, striving for liveability, injustice was done to the spatial right for social and economic minorities. The district, which for various reasons was seen as a less pleasant area to live in and which therefore had relatively cheap housing on the market, is becoming increasingly popular to live in due to the high demand for housing and good location. Before that, the neighbourhood mainly consisted of people with a lower income and was ethnically segregated. Segregation is mainly understood as a bad thing. Peach(1996) states "it is seen as divisive, as preventing understanding, as reducing social interaction between groups and individuals and as leading to mistrust".

Heavy gentrification can lead to re-segregation. The neighbourhood has been 'upgraded' to such an extent that many wealthy potential residents pay relatively much more money for a house that was previously worth much less. When this becomes a trend and a lot of wealthy people will start to live here, it will go over a certain "social inhabitants mix" boundary. If so, you could say that segregation has occurred again. This has then shifted from socio-economic and ethnic segregation to segregation of the rich. An illustrative image is shown on the next page in Figure 1.

*You could say that gentrification is the phenomenon of increasing liveability at the expense of affordability.*

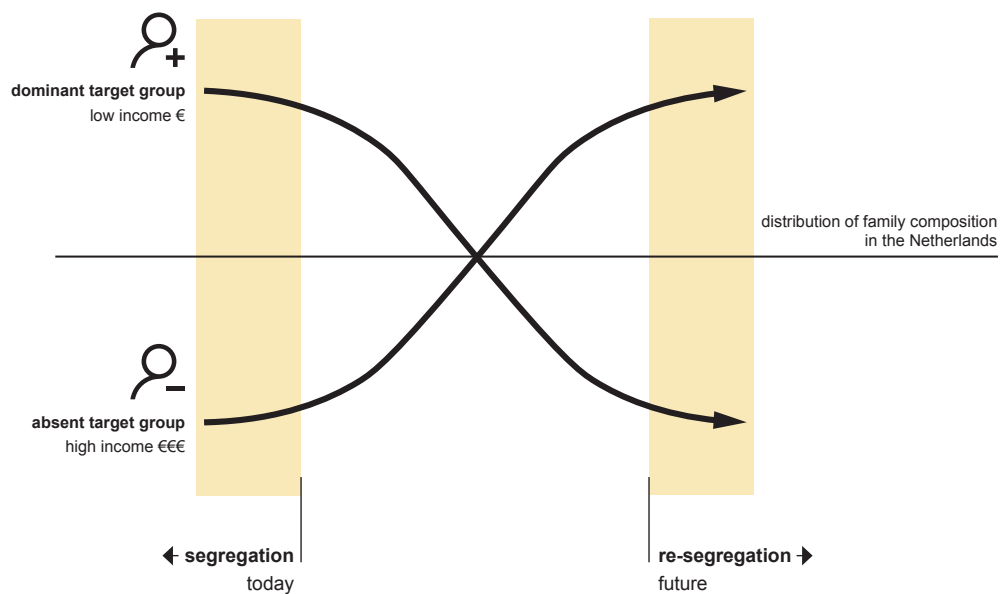


Figure 1. Reorganising segregation by gentrification (Author, 2021).

## 1.2.2 Inclusive design

This led to the importance of an inclusive urban design. Yet, this terminology about 'inclusive design' led to confusion.

Harteveld (2019) debates the meaning of inclusive cities. He notes that conflicts appear between generally-accepted definitions and what we see in the city. Creating these kinds of inclusive cities, seem to mean something different to different people. He states: "Inclusiveness, democracy, and 'agency' are strongholds in our scientific thinking on public space and each issue echoes through in an aim to keep cities connected and accessible, fair and vital, and open and social". He disputes the idea that

enforcing diversification is the best way of urban development. In the article Harteveld concludes the fact that the city is still our common house, but public spaces are not used by the people as a whole. The city is still open, but public spaces cannot be seen and/or known by everyone.

So a clear definition will have to be made for whom this public space or in this case (parts) of these neighbourhoods will become. Also, the idea of creating inclusive neighbourhoods will be reconsidered. Creating inclusive design implies creating equality, but it also means that in order to achieve this inclusive design, current social economic minorities will have to make way for perhaps the

richer “social economic majorities”. The focus is less on the problem that current residents should also continue to have space in the new design. Concluding, that what is inclusive for one is certainly not for another. Focusing on creating an inclusive design, ignores the problem driving away the current residents.

### 1.2.3 Social sustainability

The literal meaning of sustainability is about sustaining a phenomenon for as long as possible for the benefit of the source. You could say that gentrification and also creating a socially-economic diverse design is not enough to create sustainable urban development, because it is not in the best benefit for ‘the source’- the source in this are the current residents.

Sustainability is about creating closed or as closed possible loops in terms of a certain

source. Reaching social sustainability fits the aim for the project. Social refers to the social aspect of the design, which focuses on the liveability experience of the inhabitants and potential inhabitants. This should ensure a sustainable resident flow instead of a non-sustainable resident flow (Figure 2 & 3). This will ensure that the entire community will not move after the implementation of urban renewal.

This social sustainable urban design will be created with the focus on preserving current residents and let them benefit from urban renewal. It will be a challenge to solve the design assignment without a suggestion of it being a ‘tabula rasa’ and create a new program in which both new as the current resident live and will continue living in.

The concept of social sustainability will be explained in more detail later and tested against existing theories.

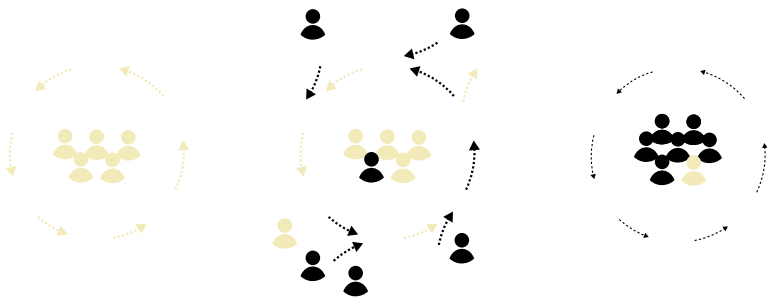


Figure 2. Example of unsustainable resident flow (Author, 2021).

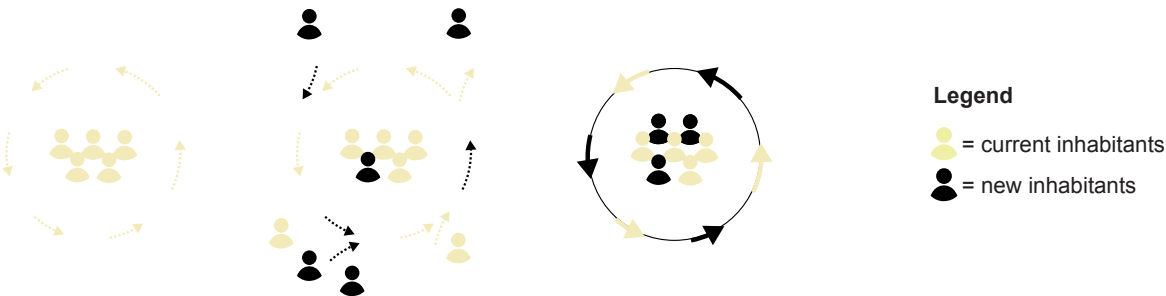


Figure 3. Example sustainable resident flow (Author, 2021).



## 1.3 Personal motivation

Based on my own experience, I started researching this phenomenon of gentrification and urban renewal. I myself am part of this problem causing this phenomenon. Together with four other highly educated friends, who are all at the end of their studies, I came to live in Rotterdam on the Mathenesserweg, just on the border between Tussendijken and Spangen. We found our house through a real estate developer who made the house exactly to our liking and asked a significantly higher price than our neighbours pay for their house.

Entering the neighbourhood we were immediately confronted with resistance from the current residents. Pamphlets indicating dissatisfaction with students about the ‘verkamering’, Dutch terminology that refers to the division of homes for home sharers, could be seen in several window frames. Also, in the neighbourhood whatsapp chat, people regularly speak negatively towards the new entering resident groups (which were mostly students). Not even mainly about their lifestyle, but especially about the socio-economic consequences that it entails.

Rents are rising, and social cohesion is decreasing in their opinion. “The neighbourhood is no longer the neighbourhood”. All this has to do with a certain degree of loss of identity. This identity is something about what everyone who has a certain relationship with the neighbourhood has an opinion and value about to a certain extent.

I am aware that it is human not to like to see change, so that some form of visible change often already sparks discussion. But I understand the frustration, especially when it comes to unaffordable housing for the current residents. If this happens at a certain speed, there is a chance that the population composition will change uncontrollably and that soon there will not be much left of the current identity.

That, while it is precisely urban development that can be an outcome for improving the liveability in these neighbourhoods. It is soon noticeable that there is or has been a certain bad atmosphere in the neighbourhood. Even if you mention the neighbourhood name to someone who has lived in Rotterdam for years, there is rarely a positive sound. So urban renewal could provide a solution.

All this, together with the belief that not only capital owners should set the rules, means that my personal motivation is about urban development with a view on improving the liveability, especially for those who have lived here for years. So that these socio-economic minorities are not driven out and eventually run into the same problem together in another place.

*Differences are normal, inequalities are not.*





**We forgot home is nothing more than  
a place you can get chased out of**

Image 3.

Scene at 0:55 from the mini movie Exodus (van Doezelaar, 2020).

# Problem Field

2.1 Urban Trends

2.2 Problem Analysis

2.3 Problem Statement

2.4 Approach

# 2

**Problem Field** As mentioned before, the motivation for this thesis is about creating sustainable urban development. In order to be able to provide a good answer to this design question, it is important to look at what trends contribute to unsustainable urban development. Three main trends can be established: the current housing crisis, the rising popularity for living in the Randstad and the phoneme where owning and renting houses is used for making a profit.

Besides, there are also various reasons why urban renewal is desirable in these neighbourhoods. Several current drivers for the need for sustainable urban renewal are set out in chapter 2.2. This includes bad liveability, segregation, an increase in WOZ values and loss of identity in gentrified neighbourhoods.



## 2.1 Urban trends

There are three main trends in urban development which cause discomfort and create inequality for socio-economic minorities. These trends can be set out in three scales and have a strong mutual relationship with each other. The trends take place on the national scale, the scale of the city and also on a neighbourhood scale. The housing crisis is a problem which concerns a lot of inhabitants of the Netherlands. Part of the problem of the housing crisis is the increased interest in living in the Randstad. In turn, real estate investors make use of this by buying houses in centrally located, still affordable neighbourhoods and renting them out for high prices. Together, these pose problems for creating a socially sustainable urban renewal.

### 2.1.1 Housing crisis

### 2.1.2 Randstad as a popular growing metropolis

### 2.1.3 Houses for profit

## 2.1.1 Housing crisis

Rising house prices and a major shortage of rental and owner-occupied homes. The housing market has been under tension for years. Opinions differ about the seriousness of the housing shortage. According to official figures, there are currently 279,000 homes too few, out of a total of more than eight million homes. New homes are needed for the growing population; for the also steadily expanding number of households; and for asylum seekers and migrant workers (Schreuder, 2022). Statistical housing shortages have been used for decades as an indicator of housing market tension. The housing shortage is expressed in the number of homes (and how large this number is as a percentage of the housing stock). The housing shortage does not mean that these households have no housing, but that they do not live in an independent home and are expected to want to (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021b).

According to Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2021b) the demand for housing is high, the supply for sale is low and house prices have grown faster than ever. In the rental sector, the waiting lists for social housing are long everywhere. There is a serious shortage of affordable housing in both the owner-occupied and rental sectors. All in all, the housing shortage will increase until 2024 and will gradually decrease after that.

The main conclusions from the report “Staat van de Woningmarkt - Jaarrapportage 2021” are as follows: Historic low number of houses for sale, rising house prices, despite corona, strong urgency for housing,

affordability is a problem, especially for specific groups. Due to this low number of houses for sale rent and purchase prices are rising enormously, especially in the cities in and near the Randstad. Overbidding on owner-occupied homes has increased and homes are for sale for a shorter period of time.

The reason that this housing shortage has arisen is given a clear answer by Schreuder (2022): the state of the interest rate. According to PvdA politicus Adri Duivesteijn, insufficient housing has been built in recent years: the shift of power over the housing market from the government to the private market. In addition, investors have discovered the property; twenty years ago it was more lucrative to invest capital on the stock market or to earn a good interest from it, now the return on real estate is more attractive.

The most obvious solution to the housing crisis is the construction of many new homes. “The bottleneck in the Netherlands is spatial planning,” says Taco van Hoek (Clahsen & Verbraeken, 2021). He states that the core is that good locations are being developed. “No subsidy is required. There are plenty of options for small-scale construction that suits the environment”.

Schreuder argues that also the ‘flow’ also needs to be improved; more people should be tempted to move. For example, it is often blamed on the elderly (NOS, 2021a) who would live too large and in this way, take the place of first-time buyers who are looking for this type of housing.

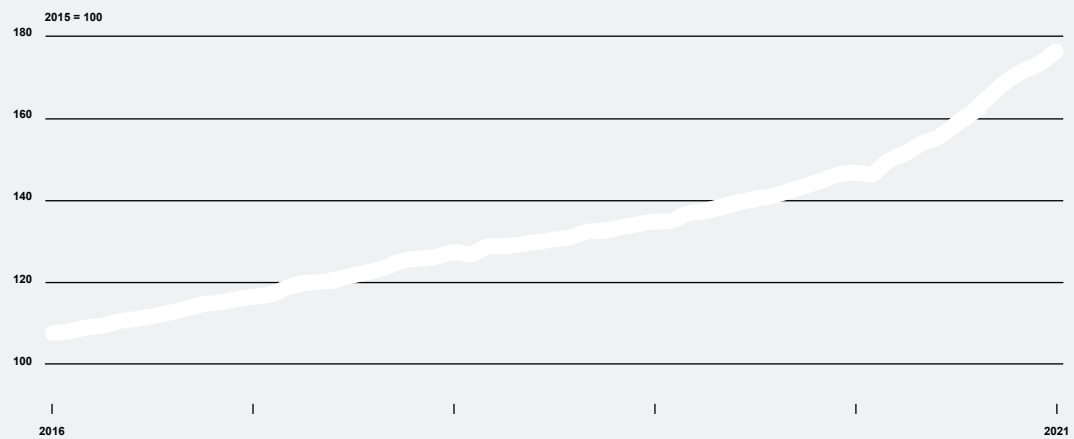


Figure 4. Prices for existing owner-occupied homes (Centraal Bureau voor de Statistiek, 2021b) (Author, 2021).

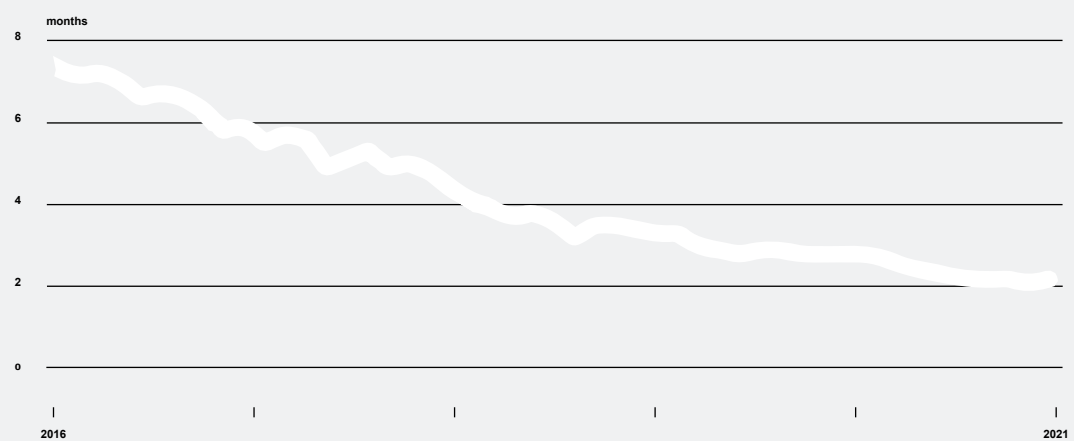


Figure 5. Average supply time for homes sold (Centraal Bureau voor de Statistiek, 2021a) (Author, 2021).



## 2.1.2 Randstad as a popular growing metropolis

Rotterdam has the highest average rent increase as of 1 July 2020, excluding resident change, together with The Hague. This is higher than in the other cities in the Randstad. This means even higher than in Amsterdam (Centraal Bureau voor de Statistiek, 2020).

While the high, rising rents in Amsterdam generally seem to be more discussed. But, for the first time in years, rents did not rise the most in Amsterdam, but in Rotterdam. Rents there will rise by 4.1 percent and in Amsterdam by 3.5 percent. This year, rents are also rising more strongly in The Hague than in Amsterdam: 3.6 percent. Rents in Utrecht rose less rapidly than the national average: 2.6 percent (Centraal Bureau voor de Statistiek, 2020). Outside the Randstad, rents are developing much more moderately, with the exception of a few cities.

Jasper de Groot (2016), general manager of Pararius says about this: “The increasingly flexible society also requires people to become increasingly flexible. For example, the number of permanent contracts in the labour market is decreasing, mobility in work and relationships is increasing and there is a less clear separation between home and work location. More and more people want to live in the city.” He states that this is creating a growing demand for temporary and quickly accessible luxury living space. These people are not eligible for social housing, where there are long waiting lists anyway, and they are not in a position to buy. De Groot concludes that

a larger middle-priced segment with rental prices between € 700 and € 1,000 per month would offer a solution.

This results in a poor distribution of homes throughout the Netherlands. The map on the right shows how many inhabitants have settled in municipalities per square kilometre. The map clearly shows that the cities in the Randstad, mainly located in North and South Holland, are more densely populated than other parts of the Netherlands.

That shows that these areas are more popular to live in. In addition, the rising rents are a result of the high demand in this place. The market is responding to the shortages and also to the growing demand for housing in general, but especially based on location.

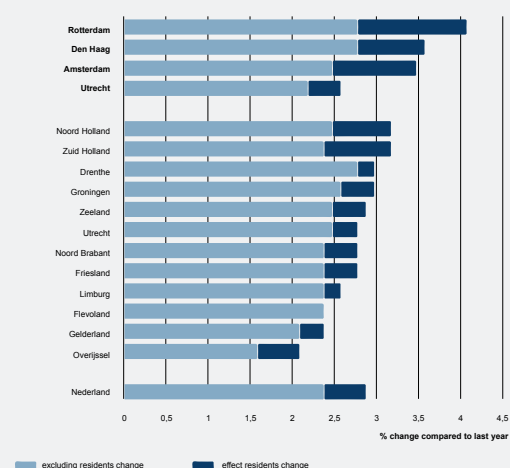
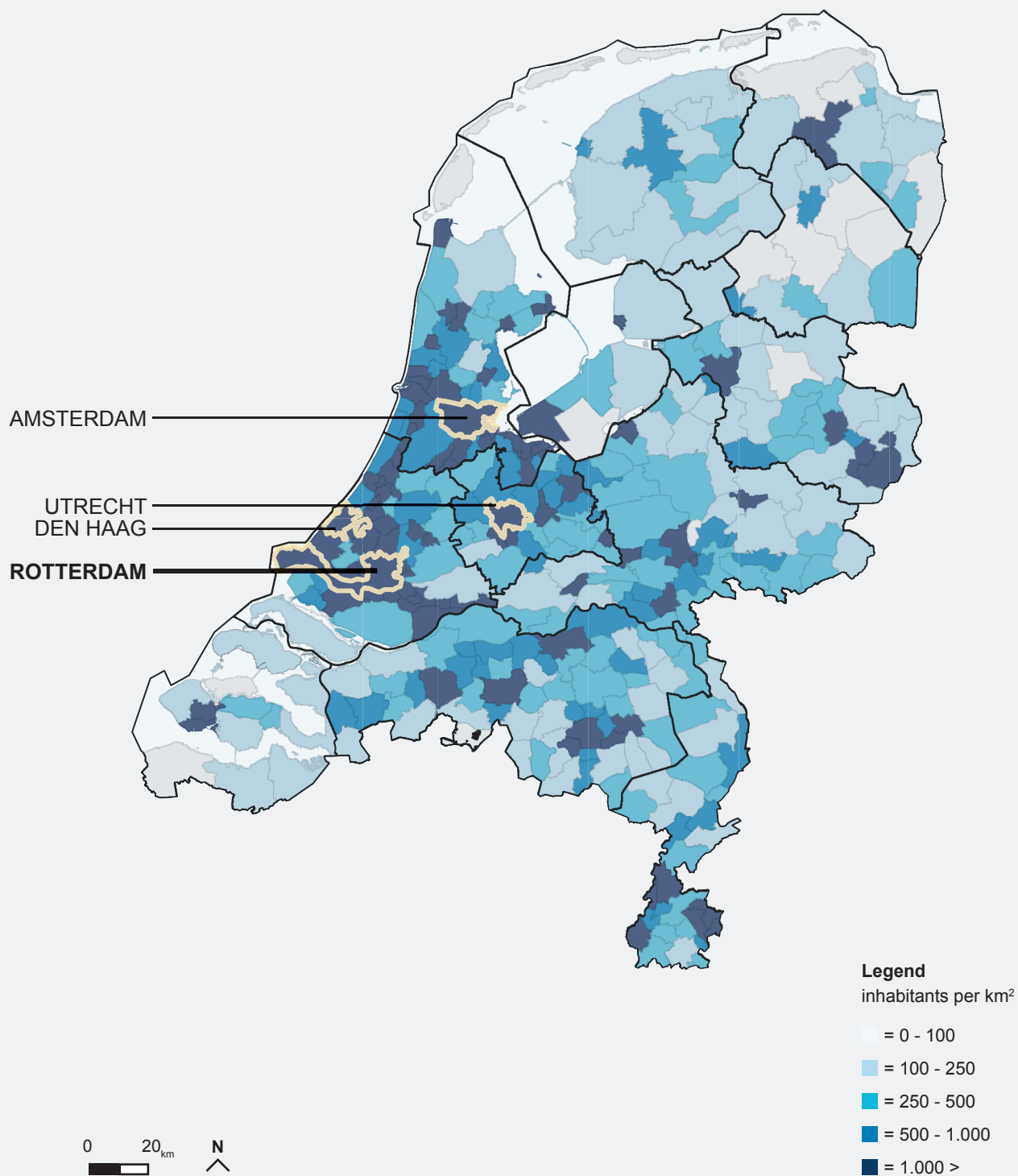


Figure 6. Average rent increase as of 1 July 2020 (CBS, 2020).



Map 1. Population density of inhabitants per km<sup>2</sup> (CBS, 2019).



## 2.1.3 Houses for profit

Studying the headlines already sheds light on the problem of rapidly changing population composition by viewing housing as profit versus its primary function: housing. As described earlier investors have discovered the property. Twenty years ago it was more lucrative to invest capital on the stock market or to earn a good interest from it, now the return on real estate is more attractive.

This causes a lot of disagreement. The same goes for current residents. The residents of Mathenesserweg in Rotterdam-West protested in 2019. An image of this can be seen on the opposite page (Image 4). The current residents of the Mathenesserweg say: “Students in the street are fine, but there are limits to that too. So if Amsterdam real estate entrepreneurs buy the third building in the street and build thirteen student rooms in it, the limit is reached” (Rijnmond, 2019). According to Leonie Verhoeven, most students are passers-by who have not lived in the building for more than one or two years. “They are less involved. They have their own lifestyle, while in our street we want togetherness and cohesion.”

Another problem related to socio-economic equality is probably partly caused by this phenomenon is ‘Housing inequality’ (Beunderman & Molijn, 2021). Due to the great shortage of (affordable) housing, the high rents in many cities and the ever-rising house prices, two dividing lines have emerged in recent years. Firstly, that between buyers and tenants. In general, tenants already had higher housing costs relative to their income (the so-called housing ratio): it is more often people with lower incomes who rent. This

difference is increasing. For buyers, the housing ratio actually decreased. They therefore spend a smaller part of their income on housing. While tenants spend an increasing part of their income on rent. In this way, this contributes to the widening gap between rich and poor. Housing has therefore become a problem, especially for young people and for low incomes.

Because of this problem, Rotterdam is introducing ‘purchase protection’ for sixteen neighbourhoods (Gemeente Rotterdam, 2021). For the selection of the neighbourhoods, the combination of the number of homes in the neighbourhood that is currently rented out privately and the liveability that is under pressure. The districts of Bergpolder, Blijdorp, Bloemhof, Carnisse, Groot IJsselmonde, Het Lage Land, Hillegersberg-South, Hillesluis, Kralingen-East, Kralingen-West, Middelland, New West, Oud-Mathenesse, Oud-Charlois, Rubroek and Tarwewijk came to the fore. The Purchase Protection in these neighbourhoods only applies to homes in the low and middle segment with a WOZ value of up to €355,000.

Mathenesserweg is outside the purchase protection. The adjacent neighbourhood of Oud-Mathenesse, where investors bought most of the homes from residents in the whole of Rotterdam (47 percent in a year), is one of the sixteen neighbourhoods. “Now come with the protection of this law that you promised us two years ago but could not give,” was the appeal of resident Leonie Verhoeven to alderman Kurvers in the city council. That’s impossible, Kurvers replied. Purchase protection does not exist for individual streets (König, 2022).



Image 5. Mathenesserweg residents in revolt: Stop the proliferation of student buildings (Rijnmond, 2019).

## 2.1.4 Conclusions

**Housing Crisis** - There are different ways to approach the housing crisis and the demand for housing. The general opinion is aimed at changing policy. However, there are also urban design elements that can focus on motivation for moving and stimulating promotion. To improve this incentive, it is necessary to create new housing stock. Consideration should be made as to where to build this. The question is also whether the current housing stock should be adapted, demolished and rebuilt or whether one should start looking at undeveloped buildings.

**Randstad as a popular growing metropolis** - People's lifestyles have changed a lot in recent years. People are becoming more flexible and do not continue to work in the same job for decades. This has resulted in a growing demand for temporary and quickly accessible luxury housing in the city. The capitals are well connected with the rest of the Netherlands and offer this group of people a great place to live. Logically, the places that are more accessible and relatively cheap are even more popular to live in.

**Houses for profit** - More and more houses are going off the market and are being rented out. Because the trend towards moving to cities is increasing, the demand for housing is also greater there. Demand determines the price and causes the houses to rise significantly in rent. In addition, tenants already had higher housing costs relative to their incomes. In this way, this contributes to the widening gap between rich and poor.

Also, the change in people's lifestyles has made it more attractive to temporarily live in homes that have a central location in the city as their main requirements. Housing has become mainly a problem, especially for young people and for low incomes. That is why there is pressure on the affordable neighbourhoods in the city.

Policy makers are already making rules to address this problem. But through detours and exceptions, this remains a problem for many areas in the city.

## 2.2 Problem Analysis

Urban development is desired by demand, as described above. But it is also necessary because there are some problems surrounding the current situation of cities. These can be explained as the reason for urban renewal in itself, but also why the focus should lay on more sustainable ways of urban development.

Low liveability and segregated neighbourhoods are important reasons for urban renewal. The rising WOZ values and loss of identity in the current unsustainably developed (gentrified) neighbourhoods are also a reason to rethink urban development plans for the sake of spatial justice.

### 2.2.1 Low liveability

### 2.2.2 Segregation

### 2.2.3 Increasing WOZ values

### 2.2.4 Loss of identity

## 2.2.1 Low liveability

Liveability is the extent to which the environment meets the requirements and wishes that are set by humans (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2018). For anyone who is looking for a pleasant place to live or sometimes already to stay temporarily, this is an important consideration. The word itself already points to the definition that deals with life and how this can be done in the most pleasant way.

Rotterdam's policy is aimed at ensuring that attention to social safety and liveability is an integral part of planning in new-build plans. The aspect of liveability concerns physical spatial facilities for the accessibility of buildings and public spaces, parking and parking for cars and bicycles, space for play and greenery, effects on sunlight and views for local residents, waste management and consequences for the management of public space.

Various types of organisations conduct research into the perception of quality of life and a well-known one for the Netherlands is the Leefbaarometer.

### 2.2.1.1 The leefbaarometer

The Leefbaarometer provides information about the liveability in all neighbourhoods and districts in the Netherlands. It reflects the situation in the neighbourhood, but also developments and backgrounds of the neighbourhood. The Leefbaarometer can be used for example in policy preparation by municipalities: for example, it can concern problem identification and the making of an initial neighbourhood

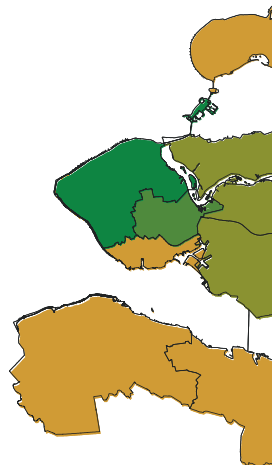
diagnosis.

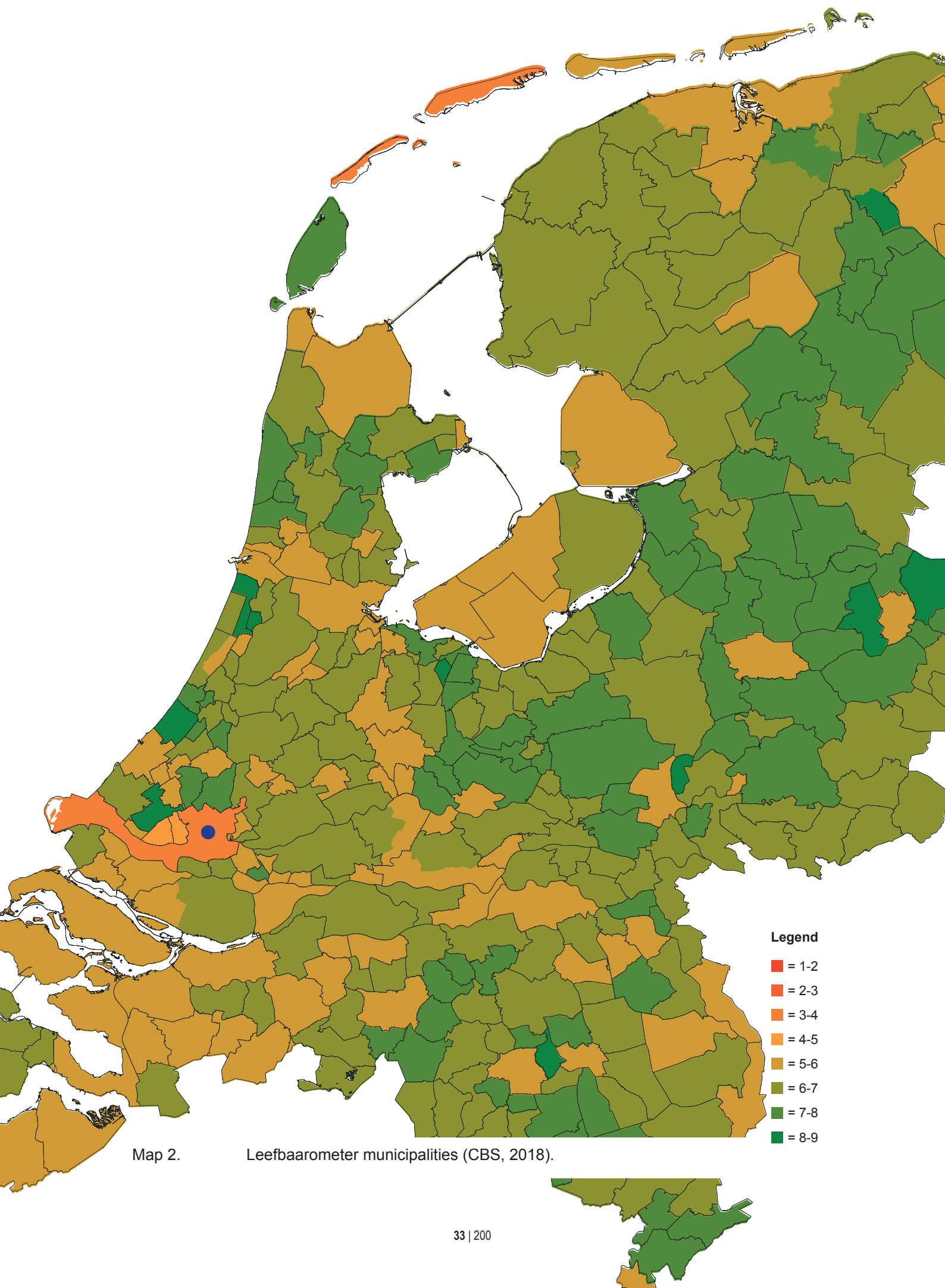
This 'liveability' is composed of five underlying dimensions. Not every dimension counts equally heavily in the total score for quality of life. Facilities and safety together determine almost half the final score. The division is as follows: Houses 18%, residents 15%, facilities 25%, safety 24% and physical environment 18%.

Based on these factors, the municipality has scored 'weak' since the start of the Leefbaarometer in 2002 until the last measurement in 2018 (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2018).

#### ● Liveability municipality of Rotterdam

- When you look at the liveability map of the Netherlands from Leefbaarometer (Map 2), which indicates per municipality what they score, you immediately notice one thing. Rotterdam stands out with its orange colour that stands for a score of 3-4 on a scale of 10. An insufficient score already points to a clear problem in quality of life, but the fact that this is not a normal score in relation to the Netherlands also arouses suspicion.





Map 2.

Leefbaarometer municipalities (CBS, 2018).



## Liveability neighbourhoods of Rotterdam -

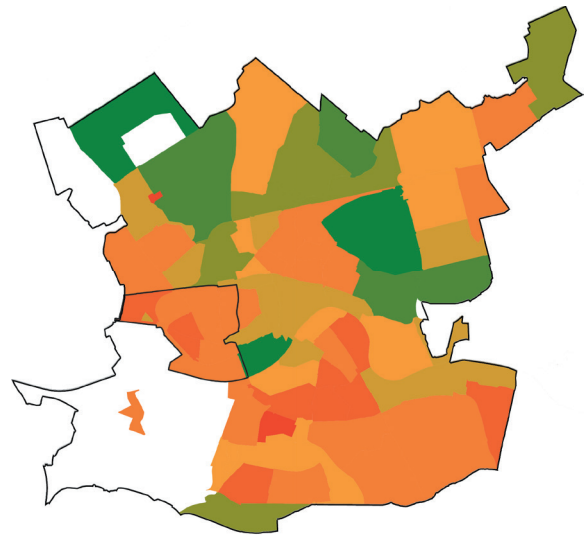
If you look at the development maps of quality of life in Rotterdam from 2012 (Map 3), to 2014 (Map 4), to 2016 (Map 5) and ultimately 2018 (Map 6) per municipality, you can see that in all this time at first glance not much has changed. It seems to be a collection of different scores, where if you look closely, some colours do go more towards green. The neighbourhoods seem to score badly, especially in the south and west of Rotterdam.

**Liveability Delfshaven (De Wijk) -** The neighbourhoods (in Dutch: “Buurten”), of the neighbourhood (in Dutch “Wijk”) Delfshaven colour through the years from orange to more red to orange again. This points to a generally poor liveability status.

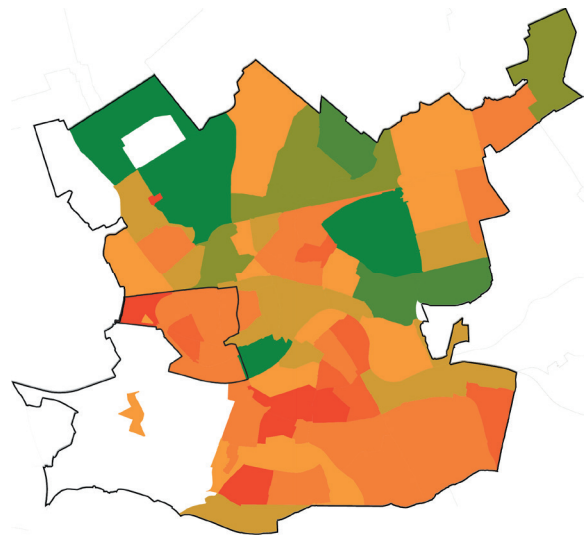
**Liveability Spangen / Bospolder / Tussendijken (De Buurten) -** The liveability in the Spangen, Tussendijken and Bospolder districts seems to have stagnated over the years. It will be a challenge to increase this score until it turns green. The scores are as follows: Spangen has a 3-4, Bospolder and Tussendijken scores a 4-5. All in all, grossly inadequate.

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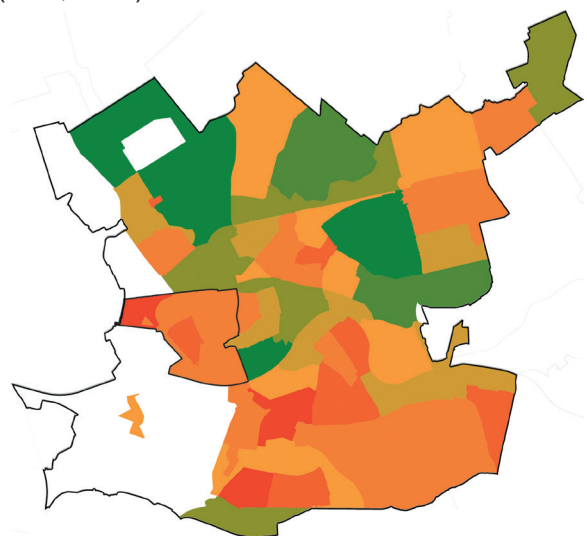
Note: As can be seen on the map, part of the western neighbourhoods towards the North Sea are not shown. Many of these districts contained no data, probably because these districts do not have residential as their main function, but are strongly related to the port.



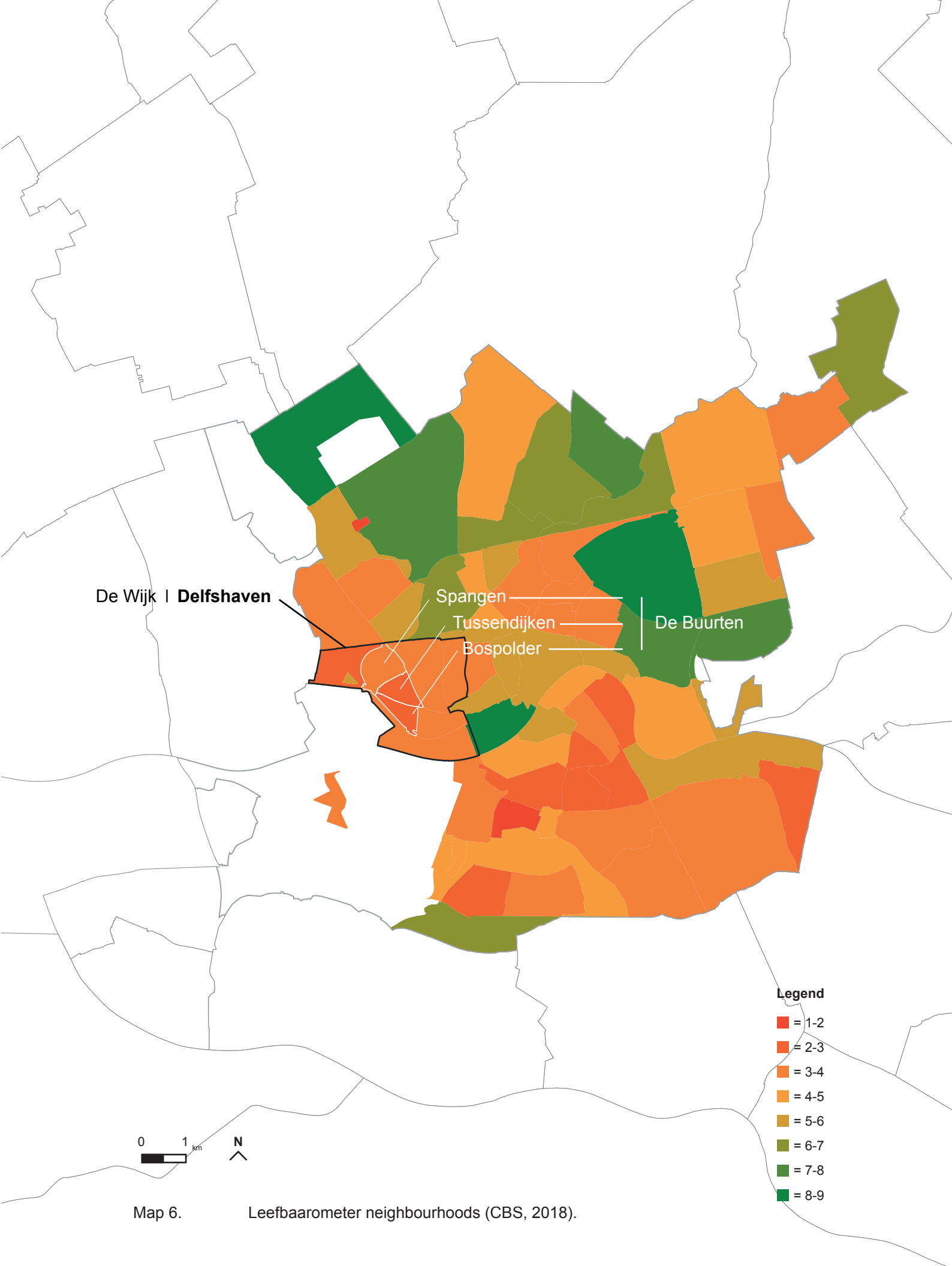
Map 3. Leefbaarometer neighbourhoods (CBS, 2012).



Map 4. Leefbaarometer neighbourhoods (CBS, 2014).



Map 5. Leefbaarometer neighbourhoods (CBS, 2016).



Map 6. Leefbaarometer neighbourhoods (CBS, 2018).



## 2.2.1.2 Wijkprofiel

Another liveability monitor is the Wijkprofiel (Onderzoek en Business Intelligence, 2022). The liveability is measured on a physical level (Housing experience, Housing, Public space, Facilities and Environment), on a safety level (Perception of safety, Theft, Violence, Burglary, Vandalism and Nuisance) and on a social level (Perception of liveability, Self-reliance, Coexistence, Participation and Binding). These are visualized in 3 disks, as shown in Figure 7.

The outcomes are determined by means of general information, objective information and subjective information. The objective score is made up of indicators that come from various registrations or from survey questions. In that case, residents of Rotterdam were asked about facts or behaviour. The subjective score consists of indicators from survey questions, asking for opinions and ratings.

All figures for all districts together are the average for Rotterdam. The colours per district indicate whether the score is below or above the average for Rotterdam in 2014.

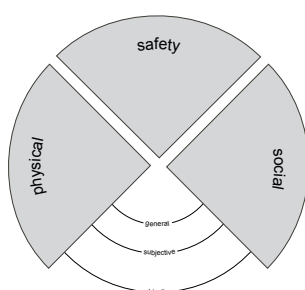


Figure 7. Liveability indexes according to Wijkprofiel (2022).

The Wijkprofiel determines the status of liveability every two years and thus provides a clear overview of what has changed over the years. On the right pages, figures 8 to 13 show the scores for the three neighbourhoods.

**Spangen** - For Spangen, a clear colour difference can be seen and thus improvements in almost all the indexes. What is particularly striking is that there is still subjectively room for improvement physically and socially.

**Tussendijken** - In 2014, Tussendijken scored below average in many areas: general, objective and subjective. Much has been improved, mainly in the area of objective physical environment and safety. But statistics on subjective information and general data show a different picture. There seems to be a lot of room for improvement in all 3 areas.

**Bospolder** - For Bospolder, the objective opinion has also mainly improved. Security seems to have improved a bit. But especially on a physical and social level, things will have to change in order to achieve a better quality of life.

In general the objective liveability became much better. Especially on the physical and social aspect for the neighbourhood improvement is desirable in terms of subjective and general liveability.

### Legend

- = far above average for Rotterdam
- = above average of Rotterdam
- = around average of Rotterdam
- = below average for Rotterdam
- = far below average for Rotterdam



Figure 8. Liveability of Spangen according to Wijkprofiel (2014).

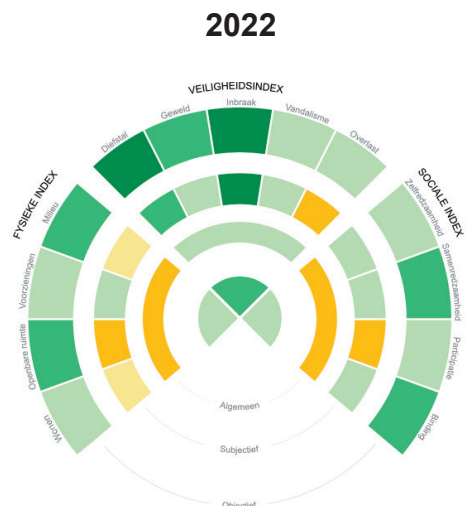


Figure 11. Liveability of Spangen according to Wijkprofiel (2022).

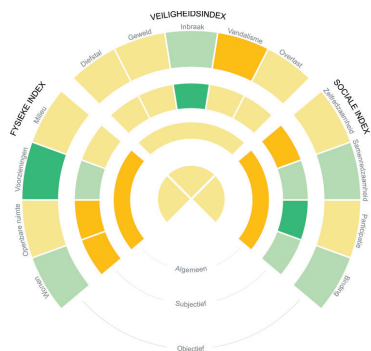


Figure 9. Liveability of Tussendijken according to Wijkprofiel (2014).

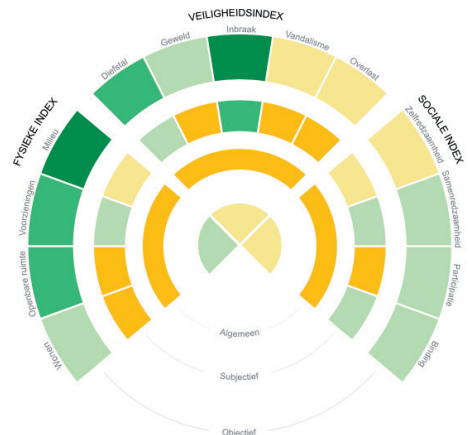


Figure 12. Liveability of Tussendijken according to Wijkprofiel (2022).



Figure 10. Liveability of Bospolder according to Wijkprofiel (2014).

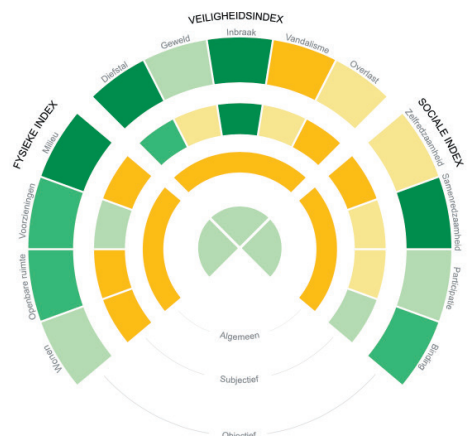


Figure 13. Liveability of Bospolder according to Wijkprofiel (2022).

## 2.2.2 Segregation

By all accounts, the European mediaeval city was a place teeming with different activities where people accomplished their daily tasks in close proximity to one another. Through economic necessity, most activities clustered close together, literally on top of one another and what segregation existed was highly ritualised through the institutionalised power of church and state (Batty, Besussi, Maat & Harts, 2004).

In the twentieth century, this process has accelerated in the quest to deconcentrate activities in the search for more living and working space. This has been made economically possible by keeping urban activities linked together through new transport technologies with lower costs. Urban sprawl has led to less diversity and greater segregation of populations according to income while economic activities no longer need to be as close to one another as they have been in the past. This has led to highly specialised nodes such as edge cities appearing as a counterpart to the familiar decline of the city centre or downtown, particularly in North America (Besussi & Chin, 2003).

Because the corporations sell their assets in the more expensive neighbourhoods, mainly because of the landlord levy en masse. This is logical, because the amount of the WOZ value of their assets determines the amount that the corporations have to pay to the government each year. And so the housing associations are the first to sell the homes that are also expensive for them.

Franke & Veldhuis (2018) asked

themselves: “Is segregation an unstoppable process or can we reverse the trend?” They believe that spatial design and, in particular, spatial planning offer numerous opportunities to change course. What needs to happen above all is to reduce market forces in urban space.

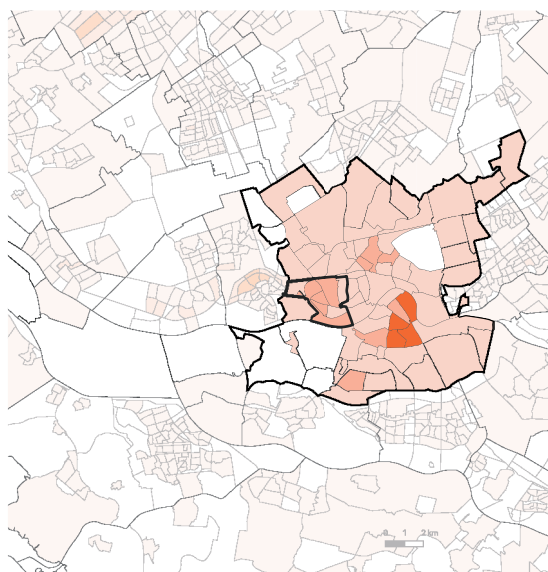
“Housing, social real estate and public space must once again become part of the ‘fundamental’ or public economy”. - Franke & Veldhuis, 2018.

Segregation and sustainability - Study, done by EU-funded researchers, about the widening gap between the rich and the poor in 13 European cities shows how socio-economic segregation reduces a city’s sustainability (CORDIS, 2012). These differences and the growing gap between the rich and poor segregates Europe’s cities. Middle-class residents are moving away from neighbourhoods with low income, those without capital are going to locations where housing is cheap. Besides, gentrification is pushing poor people out of desirable areas. The result can be disastrous for the social stability of urban regions – not to mention the negative impact it can have on inhabitants’ well-being.

**2.2.4.1 Ethnic segregation (Map 7)** - This phenomenon, in which different ethnic groups live separately from each other, can have negative consequences. For example, an (ethnically) homogeneous neighbourhood can be a concentration of social problems and get into a downward spiral (Amin, 2002). Despite government policy interventions to combat segregation, ethnic segregation is still an existing

problem in the Netherlands (Aalbers, Beckhoven, Kempen, Van, Musterd & Ostendorf, 2004).

School segregation is strongly related to ethnic segregation. According to Stoica & Flache (2014), school segregation means that there are a disproportionate number of ethnic minorities in different schools.



Map 7. Ethnic Segregation (% Turkish) in Rotterdam (CBS, 2019).

**2.2.2.2 Segregation based on education level** - Internationally, the gap between the highly and less educated is widening. Distinctive is no longer religion or social class, as it used to be, but education (Huygen, 2016).

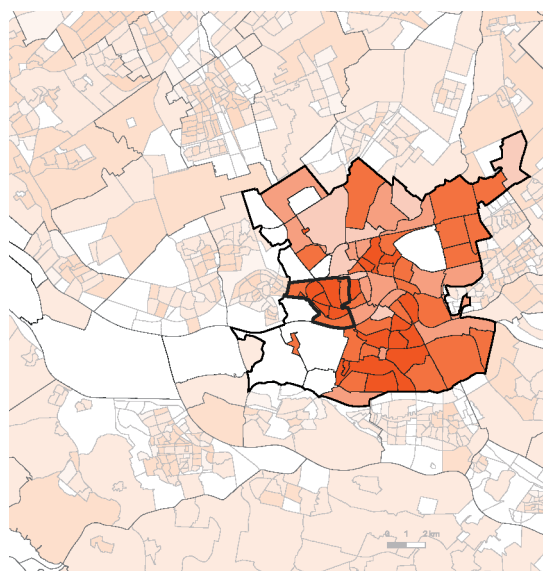
#### 2.2.2.3 Income segregation (Map 8)

- As described earlier in chapter 1.3.2 Social Relevance, segregation of certain socio-economic factors has a negative impact on several fronts. Van Ham (2016) confirms and writes about Socio-economic segregation in European cities and that many governments fear that this increasing inequality and spatial

segregation by income can lead to social unrest, and this fear is reinforced by riots in Paris (2005), London (2011) and Stockholm (2013). These riots arose from spatially concentrated poverty, inequality and (partly) tensions between ethnic groups.

**2.2.2.4 Conclusion** - Different forms of segregation lead to disconnected and non-socially-economically diverse cities. Segregating is at odds with integration and thus endangers social cohesion. It seems to lead directly to discontent among the current population. This affects the sense of liveability of the neighbourhood.

In conclusion from the maps (Map 7 and Map 8) it can be stated that the neighbourhoods are segregated by Turkish ethnicity as well as by low income.



Map 8. Income segregation (% low income) in Rotterdam (CBS, 2019).

### 2.2.3 Increasing WOZ values

The WOZ value (Value Immovable Property) is the valuation of homes by municipalities, based on sales prices, type of home, size and location. It concerns all homes, including rental homes and unsold owner-occupied homes. The number is used for tax returns, a mortgage and for the amount of municipal taxes (NOS, 2021a).

The average WOZ value in the Rijnmond region has increased by 8.1 percent. In Rotterdam the WOZ value increased by about 11.4 percent (CBS, 2021). This makes Rotterdam one of the fastest growing municipalities in the Rijnmond region.

Because the WOZ values are rising so fast, it makes it impossible for socio-economic minorities to buy or rent houses. This in turn leads to (re)segregation in neighbourhoods that are affordable at that time. It is desirable that a mix of affordable and more expensive homes remains.

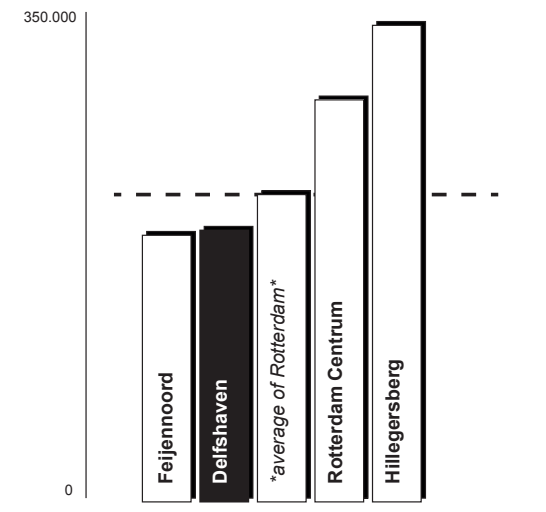
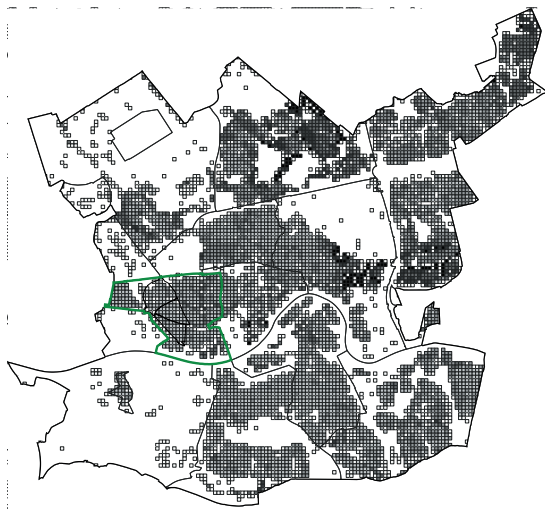
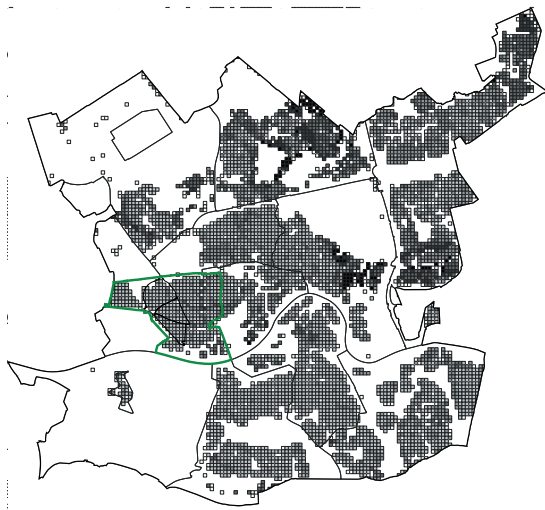


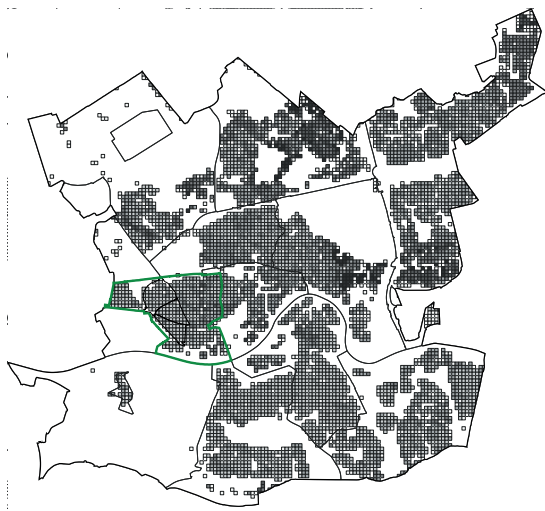
Figure 14. WOZ-values (CBS, 2020).



Map 9. WOZ-values (CBS, 2012).

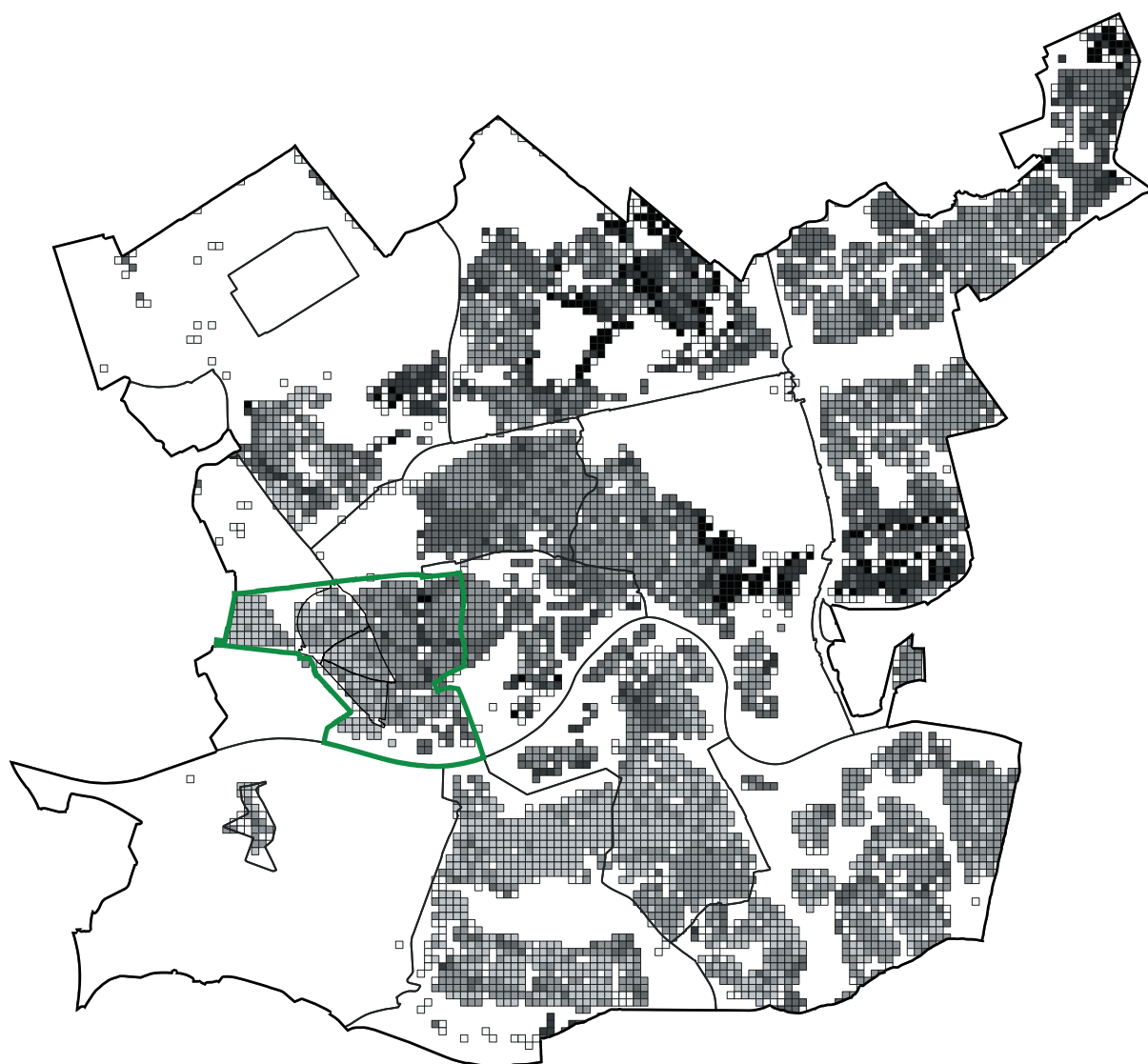


Map 10. WOZ-values (CBS, 2016).



Map 11. WOZ-values (CBS, 2018).





**WOZ value x 1.000**

- = < 100
- = 100 - 150
- = 150 - 200
- = 200 - 250
- = 250 - 300
- = 300 - 350
- = 350 >

0 1 km  N

Map 12. WOZ-values (CBS, 2020).

## 2.2.4 Loss of neighbourhood identity

In *How to Kill a City*, Peter Moskowitz describes, on the basis of New Orleans, Detroit, San Francisco and New York, how gentrification is a deliberate strategy of government and business to rid cities and neighbourhoods of poorer population groups. In his view, Gentrification is not a natural process that improves neighbourhoods, as is often said in the Netherlands. On the contrary, it causes segregation and destroys social bonds and community spirit (Franke, 2019).

Several neighbourhoods in Rotterdam have already been affected by gentrification and, in turn, certain characteristics have been changed. There is also Spangen, where boarded up buildings used to determine the atmosphere in the 1990s. Partly due to demolition and new construction, the neighbourhood has been transformed into a normal to even popular city district (van Engelen, 2015).

A certain amount of atmosphere changes in the neighbourhood. This atmosphere has to do with physical expressions but also socially perceptible expressions. Rather, it gave people the reason to live there or a certain reason to do not. This makes the assessment of identity and its value subjective by nature. However, this subjective opinion can be subdivided somewhat into certain socio-economic groups. This makes it possible to focus on attracting or, conversely, partly excluding certain groups in urban design.

To achieve socio-economic diversity combined with social cohesion, it is important to realise an urban program that

contributes to the motivation for current and new residents to continue living in this place.

This mainly involves a specific socio-economic programme. Logically, affordable shops for lower incomes, sometimes with a certain ethnic background, are appropriate in neighbourhoods with these groups of residents. In this, the gentrified neighborhood changes into a neighborhood with a more expensive program for the needs of higher-educated residents.



Image 6. Several purchased homes at the Mathenesserweg, bought by real estate developers and converted for (early working) students and young professionals (GoogleMaps, 2016, 2018 & 2021) (Author, 2021).

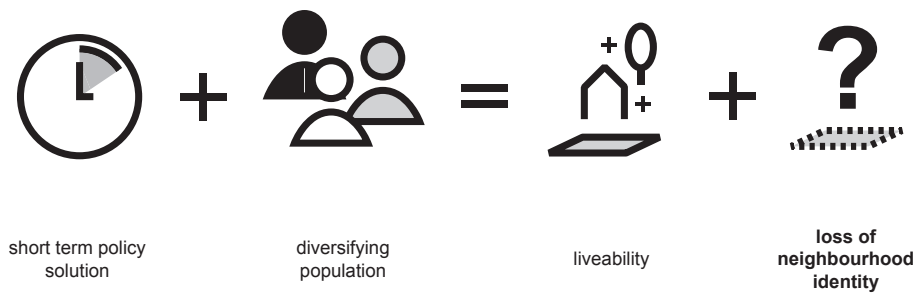




Figure 15. SWOT analysis (Author, 2021).

## SWOT-analysis

ASWOT analysis has been drawn up on the basis of realising socio-economic diversity and contributing to a social sustainable design. The SWOT is a summary of the trends and problem analyses described above.



## 2.3 Problem statement

Study shows that the liveability in neighbourhoods such as Spangen, Tussendijken en Bospolder is deteriorating. Simultaneously, the pressure on the housing market in the neighbourhoods in Delfshaven puts the socially-economic diverse composition of residents in danger. Gentrification is seen as a short-term solution for improving the liveability of a neighbourhood at the expense of affordability. Changes in the social composition of the city or neighbourhood are stimulated in various ways. In particular in policy terms, consideration is being given to how rules can be used to control, for example, housing associations that also allow higher incomes or how they could move to neighbourhoods where there is little social rent. However, social geographer Bolt (2020) argues the fact that liveability is not necessarily improved if you mix low, middle and high incomes.

To some extent, mixing of the previously segregated neighbourhood is desirable. Not just for higher incomes and their subsequent purchasing power, but also by financial means to maintain the house and surroundings. In addition, also due to different lifestyles and time divisions of the day. These intersecting daily schedules create social control, which contributes to

the liveability in the neighbourhood.

Yet, just introducing new, wealthier target groups into the neighbourhood without a well thought out plan could lead to the chance of re-segregation. In addition, this unsustainable way of population change through excessive gentrification changes the neighbourhood not only in the composition of the population, but also in characterising urban features. Current residents are not only financially disadvantaged by rising rents, but they are also less and less tied to the place where they lived. Due to this change, which is taking place in the last phase of extreme gentrification, the economic program of the neighbourhood is also undergoing such a strong change that a large part of the higher incomes is even more attracted to the neighbourhood. This curve also applies to the other: first the residents live here precisely because of the price, location, but also because of mutual connection. But due to the large influx of new, wealthier populations to which they have no connection, living in the neighbourhood becomes unattractive and also leaves those who are not only demotivated by the rising prices. This will lead to unsustainable urban development with the lack of a balanced resident flow.

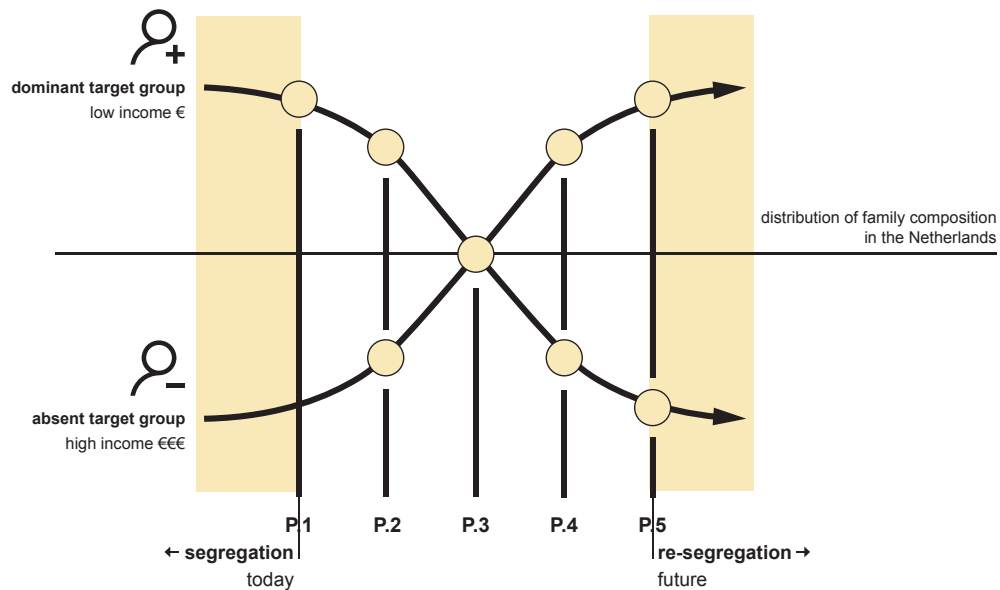


Figure 16. Gentrification curve (Author, 2021).

<p><b>P.1</b> segregated low income population</p> <p>due to the large amount of social rent and the historical trend of housing migrant workers.</p>	<p><b>P.2</b> growing interest for centrally located affordable neighbourhoods</p> <p>due to the housing crisis, growing interest for living in the Randstad and trend of houses for profit.</p>	<p><b>P.3</b> noticeably changing population composition in public realm</p> <p>The integration of the first groups more wealthy inhabitants took place. Businesses matching their (more expensive) desires also want to settle themselves here. Traffic flows are shifting and a more mixed population is taking to the streets.</p>	<p><b>P.4</b> the emerge of new more expensive socio-economic program</p> <p>the first part of the capital-bearing inhabitants arrive, resistance from current residents arise by seeing rapid changes in the composition of residents and transformation of buildings.</p>	<p><b>P.5</b> last phase of extreme gentrification: re-segregation</p> <p>after the establishment of new types of businesses, less of the previous urban fabric is left. Current residents experience poor bonding and those who were able to continue living financially are less motivated to do so.</p>
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## 2.4 Approach

At the moment, current trends are already putting pressure on the current, poorer population groups that now live in the area. An important question for the design is therefore: how can you encourage current residents and give them the opportunity to continue living here? But also: how can you ensure that the new, wealthier residents do not take the place of current residents in such a way that the existing social cohesion is lost?

### 2.4.1 Phases of gentrification

Certain interventions in both policy and urban design can be applied to counteract extreme gentrification. This thesis focuses on urban design. In order to determine what elements to focus on, gentrification to re-segregation is depicted in the graph above. Attached below are descriptions of the 5 phases that change the composition of the inhabitants.

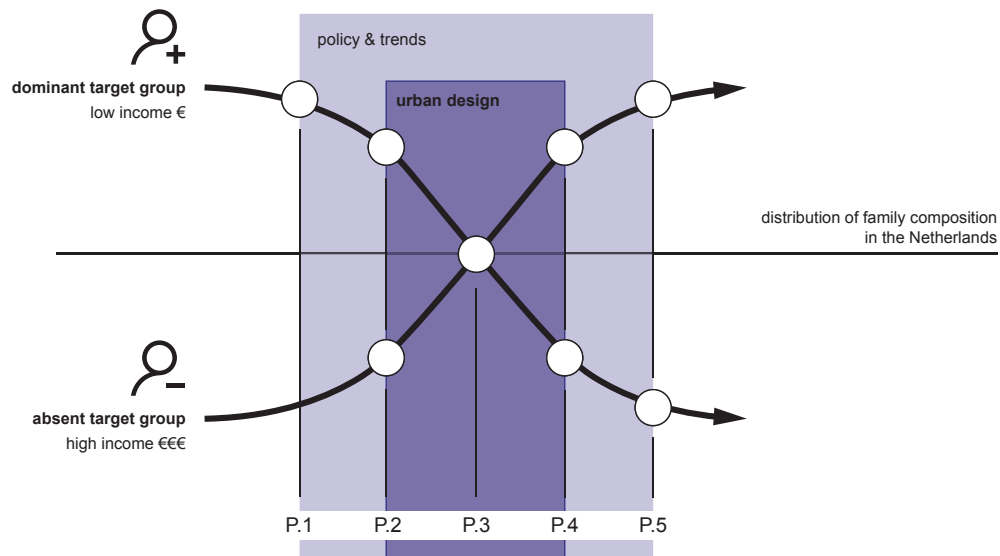
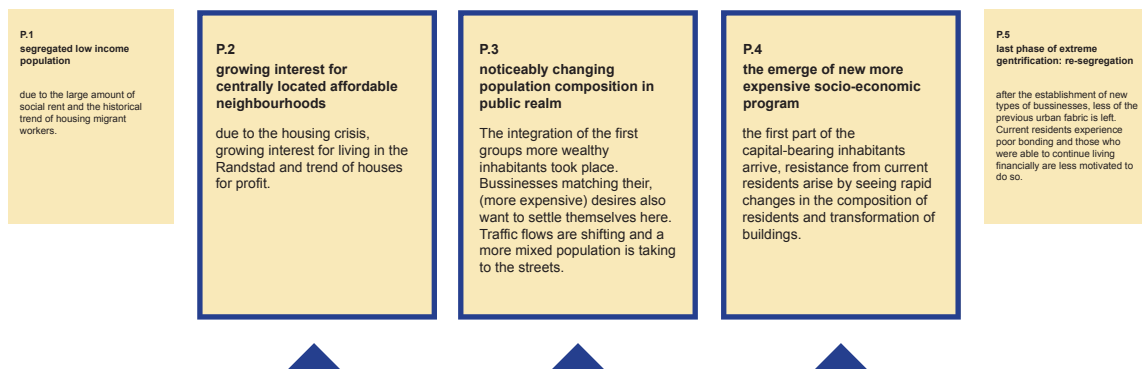


Figure 17. Gentrification curve based on policy & trends and urban design (Author, 2021).



## 2.4.2 Urban design approach

The urban design approach leads to an action plan for this project. Not all phases relate to urban design, the second, third and fourth do. The second phase has to do with housing stock. The growing interest in the location puts pressure on the housing market and its rents. The third phase has to do with the experience of population change. Especially in public spaces new residents meet the current ones. The residents' experience varies positively

up to negatively towards this. The fourth phase is an important phase. This phase is strongly related to the change of identity of the neighbourhood. Due to a new socio-economic program that suits the new, wealthier inhabitants, the neighbourhood identity and with it the bond between users and residents of the place is lost. This is the last push for the remaining large group of new, wealthier residents to come, live and invade this place.





Image 7. Scene at 1:46 from the mini movie Exodus (van Doezelaar, 2020).

# Methodology

3.1 Research questions

3.2 Research aim

3.3 Expected outcomes

3.4 Research methodology

# 3

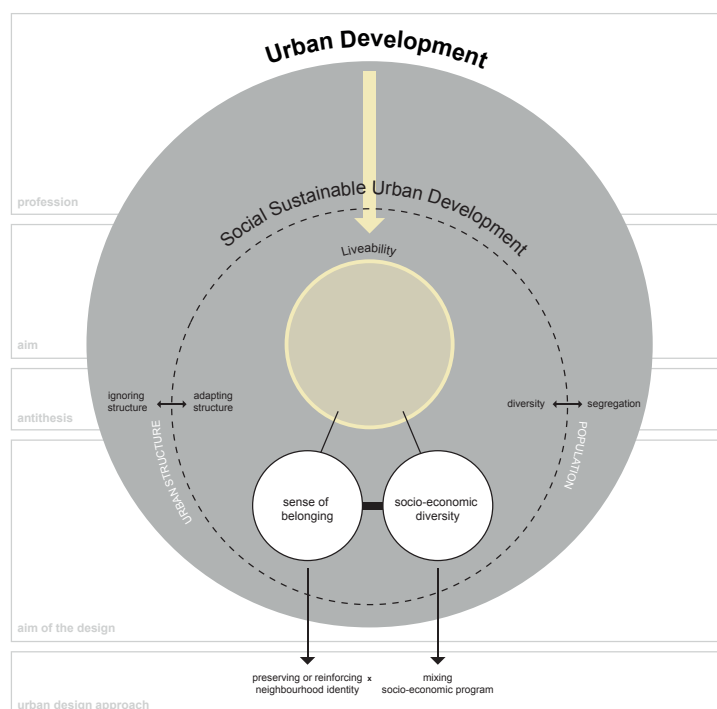
**Methodology**      The methodology chapter makes transparent the research methods that have been used to come to the presented findings. The research question has been set out in several sub-questions that together will lead to the structure of this research and design thesis. The answers will form part of a list of criteria that will form the foundation for the further graduation design.

The chapter concerns the research questions, the research aim, expected outcomes and the research methodology.



<b>Problem Field</b>	segregation, liveability, spatial justice
<b>Key Words</b>	neighbourhood identity, socio-economic diversity, sustainable urban development
<b>Location</b>	Rotterdam West - Spangen, Bospolder & Tussendijken
<b>Problem Statement</b>	Improved liveability in the Spangen, Tussendijken and Bospolder neighbourhoods is desirable. A more socio-economically diverse population contributes to this. Gentrification makes wealthier residents move into the neighbourhoods in a short period of time. Yet, it causes a decrease in affordable housing and a chance of disappearing neighbourhood identity. Which means that current, less wealthy residents no longer feel attached to the place and that wealthier population groups want to settle in increasing numbers. This demonstrates unsustainable urban development by creating a re-segregated neighbourhood.
<b>Research Question</b>	How can urban design contribute to increasing liveability and a social-economical mix for Spangen, Bospolder & Tussendijken while preserving neighbourhood identity?

## Conceptual Framework



<b>Methods</b>	literature review, statistical analysis, fieldwork, documentary, interviews, research, spatial analysis, hand sketching, form studies, site specific design
<b>Outcomes</b>	Design Guides, Strategic Masterplan, Atmospheric Visuals



# 3.1 Research questions

The research question is as follows:

Research question:

6 1 How can urban design contribute to increasing  
1 liveability and socio-economic diversity for  
5 Spangen, Bospolder & Tussendijken while  
preserving neighbourhood identity? 2 4  
2 3

- 1 urban liveability \_\_\_\_\_
- 2 social identity and a diverse population \_\_\_\_\_
- 3 physical neighbourhood identity \_\_\_\_\_
- 4 diversifying socio-economic program \_\_\_\_\_
- 5 spatial opportunities and urgencies \_\_\_\_\_
- 6 design \_\_\_\_\_

## Sub-Questions:

How does liveability relate to socio-economic diversity and neighbourhood identity in terms of urban design?

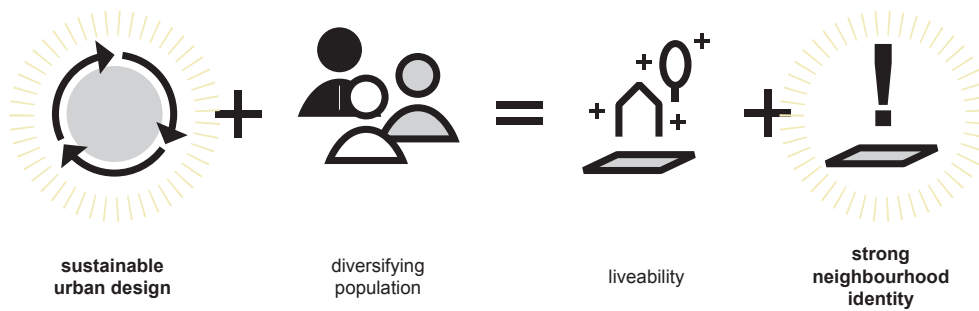
How can the socio-economic status of the neighbourhood become more diverse and still be part of the social identity?

What are the physical, urban features of the neighbourhood identity in Spangen, Bospolder and Tussendijken that people feel belongingness towards?

How can the socio-economic program be redesigned to realise improved liveability and contribute to socio-economic diversity?

What spatial opportunities and urgencies are there to realise a sustainable liveable neighbourhood design?

How to design these neighbourhoods creating social sustainability by increasing liveability, socio-economic diversity and a preserved or reinforced neighbourhood identity?



## 3.2 Research aim

Smart design for urban renewal where there is room for new residents, but where the requirements to allow current residents to live are guaranteed. This will contribute to a sustainable social-economic form of urban development.

Redesigning a neighbourhood in which individuality is ignored and blindly focused to make it more liveable, the current socio-economic minorities are often abandoned. This way they are driven away to other areas, the chance that they will live segregated again is considerable. In addition, a new form of segregation will take place in the newly designed neighbourhoods: segregation of the richest. This, in turn, brings problems. That is why socio-economically mixed neighbourhoods are desirable.

The design makes an attempt to humanise urban design with attention to the current inhabitants, users and the admirers of the areas - the people who are bound with this place. The design focuses on the three phases of strongly gentrifying neighbourhoods in which urban design plays a role. By drawing up rules in the right way, developing and redeveloping them, a sustainable flow of residents can be achieved.

Research and design will show how this socio-economically mixed neighbourhood can be realised. This involves looking at aspects that ensure that current residents continue to feel bound to the neighbourhood. Eventually, it will contribute to a socially sustainable solution to have a stable population.

Redesigning urban inconveniences is good, but don't tear down the valuable features that brought (and kept) people here in the first place.

- This results in a desirable mixed socio-economic program
- And a preserved or reinforced identity.

The themes of the sub-questions build up to the ultimate goal of the (draft) design. An aim is answered with every question. These can be seen on the next page.

## Sub-Questions:

WHY

### 1 urban liveability

*How does liveability relate to socio-economic diversity and neighbourhood identity in terms of urban design?*

### 2 social identity and a diverse population

*How can the socio-economic status of the neighbourhood become more diverse and still be part of the social identity?*

HOW

### 3 physical neighbourhood identity

*What are the physical, urban features of the neighbourhood identity in Spangen, Bospolder and Tussendijken that people feel belongingness towards?*

### 4 diversifying socio-economic program

*How can the socio-economic program be redesigned to realise improved liveability and contribute to socio-economic diversity?*

WHAT

### 5 spatial opportunities and urgencies

*What spatial opportunities and urgencies are there to realise a sustainable liveable neighbourhood design?*

### 6 design

*How to design these neighbourhoods creating social sustainability by increasing liveability, socio-economic diversity and a preserved or reinforced neighbourhood identity?*

## Aim:

interrelations and  
operationalisation

relativisation and  
standard setting

validation

validation

exploration

implementation

## 3.3 Expected outcomes

A hypothesis of the outcome of this urban design is described below. Expected outcome without sustainable diverse socio-economic form of urban development:

**H0:** Re-segregated neighbourhoods with an increased average income and unaffordable housing.

**H0:** Neighbourhoods where livability is still low, and segregation is still the case.

Desired outcome with sustainable social-economic form of urban development:

**H1:** Increased liveability and a socio-economic diverse neighbourhood due to a preserved neighbourhood identity.

The output products of this will be:

DESIGN GUIDES,  
STRATEGIC MASTERPLAN,  
ATMOSPHERIC VISUALS.

## 3.4 Research methodology

An attempt is made to answer the main question and its sub-questions by means of various research methods. The methods used or to be used in the future are: literature review, statistical analysis, fieldwork, policy documents, spatial analysis, hand sketching, form studies, site specific design.

In Figure 18 at the right page is shown

how each sub-question will be answered with which method.

**EXPLORATORY RESEARCH** - The exploratory research helps to find the problem which is not clearly defined yet.

FIELDWORK  
DOCUMENTARY RESEARCH  
STATISCAL ANALYSIS

**CONSTRUCTIVE RESEARCH** - The constructive research helps to define the problem and it proposes a direction for solution.

LITERATURE REVIEW  
CASE STUDIES

**EMPIRICAL RESEARCH** - Empirical research focuses on the observed and measured phenomena. It extracts knowledge from experience and other non-theoretical research.

INTERVIEWS  
ENVIRONMENTAL VISIONS

**RESEARCH BY DESIGN** - Research by design is an academic investigation which is a crucial method in urban design. Design is explored as a method of research for the expansion of a project and also exploring the different ways by which a design is carried out.

FORM STUDIES  
SITE SPECIFIC DESIGN

		FIELDWORK	STATISTICAL ANALYSIS	DOCUMENTARY RESEARCH	LITERATURE REVIEW	CASE STUDIES	INTERVIEWS	EXISTING ENVIRONMENTAL VISIONS	FORM STUDIES	SITE SPECIFIC DESIGN
WHY	RQ1_How does liveability relate to socio-economic diversity and neighbourhood identity in terms of urban design?	+			+	+				
	RQ2_How can the socio-economic status of the neighbourhood become more diverse and still be part of the social identity?		+	+						
HOW	RQ3_What are the physical, urban features of the neighbourhood identity in Spangen, Bospolder and Tussendijken that people feel belongingness towards?	+			+	+	+	+		+
	RQ4_How can the socio-economic program be redesigned to realise improved liveability and contribute to socio-economic diversity?		+	+						+
	RQ5_What spatial opportunities and urgencies are there to realise a sustainable liveable neighbourhood design?		+	+	+			+		+
WHAT	RQ6_How to design these neighbourhoods creating social sustainability by increasing liveability, socio-economic diversity and a preserved or reinforced neighbourhood identity?					+			+	+
		• Exploratory >		• Constructive >		• Empirical >		• Research by design >		

Figure 18. Research methodology per sub-question (Author, 2021).





Image 8. Scene at 2:20 from the mini movie Exodus (van Doezelaar, 2020).

# Definitions

4.1 Theoretical background

4.2 Theoretical framework

4.3 Conceptual framework



# 4

**Definitions**

In this chapter the theoretical background is described in which this graduation project is embedded in. Starting with explaining theories supported by appropriate literature. These key concepts consist of theories. Chapter 4.2 shows how these theories interlinked and sets out how they complement each other. As followed by chapter 4.3 where concepts that contribute to the understanding of the research and design direction have been set out. Assisted by the conceptual framework.



## 4.1 Theoretical background

The different types of theories covered by the research discussed in this chapter: right to the city, spatial justice, liveability, (neighbourhood) identity and social sustainability.

This idea and this movement that has existed and that has been supported by many for years underpins the importance of this research and by achieving equality to the right to the city.

### 4.1.1 Right to the city

*Lefebvre, H. (1968) La droit à la ville (2e ed.), Anthropos, Paris*

The expulsion of socio-economic minorities seems to have a lot to do with the right to live somewhere. Today, the Right To The City movement is a global social movement that opposes neoliberal policies and in particular the eviction of poorer populations from the city (Visser, 2011). This movement is based on the slogan Henri Lefebvre (1968) writes about this in his book 'La droit à la ville' for the first time. The slogan covers a call to action to reclaim the city as a to-created space. The belief includes that the city is a place for life removed from the growing effects that capitalism and commodification have had over social interaction and the rise of spatial inequalities in worldwide cities throughout the last two centuries. The French philosopher designed a new notion of citizenship based on 'inhabitation'. This meant that citizens have the right to decide and use the space in the city on the basis of their participation in the production of space in everyday life, as opposed to the right to decide and use property based on property rights.

### 4.1.2 Spatial Justice

*Soja, E. W. (2010). Seeking Spatial Justice (1st ed.). University of Minnesota Press.*

Social justice is a clear theme that is related to the problem statement. For this urban design thesis, the defined problem will be approached spatially. Social justice has strong interrelation with spatial justice. Therefore, spatial justice is an important perspective towards social sustainable urban development that could help in examining and harmonising the difference between liveability and sustainability. Spatial Justice arranges an evaluative framework that facilitates action to make communities more liveable and sustainable cities a reality (Babu, 2021). Fainstein (2010) supports the idea by stating that the argument for spatial justice in cities focuses on social differentiation without exclusion.

Soja (2010) describes the definitive struggle over geography as it being understood from an assertive spatial perspective, one that affirms what can be described as the explanatory power of the substantial geographies of justice. Soja states: "These consequential geographies are not just the outcome of social and political processes, they are also a

dynamic force affecting these processes in significant ways”. This supports the idea that urban development can contribute to combating inequalities among humanity.

*“Spatial thinking ... cannot only enrich our understanding of almost any subject but has the added potential to extend our practical knowledge into more effective actions aimed at changing the world for the better.” - Edward W. Soja, 2010.*

### 4.1.3 Liveability

Leidelmeijer, K., & van Kamp, I. (2003). *Kwaliteit van de Leefomgeving en Leefbaarheid* (No. 630950002). RIVM. <https://www.rivm.nl/bibliotheek/rapporten/630950002.pdf>

The Leefbaarometer is based on an extensive literature study of the concept of quality of life (Leidelmeijer and Van Kamp, 2003). The definition of quality of life has been derived from this study, which is based on the Leefbaarometer: Quality of life is the extent to which the environment meets the requirements and wishes set by humans.

The Leefbaarometer provides a model-based estimate of the quality of life. In doing so, we looked at the extent to which different environmental conditions influence the judgement about and appreciation of the immediate living environment. This was done for those places for which data on judgments and valuations are available. Assuming that the relationships found apply in principle to the whole of the Netherlands, the quality of life for the whole of the Netherlands was subsequently mapped out at a low scale on the basis of nationwide sources about

those environmental conditions.

Liveability is measured on five different indicators: housing stock, physical environment, facilities, residents and safety. In order to convert these into urban indicators that are related to the socio-economic program, this chapter looks at: housing stock, physical environment and facilities.

Liveability and quality of life are not static concepts. Rather, they should be regarded as ‘transactional’. This means that issues of causality cannot be answered easily. It is only possible to make statements about causality at a low scale level and with simple relationships between exposure and response.

Onderzoek en Business Intelligence (OBI). (2022). *Wijkprofiel Rotterdam*. <https://wijkprofiel.rotterdam.nl/NL/2022/Rotterdam>. Retrieved 23 April 2022, from <http://wijkprofiel.rotterdam.nl/nl/2022/rotterdam>

As described earlier in chapter 2.2.1.2 the Wijkprofiel proposes 3 pillars: physical index (fysieke index), safety index (veiligheidsindex) and social index (sociale index). These three domains are made up of a number of objective and subjective themes, for example the environment (physical), burglary (security) and self-reliance (social). The figure shows at a glance what the spectrum of a neighbourhood looks like in these three domains: what are the (relative) strengths of a neighbourhood (green), what are the (relative) weaknesses (yellow).

The physical index concerns, for example, vacancy of buildings, public space and living experience, safety concerns, for example, crime or nuisance and socially,

for example, education, work and income or contact with local residents. subjective and objective

Within the themes, we distinguish between an objective and a subjective score. The objective score is about facts and figures, the subjective score is about opinions.

The objective score is made up of indicators that come from various registrations or from survey questions. In that case, residents of Rotterdam were asked about facts (such as the level of education achieved) or behaviour (such as participation in social activities). The subjective score consists of indicators from survey questions, asking for opinions (such as having confidence in the government) and ratings (such as satisfaction with the living situation).

The scores on the themes are presented as an index score, with the average of Rotterdam in the baseline measurement (2014) being set at 100. All scores in the areas and neighbourhoods are calculated and compared with this city average. The score of Rotterdam as a city is also compared with the value in the baseline measurement (2014).

#### 4.1.4 Identity and neighbourhood identity

*Relph, E. (1980). Place and placelessness. Pion.*

*Lilja, E. (1995). Människosyn och samhällsplanering. Nordiska institutet för samhällsplanering, Rapport 1995:1, Stockholm*

Harvey Perkins and David Thorns(2011) examine the ways in which we use local

spaces and global processes to shape our identities. They explain how individuals, communities and cities react to such globalising forces on a local level. They state that place relationships happen at a variety of scales and incorporate influences from multiple parts of distant or local social and economic networks.

According to Relph (1976) a distinction can be made between 'identity of' and 'identity with'. The identity of a place refers to the features that make the place different from other places. However, what is more important is that identity that a person or a group has with a place, to what extent they are attached to it and how they experience it.

A slightly different approach to identity is from Lilja (1995). She states that identity can exist in an ethical, space and time dimension. With that, she means that identity is something that comes from our search for meaning in everyday life and provides a connection between the past, present and future. Moreover as a relation between a person and the physical environment. Concluding, she is saying that identity is shaped in connection to everyday events: our appropriation of places and the relations we establish with other people in the context of the physical environment results in a process of 'meaning creation'.

The neighbourhood identity forms a sense of community in residential subdivisions. It can be divided into the features that distinguish the place from other places, as well as the personal experience of attachment of the users of space.

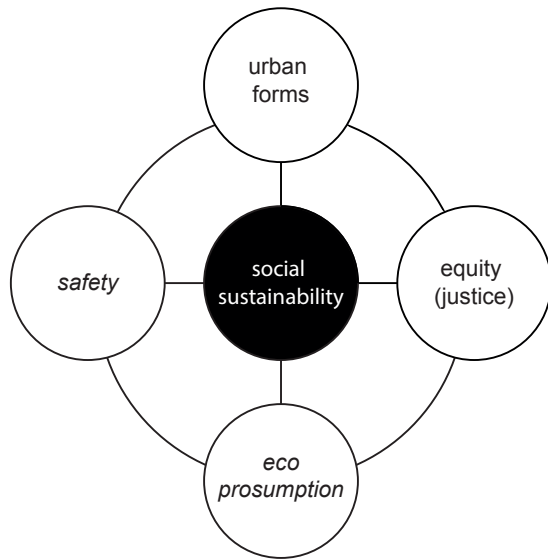


Figure 19. Social Sustainability: A New Conceptual Framework (Eizenberg & Jabareen, 2017).

## 4.1.5 Social sustainability

Eizenberg, E., & Jabareen, Y. (2017). *Social Sustainability: A New Conceptual Framework*. *Sustainability*, 9(1), 68. <https://doi.org/10.3390/su9010068>

Sustainability is a broadly defined concept. Brundtland states (1987): “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Centraal Bureau voor de Statistiek (2017) says about sustainable development striking an ideal balance between ecological, economic and social interests. So social sustainability seems to be just one of these aspects. Achieving social-economic inclusiveness introduces the theme of economic aspects.

Eizenberg & Jabareen (2017) suggest that risk is a constitutive concept of sustainability. The current conditions of risk resulting generally from climate change and its following uncertainties create significant social, spatial, structural, and physical threats to contemporary human societies and their living spaces. And within the framework of sustainability, Eizenberg & Jabareen propose that social sustainability aims to confront risk while addressing social concerns.

The concept of Equity encompasses three dimensions: recognition, redistribution and parity of participation. Especially the concept of recognition concerns the design idea for this project about preserving identity. Eizenberg & Jabareen write about recognitions as the aspect which “revalues unjustly devalued identities”. They say redistribution suggests that the remedy for injustice is some form of economic restructuring.

Parity of participation advocates substantive public involvement in the manufacturing of space. Safety is an aspect with the existential foundation of sustainability in general and especially social sustainability.

Eco-prosumption indicates modes of gaining and producing values in socially and environmentally responsible ways.

Lastly, the concept of Urban Forms represents the physical dimensions of socially desired urban and community physical forms. Obviously, urban forms fit clearly in the process of urban development. Compelling is translating these three concepts described above physical urban elements.

## 4.1.6 Interrelations

### Social Sustainability & Liveability

Camagni, Capello & Nijkamp (1998) explain the locus of sustainability principles and policies three main components in. This concept is shown in Figure 11. These three components are: social environment, physical environment and economic environment. In this concept, quality of life and social sustainability come together. There seems to be some agreement in the literature that the social, the physical (which includes both the natural and the built environment) and the economic domain are the building blocks of society. These building blocks therefore

come up again and again when an attempt is made to give meaning to concepts such as liveability or sustainability.

Liveability takes place in the interaction between the physical and the social domain. Sustainability is referred to in the interaction between the physical and the economic domain. Sustainability is therefore specifically referred to as 'environmentally sustainable'. Where Camagni et al. refer to the interaction of the three domains as sustainability, for Shafer, Lee & Turner (2000) it is precisely 'quality of life'.

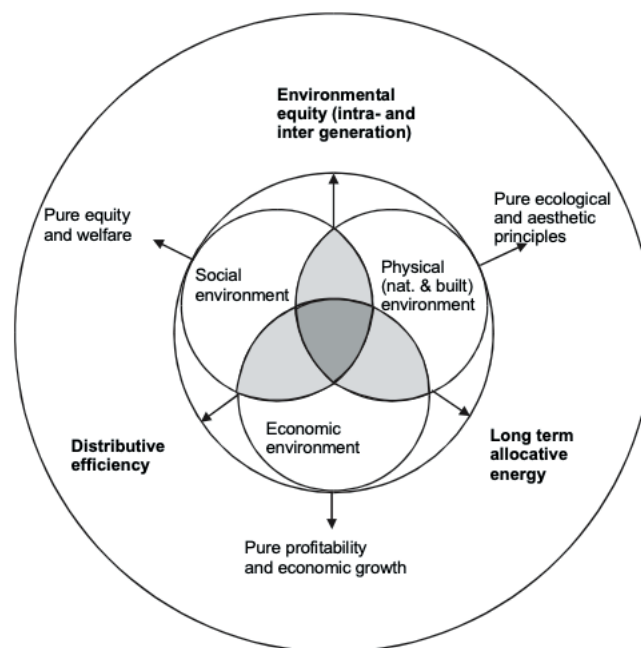


Figure 20. The locus of sustainability principles and policies (Camagni, Capello & Nijkamp, 1998)

## 4.2 Theoretical framework

In order to understand how different theories could be connected to each other to arrive at a well-founded research and design direction, a theoretical framework has been drawn up. This examines how liveability and social sustainability are linked.

Both the Leefbaarometer and the New Conceptual Model of Social Sustainability expand the theory into different variables. These variables can be plotted against each other and in this way support each other's ideas.

Going back to the problem analysis described earlier in this thesis, the

research and design goal of achieving a socio-economic diverse community and creating a sense of belonging also fits into this framework. These goals can be achieved by mixing the urban planning program for the benefit of the current and new residents groups and ensuring a preserved identity. Below in Figure 11 is visualised how these variables compliment each other.

The concept of safety seems to fall outside the framework, but in the belief of the social Sustainable Urban Development mixing program, preserving neighbourhood identity follows a sense of safety by improving the urban design elements.

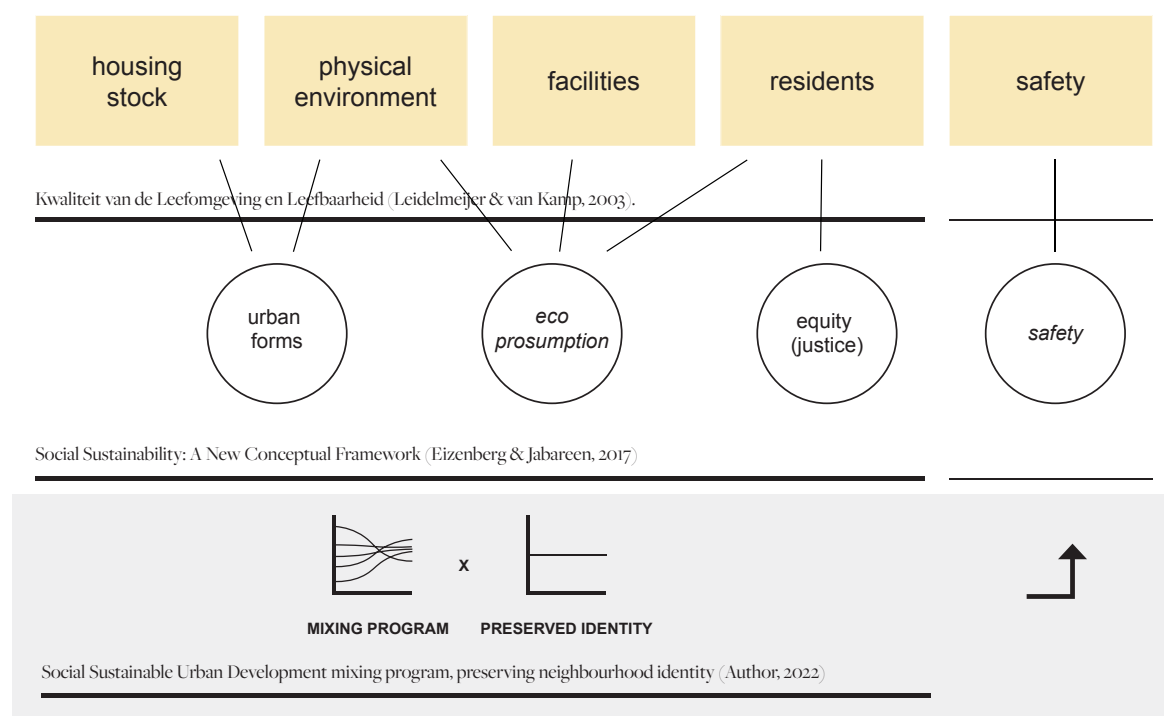


Figure 21. Theoretical framework liveability x social sustainability (Leefbaarometer, 2018) (Eizenberg & Jabareen, 2017) (Author, 2021).



# 4.3 Conceptual Framework

Below is the conceptual framework that has been formed from the current problem statement and the convictions of the aforementioned theories. This states that the central theme, or goal of urban development is liveability. In this form of Urban development only a part comes under social sustainable urban

development. Two important aims can be distinguished for this research and design. These two important design directions that emerge from this framework are the idea of preserving neighbourhood identity and mixing the socio-economic program. These two ideas are explained in more detail.

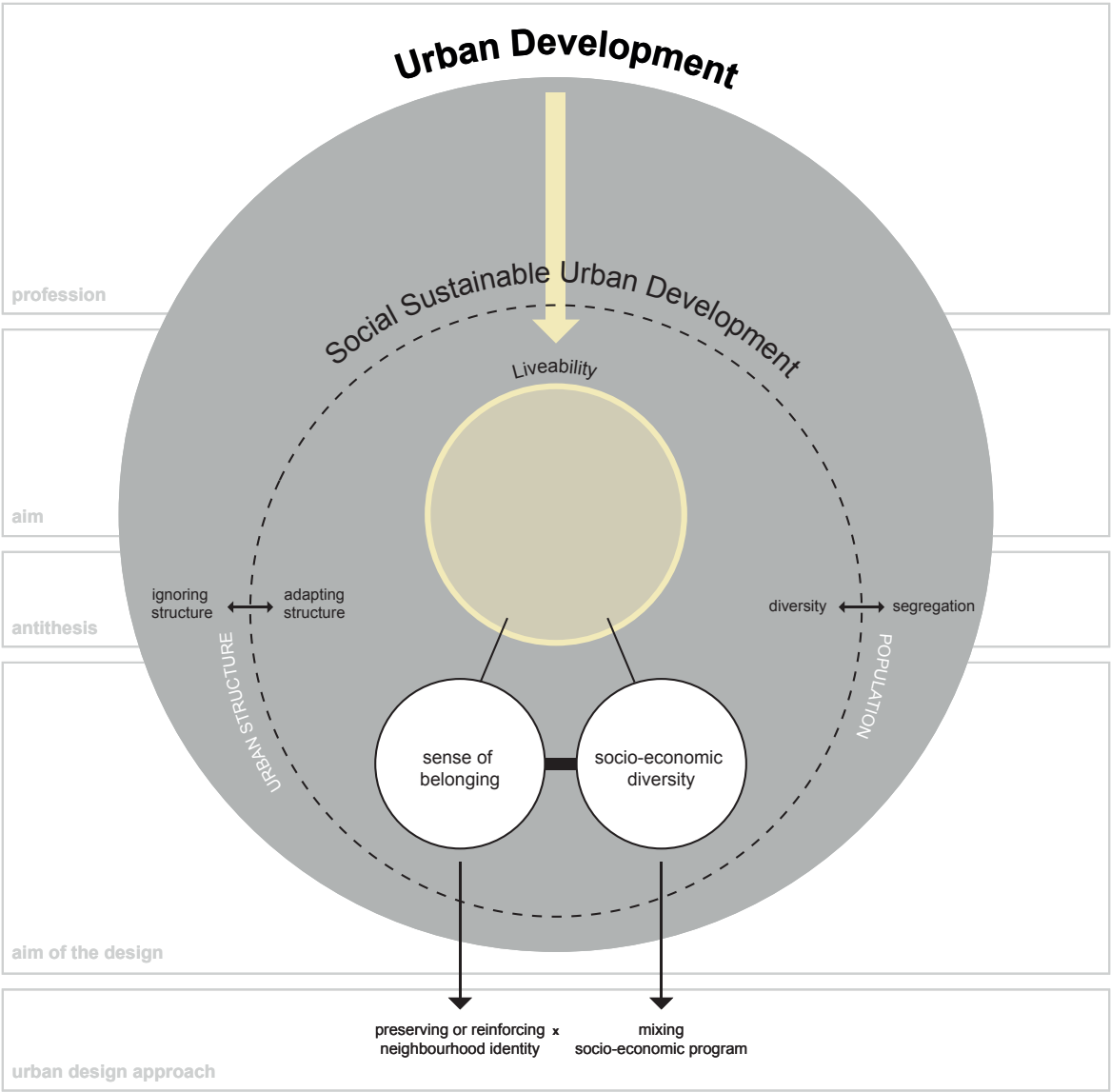


Figure 23. Conceptual Framework (Author, 2021).

## 4.2.1 Sense of belonging versus neighbourhood identity

Peek (2021) asks himself: “As a gentrification yup, how do you still find connectedness?” Hinting at the idea that not only for the current target group, but also for the potential new target groups, a sense of belonging is missing. Maslow (1943) represents this idea of importance for a sense of belonging. He states that this sense, together with love needs, as the third most important need in the Hierarchy of Needs. The hierarchy shows a pyramid that is subdivided into basic needs, psychological needs and self-fulfilment needs. Belonging is part of the psychological needs, which are necessary to meet if you want to reach the self-fulfilment needs.

**Preserved identity** - An important reason why neighbourhood identity is important is the sense of belonging for the resident and also the visitor of the neighbourhoods. Identity is about being yourself and being unique. It is an important aspect of respect and being valuable. This contributes to the feeling of equality and the right to the city.

In addition, it contributes to reasons to live in a place. If this remains constant, it can be assumed that residents also have the reason to continue living for longer. In general, long-term residents contribute to good social cohesion through the longer relationship with the environment and people in the neighbourhood.

## 4.2.2 Socio-economic diversity versus mixed socio-economic program

In order to realise social diversity, it is important to make a distinction between social groups that are deprived of a choice to live somewhere and social groups that are obliged to live in certain places, for example for financial reasons.

Affordability could be a goal in itself. It ultimately contributes to social diversity: when housing remains affordable, it will be accessible to everyone.

This is about the price of a house. But also what monthly costs it costs to own or rent the house. These prices seem to be rising due to several factors. The price of the house is determined by the market or by a corporation or municipality. The market fluctuates enormously, corporations or municipalities ensure more stable prices.

An important distinction is its internal factors: the actual condition of a house. For example, how old the house is or whether it has technical defects. But also external physical factors: the environment. For example, how green the area is or how centrally located the home is. In addition, external non-physical factors. Such as supply and demand, safety, crime rates and social factors.

**Mixed socio-economic program** - The social economic program is an important urban instrument to fulfil residents' needs. To create social-economic diversity it is important to meet the needs of both the current residents as well as the new

target residents. Next to individual needs, creating design with accessible meeting places to contribute to social cohesion would subsidise sustainability of urban development.



# Change to stay the same

- 5.1 Urban liveability
- 5.2 Social identity and a diverse population
- 5.3 Physical neighbourhood identity
- 5.4 Diversifying socio-economic program
- 5.5 Spatial opportunities and urgencies
- 5.6 Design

# 5

## **Change to stay the same**

A socially sustainable design consists of a socio-economic diverse community, respecting current neighbourhood identity. The main question is going to be answered with the disquisition of the sub questions. The following chapters are about answering these sub questions.

The chapters will be as follows: interrelations and operationalisation of urban liveability, the relativization and standard setting for social identity and a diverse population, the validation of physical neighbourhood identity and diversifying socio-economic program. Concluding with the exploration of spatial opportunities and urgencies for the implementation of the design





## 5.1 Urban liveability

A central goal for urban development is liveability for residents. In this chapter the interrelations between liveability and the concept of social sustainability are set out and how they can be operationalised. With the operationalisation urban tools for the realisation of socio-economic diversity and the urban features for neighbourhood identity can be distinguished and create a base for the next phases.

This chapter will give an answer to following sub-question:

***SQ1: How does liveability relate to socio-economic diversity and neighbourhood identity in terms of urban design?***

First, liveability is expressed in urban design features. Subsequently, the aims for the project about socio-economic diversity and a preserved or strengthened neighbourhood identity are set out in urban design terms.

## 5.1.1 Urban design interventions for liveability

Urban interventions could result in improved liveability. Following the Wijkprofiel, liveability could be set in: physical interventions, safety interventions and social interventions. Approaching these three qualities at the urban design level provides an overview of design interventions that can be explored in further research for this thesis.

### 5.1.1.1 Physical interventions

For the physical level Wijkprofiel looked at housing experience, housing, public space, facilities and environment. Some of these themes can be translated directly into urban design elements.

For physical liveability some clear design interventions can be established. Such as (technical) qualitative homes, housing differentiation for different resident groups, functional public spaces for meeting people or leisure, program differentiation for vibrance and qualitative green contributing to the environment.

### 5.1.1.2 Safety interventions

The second pillar of the Wijkprofiel is on neighbourhood safety. The four themes are perception of safety, theft, violence, burglary, vandalism and nuisance.

These design interventions can not be taken directly from the themes mentioned by Wijkprofiel, but by representation or research a few we can be distinguished. Seeing each other is an important element for being aware of a mixed, yet

close-knit neighbourhood. It creates a sense of security through social control. Long-term encounters mainly take place between acquaintances, whereas short encounters happen much more often between strangers. Social control is an important part of the perception of safety. While encounters can also take place in a negative way. For example, through intimidation. Intimidating places are places where there is a lot of noise and little overview. But also quiet places, with non-living facades and now and then someone on the street.

Social control can take place through public spaces surrounded by plinths with living- or working functions in them, rather than storage or blind facades. The alternation between working and living creates a multi-hour program. Other safety aspects can also be interpreted from the physical health and safety, such as walking or cycling on walkable or cyclable designed streets. Also, higher population densities have been linked with economic vitality due to the intense movement of people (Montgomery, 1998), improved health (Carlson et al. 2012) and lower greenhouse gas (GHG) emissions (Senbel et al. 2014) as a result of better walkability.

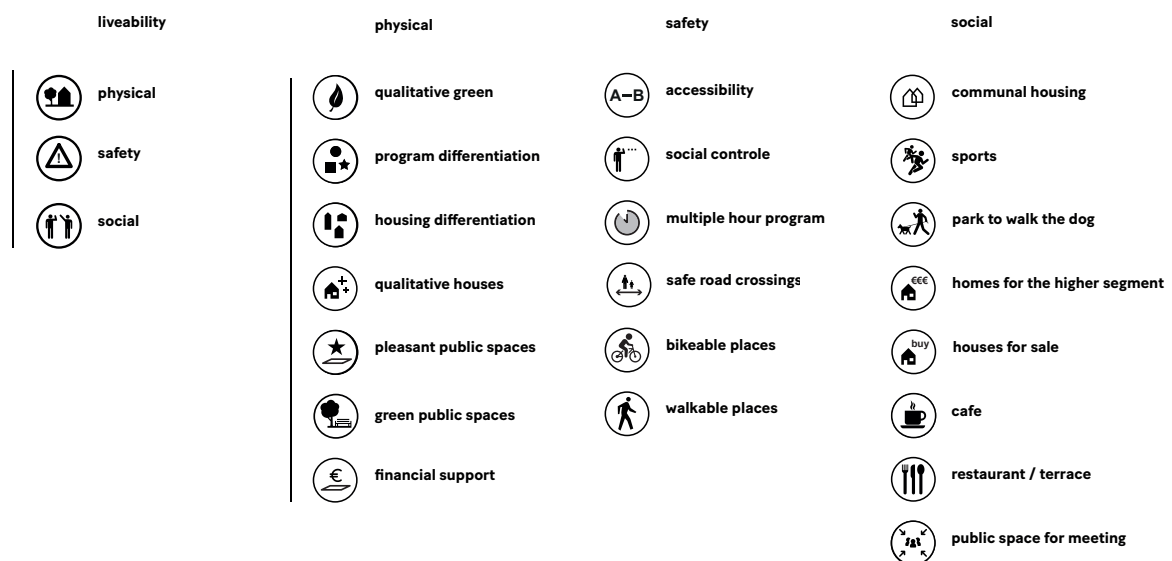
### 5.1.1.3 Social interventions

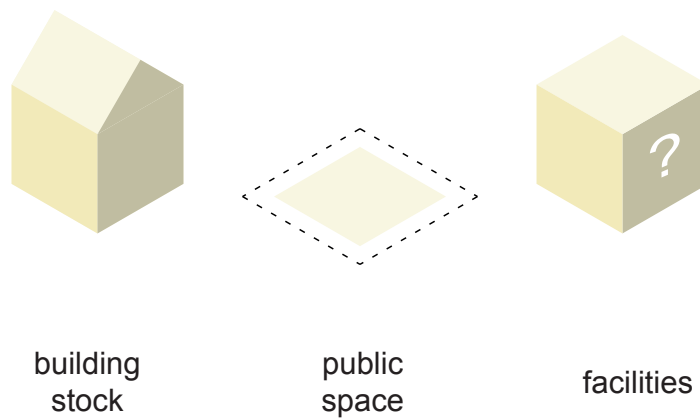
The third pillar is on social aspects, such as perception of liveability, self-reliance, coexistence, participation and binding.

For the social index, important urban

design interventions are certain facilities or public spaces which lead, in a low-key way, to the regular meetings between people. Examples of these are education, for residents themselves or their children, sports or parks where people can walk the dog. But also intentionally meeting places in public space or in restaurants, cafes or bars. In this way these could lead to mostly binding and participation of residents. Social work or care institutions

ensure the residents' self-reliance and co-reliance. But also, residential buildings that encourage good contact with the neighbours such as communal housing complexes.





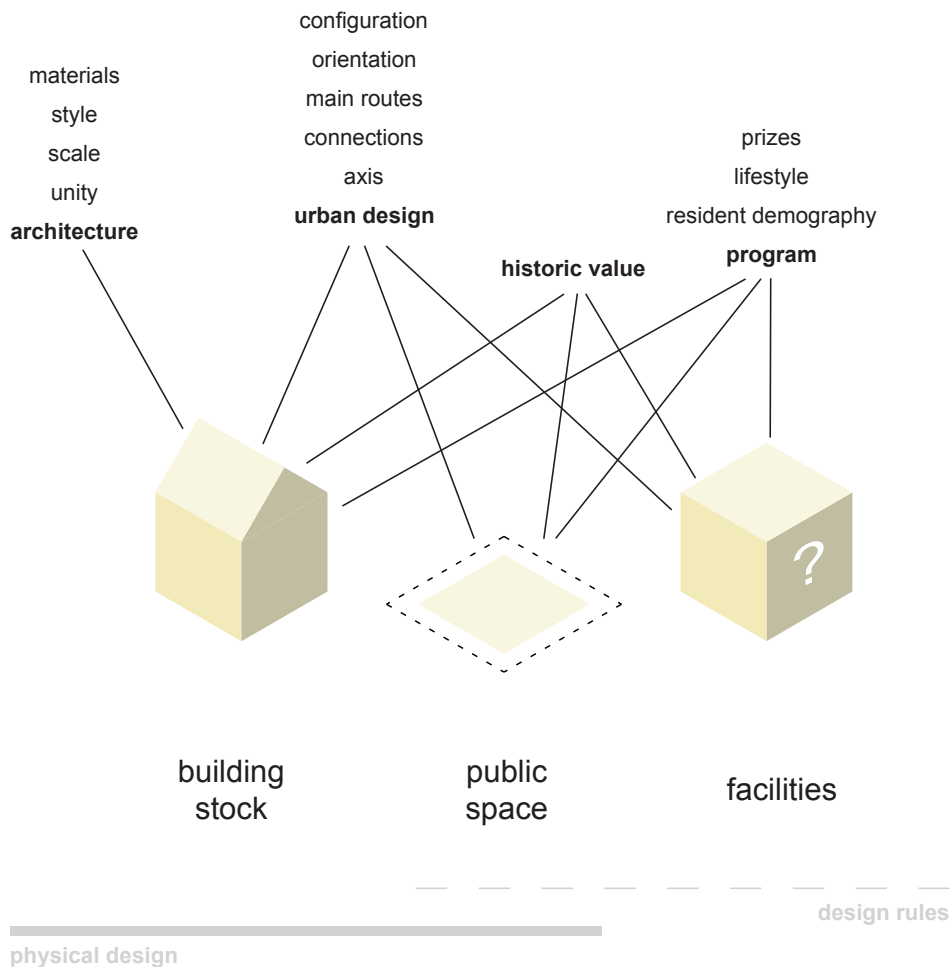
### 5.1.2 Physical urban tools for liveability and socio-economic diversity

In order to realise socio-economic diversity, new target groups have to get a place in the urban fabric and current resident groups should have the opportunity to remain. Besides residential functions, programs for public space and facilities can match certain resident groups. A mixed socio-economic program is therefore desirable. These elements are linked to the realisation of liveability.

**BUILDING STOCK** : OWNERSHIP .  
RENT VERSUS BUY . WOZ-VALUE .  
TYPOLOGIES

**PUBLIC SPACE** : GREEN-BLUE  
STRUCTURES . GREY STRUCTURES .  
FUNCTIONAL PUBLIC SPACE

**FACILITIES** : COMMERCIAL  
FACILITIES . NON-COMMERCIAL  
FACILITIES



### 5.1.3 Physical urban tools for liveability and neighbourhood identity

Urban identity is a generally objective tool to deploy. Nevertheless, this can be appreciated by testing it against a certain measure of liveability. For example, some parts of the neighbourhood identity can also be negative in relation to liveability. Therefore, for this variable, we look at the following aspects that create and mainly maintain the sense of belonging and a liveable space. The aspects are related to everyday activities and the distinguishing elements of these neighbourhoods. Such as schools, popular public spaces, supermarkets, homes, important

connection routes and or restaurants.

**BUILDING STOCK** : HISTORIC VALUE .  
ARCHITECTURE . PROGRAM

**PUBLIC SPACE** : HISTORIC VALUE .  
URBAN DESIGN . PROGRAM

**FACILITIES** : HISTORIC VALUE .  
URBAN DESIGN . PROGRAM

## 5.2 Social identity and a diverse population

In the second phase of the gentrification curve the growing interest for the, first not so popular. In order to map out which resident groups should be attracted to these neighbourhoods to ensure a diverse population, it is important to get the socio-economic status of the current residents in perspective. Therefore, the neighbourhoods are compared with socio-economic statistics of the Netherlands, Rotterdam and the 'wijk' Delfshaven.

Yet, this current socio-economic status is also part of the social identity. A number must be determined where social identity is lost and where diversity is established.

The sub-question for this chapter is:

***SQ2: How can the socio-economic status of the neighbourhood become more diverse and still be part of the social identity?***

From the established relativisation of the statistics a standard setting for diversity and social identity can be established.

### 5.2.1 The comparison of Delfshaven

The Netherlands could be a benchmark. Creating socio-economic diversity in relation to the whole of the Netherlands is not only not completely feasible, it is also undesirable. To fully apply the average socio-economic composition of the Netherlands to the whole of the Netherlands will most likely conflict with the preservation of identity. After all, resident groups are also part of the identity.

In order to get an idea of what kind of neighbourhood (in Dutch 'wijk') the neighbourhoods (in Dutch 'buurten' are located), a balance is made between the 'wijk' Delfshaven, the city of Rotterdam and the country of the Netherlands.

The distribution of age, the level of education and the average income were examined. The figure of this is shown on the right (Figure 20).

Looking at the distribution of ages, there are differences in the Netherlands. The group of 25 to 45 year olds in particular is considerably larger and 65+ is relatively low. Compared to both city and country, the difference in income and education level is also large.

**To achieve socio-economic diversity compared to Rotterdam and the Netherlands, it is desirable to attract higher educated people and people with a generally higher income.**



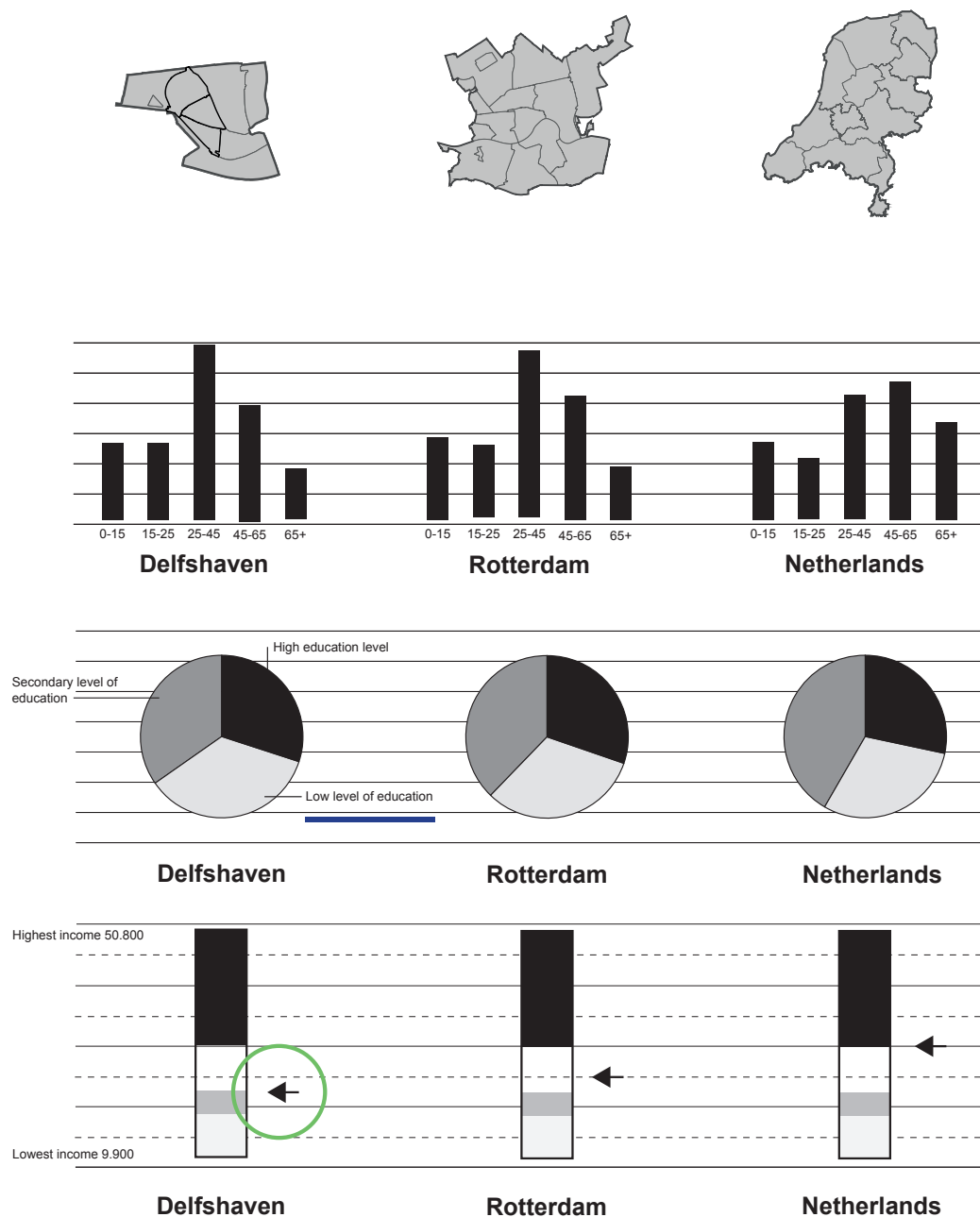


Figure 24. Demography comparison Delfshaven, Rotterdam and the Netherlands (CBS, 2021) (Author, 2021).

### 5.2.2 ‘De buurten’ Spangen, Tussendijken en Bospolder

A comparison of the districts is shown on the right-hand page. We looked at how many inhabitants the district has, what the distribution is in incomes per inhabitant and how big the districts are. This was done in order to map out the size of the area to be designed and a first attempt to outline their economic composition.

It can be concluded that Tussendijken and Bospolder are almost equal in size, also in terms of numbers of inhabitants. Spangen is somewhat outside of that. However, the district has a large part of the water area which somewhat explains this difference. But the district also has relatively more inhabitants.

Not much can be concluded about this for creating a socio-economically diverse design. These data can be used to get a grip on the assignment.

### 5.2.3 The comparison of ‘de buurten’ Spangen, Tussendijken en Bospolder

Using the Netherlands as a standard setting is not in accordance with creating a certain form of identity. As an area, Delfshaven does not score well in terms of quality of life, and is therefore probably not by definition a good starting point for comparison. That is why the economic well-being of Rotterdam is used as the standard setting. This does not mean that precise numbers will want to be reached. But distribution will be used as a guideline. The comparison is shown in Figure 21.

**Conclusion** - The figure shows how a larger amount of high incomes is desired for each neighbourhood to reach socio-economic diversity and how the lower incomes will have to decrease relatively in order to achieve social diversity.

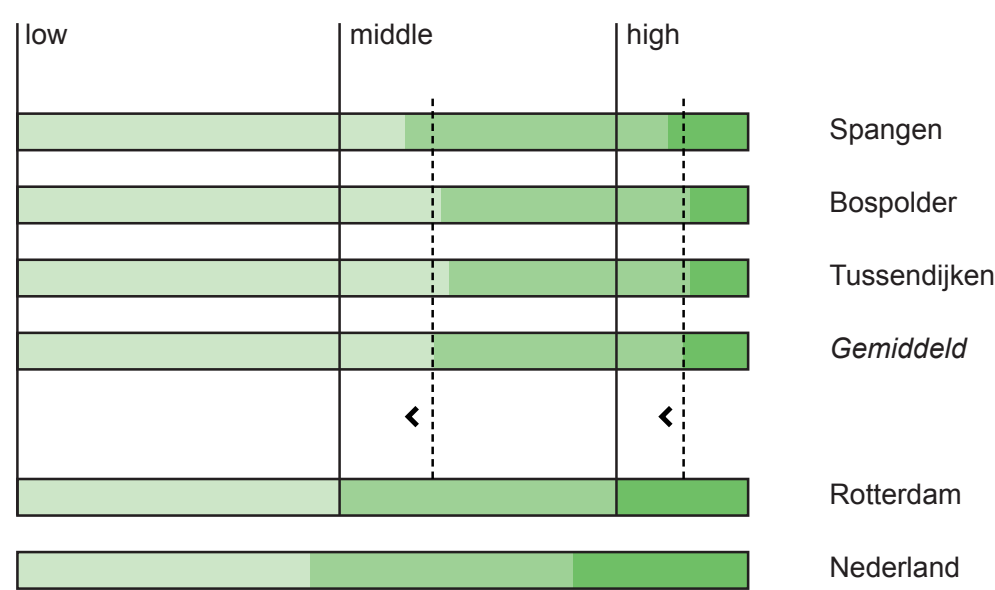
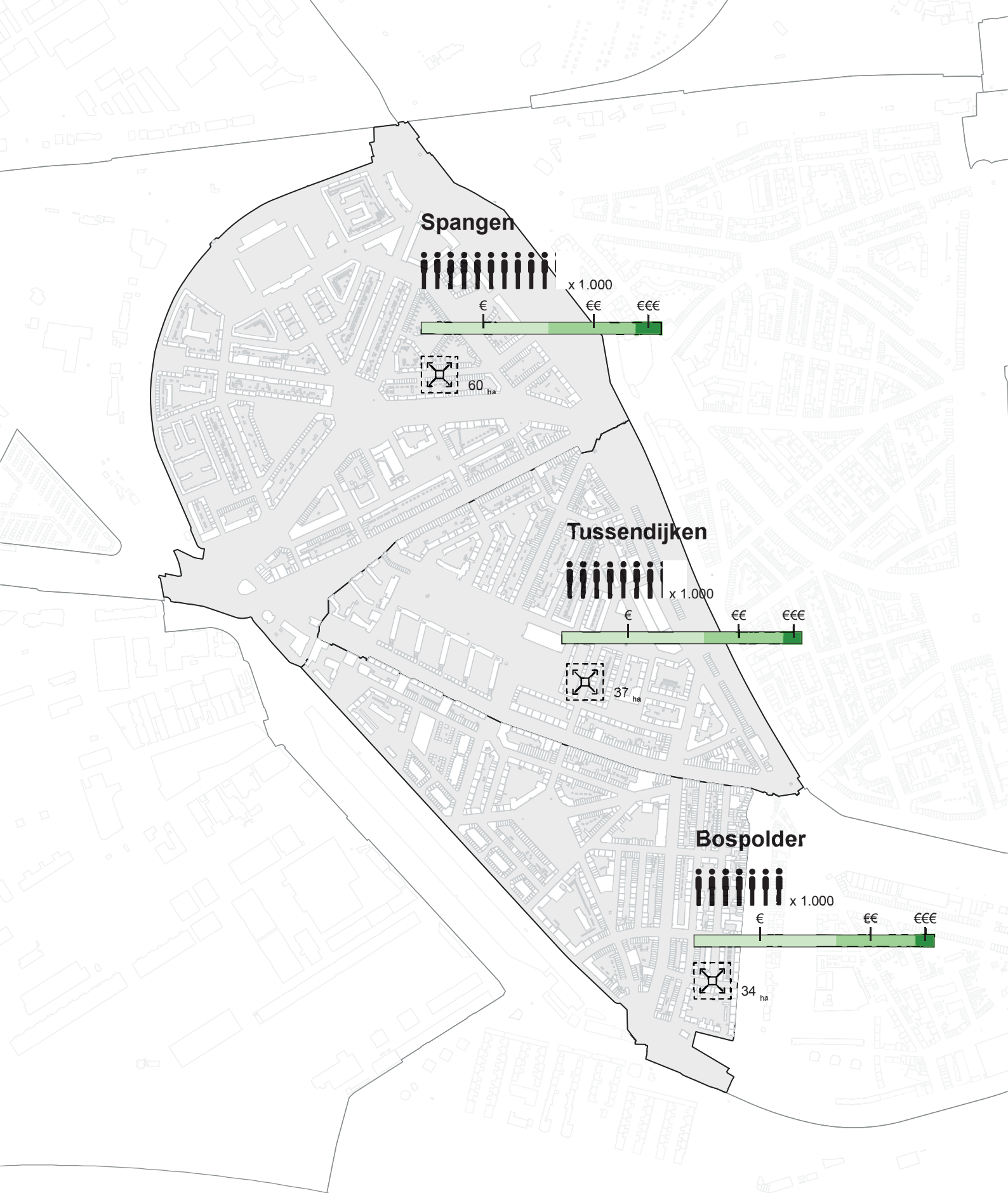


Figure 25. Distribution of incomes (CBS, 2019) (Author, 2021).



Map 13. Number of inhabitants, distribution of income and number of square meters per district (CBS, 2019).

## 5.2.4 History

The origin of the current inhabitants can be found in history. Working-class neighbourhoods arose around the ports around 1930. This created working-class houses for the built environment. This makes history not only created physical identity but also social identity for a certain group of population. These were the people who lived there up to World War II. In the first decades after that the strongest wave of suburbanization took place. Causes of these movements can be found in the poor urban housing stock and increased mobility. This made it possible for many to leave the city as a place of residence without having to give up the advantages the city has to offer. Due to suburbanization, the cities lost many of their socially and economically well-performing inhabitants.

At the same time, in the 1960s, the Dutch economy worked overtime and the demand for workers grew enormously. The first Turkish and Moroccan men came to the Netherlands between 1950 and 1960 to work here. They were called 'guest workers'. Later their wives and children also came to the Netherlands.

This is why the current socio-economic composition of the residents today still has a big group of low-income second generation 'guest workers'.

## 5.2.5 Conclusions

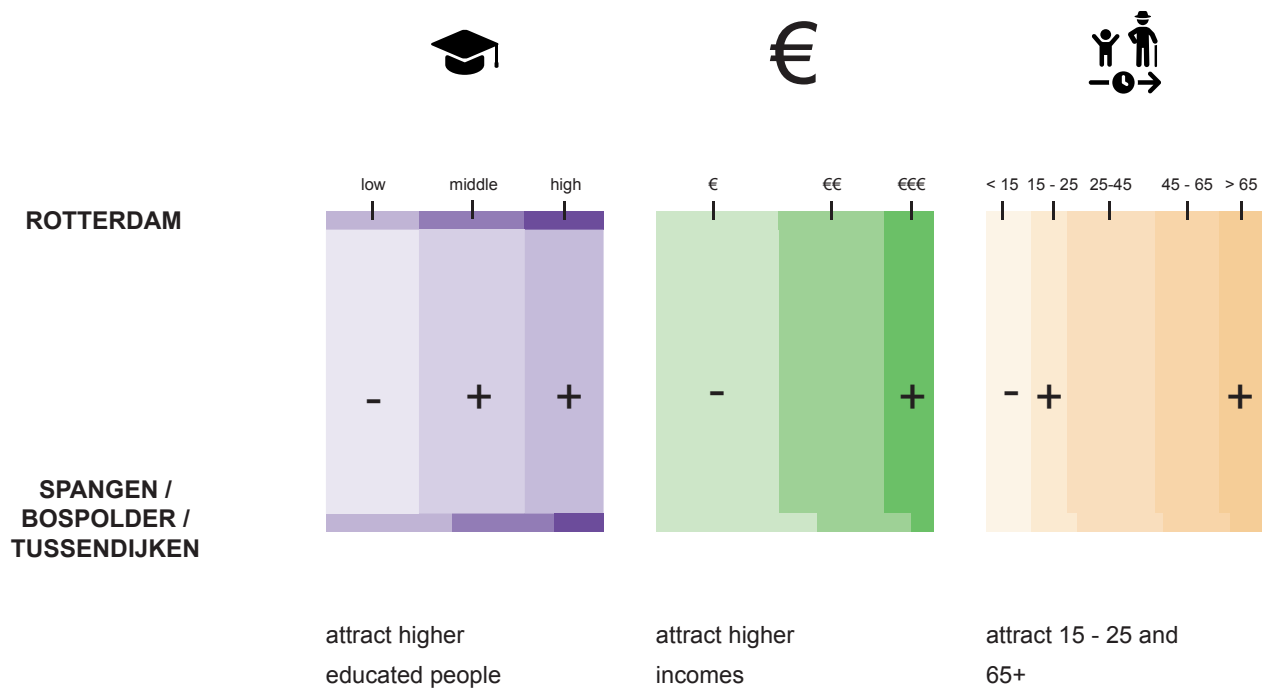
An important question for determining the final design is the question of what a socio-economically diverse composition of inhabitants means, but also which part of this belongs to the social identity of the district.

Gentrification is mainly based on attracting inhabitants with larger capitals. But the socio-economic composition does not only stand for high income. It consists of the combination of education level, income and social relations that the inhabitants have.

In the first instance, we looked at how the neighbourhoods or in Dutch 'buurten' relate on the basis of the Netherlands, Rotterdam and the Delfshaven 'wijk' scale. To achieve socio-economic diversity compared to Rotterdam and the Netherlands, it is desirable to attract higher educated people and people with a generally higher income.

Ultimately, Rotterdam was taken as the baseline. Delfshaven is not scoring good at liveability and taking the Netherlands as an average does not seem appropriate due to the difference in size and differences in qualities of cities or villages.

The figures on the right page show the relationships in education level, income and age of Rotterdam compared to the three neighbourhoods. In conclusion, you can say that achieving socio-economic diversity involves attracting more highly educated people, attracting higher incomes and attracting young people (15-25) and perhaps older people (65+).



## Social identity versus socio-economic diversity

Expulsion of current residents in particular leads to a decline in current social identity. The realisation of additional homes or spaces for new groups of residents does not have to take the place of the current ones.

## 5.3 Physical neighbourhood identity

An important aspect for a socially sustainable design is the relation residents have with the place. This creates a sense of belonging towards space and creates a place people would like to live and desire to keep on living. This also contributes to their sense of security. Walking around the neighbourhood gives you a hint of what kind of place this is and what kind of people live there.

The question to answer in this chapter will be:

***SQ3: What are the physical, urban features of the neighbourhood identity in Spangen, Bospolder and Tussendijken that people feel beloneness towards?***

The neighbourhood identity can be expressed in different scales and themes. Through spatial analysis, fieldwork, statistical analysis and interviews these characteristics are established.

- **Scales:** neighbourhood, axes, public spaces, building, human
- **Themes:** history, urban design, architectural design, socio-economic program

Outcomes of this research shows mainly the typical lifestyle features

and characterising design. These characteristics all contribute to a certain extent to liveability, social-economic diversity, or sense of belonging.

As described in chapter 4.1.3 the identity of space or the neighbourhood identity consists of the distinction from other places or the personal attachment that users of the place have. These found elements contribute to a certain extent to everyday activities and certain lifestyles. This chapter is divided in these two subparts: the distinction from other places and the personal attachment to place. Followed by the conclusion of elements which should be preserved or reinforced in future design.



### 5.3.1 Distinction from other places

The distinction from other places can be measured into physical observable features and are expressed in non-physical demographic statistics. Explained in the next sub-chapters: place and users of space.

The identity of a neighbourhood is mainly determined by the history of the landscape. Partly overlapping there are certain architectural or urban design values. Important architects from history have left their mark on the district and have therefore had varying influence on the final recognizable image of the neighbourhoods. And last, the program creates certain feelings of attachment for residents but also users of space. The program represents their everyday lifestyle and is therefore an important element for the sense of belonging. This is one reason people visit the area, but also the reason people have come, and stayed, to live in this place. Especially those elements which distinguish the neighbourhood from other parts in the city, plays an important role for the identity of the neighbourhoods.

- History of the landscape and settlements
- Urban design and urban fabric
- Architecture
- Signature program

### 5.3.1.1 History of the landscape and settlements

As said, the neighbourhood identity has a lot to do with the origin of the place and its landscape. Questions about what happened in history, to make it look like it does today arise. Answers can lay in social, political, or economic events that happened in the past, but also in the ecological history of the place.

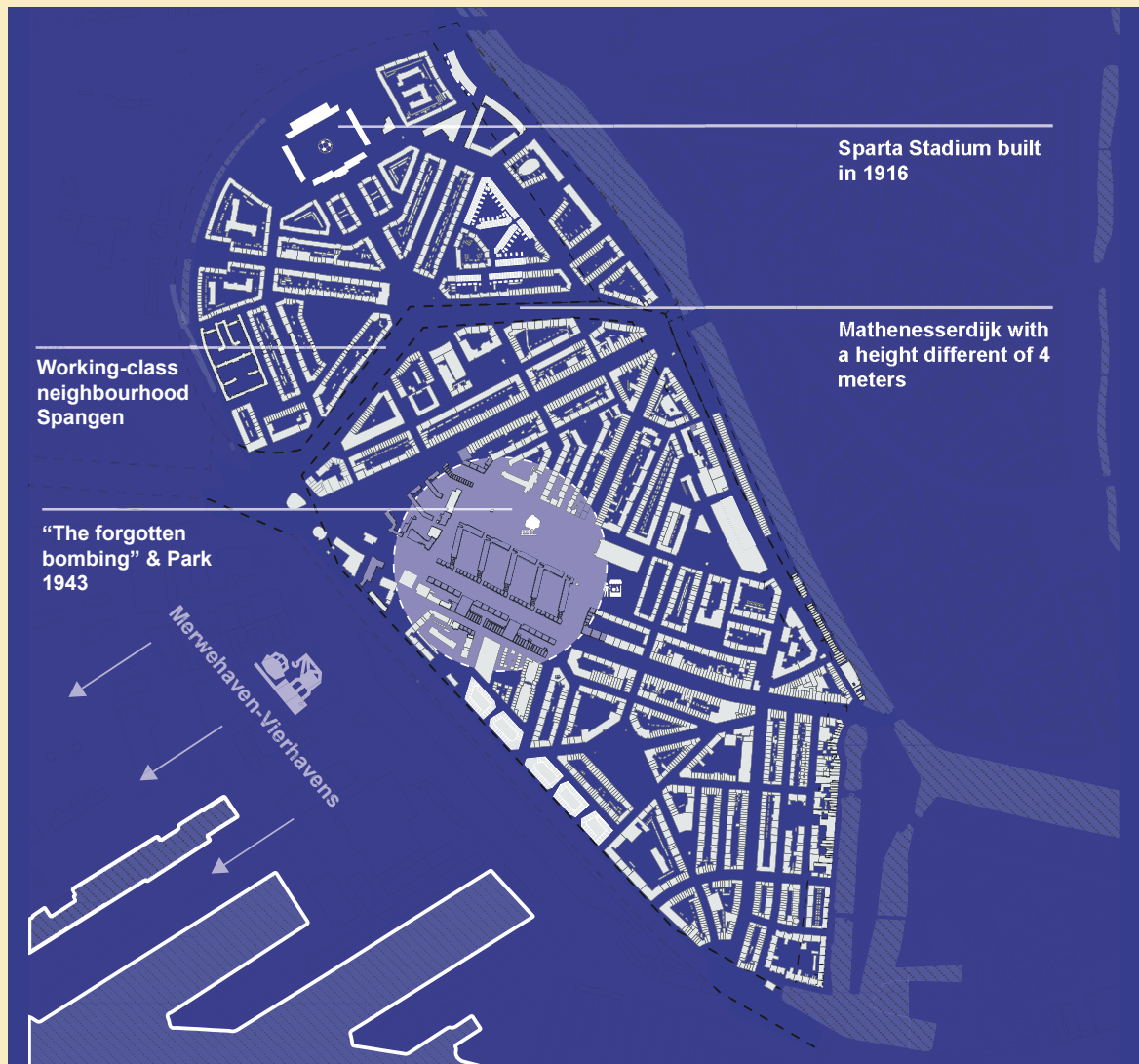
**Social and political events** – Wars are important events that steer urban design. Not only physical, but also non-physical as described in the next sub-chapter. World War II took place in the Netherlands from 1940-1945. The war changed the housing stock. Not only by erasing buildings by the bombing, but also because of the housing crisis afterwards. The housing crisis provided buildings which were mainly designed to be built quick and easy. Many of these buildings are just used to provide people a home and didn't look at social or economic consequences of its design, nor to the technical qualities of the buildings. This makes that the buildingstock from 1945 up to 1960 is mainly of bad quality and needs renovation or reconstruction.

History has left its traces in Tussendijken. The heart of the district was bombed by mistake by the Allies on March 31, 1943. Every year a commemoration takes place here on May 4. The bombing created an empty space in the district, which was converted into Park 1943 and Visserijplein after the Second World War. A monument in the Park 1943 commemorates the disaster.

**Ecological events** – Around 1250 the first

people already settled around the river de Rotte. The strategic location for trade is good for the wealth of the city, but also forms a tread for the built environment of the settlement. In addition to the fact that the Netherlands is known for its large ports, both in Amsterdam and Rotterdam. It is also known for its water management and in particular: the dikes. For the safety of the city of Rotterdam, the Mathenesserdijk was constructed. This Schielands Hoge Zeedijk was built by monks in the 12th century and followed the stretch of Maas and Hollandse IJssel from Vlaardingen to Gouda to protect the country against the water of the rivers that were then directly connected to the North Sea. The Mathenesserdijk is part of this seawall. This dike protected the land to the north-east, including the “Matenes Polder”, against flooding. The Delfshavense Schie was later dug along this. Until about 1910, the Mathenesserdijk was part of the main connection in the road network between Rotterdam and Schiedam. The dike runs in a triangular shape north of the Mathenesserweg. Nearby, the dike is 9.8 metres at its highest and 3.8 metres at its lowest. This forms a difference in height of about 4 metres. In this way, the dike forms a physical barrier that separates Spangen from the rest of Rotterdam.

**Economical events** – The Netherlands had become a rich land due to the excellent location at the North Sea. In 1962 the harbour of Rotterdam was called the biggest harbour of the world. They held this title until 2004 and are still participating in the leading port parties today. It started



Map 14. Historical landscape and settlements of Spangen, Tussendijken and Bospolder. (Author, 2022).

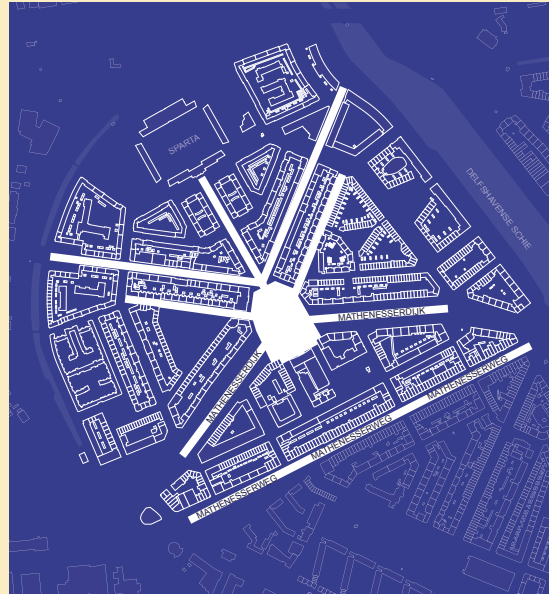
with the establishment of the Dutch East India Company (VOC) on March 20, 1602, trade and shipping increased rapidly, so more ports had to be built to be able to continue shipping everything. From then on, various ports in Rotterdam will be constructed. Ship loads are growing and growing, so it's time for a general cargo port. The Merwehaven was built for this purpose between 1927 and 1931. A port complex is being designed between the Keilehaven gas factory and the municipality of Schiedam. Merwehaven-Vierhavens on the north bank is the basis of Rotterdam Fruitport.

Working-class neighbourhoods arose around the ports where the 'Havelingen' lived. The White Village, Oud-Mathenesse and Spangen arose as close-knit communities with a lot of social housing. From the 1970s, the fruit trade came to dominate in both ports and automation took place. After the reconstruction came reconstruction: many jobs disappeared, causing the bond with the surrounding neighbourhoods to disappear and the harbour area took on an increasingly desolate appearance.

### 5.3.1.2 Urban design

The visible physical design of the neighbourhood, the streets, public spaces and buildings are thanks to architects and urban planners who have left their mark on the neighbourhood longer ago, but also recently. A large amount of the buildingstock was built around 1920, which was before the war. Something that is quite special for the city of Rotterdam, which was bombed during the World War II. Below is a summary of which urban design, axes, public spaces, building blocks and individual buildings form an important part of the identity of the neighbourhood.

The urban design of the neighbourhoods can be observed in different scales. Below is described how the neighbourhood identity manifests itself on the neighbourhood scale, the dominant axis and the recognizable public spaces.

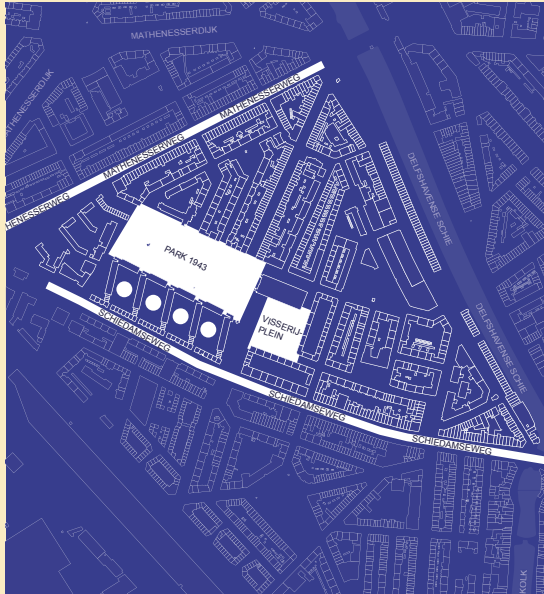


Map 15. Urban design of Spangen (Author, 2022).

#### Spangen

Architect J.J.P. Oud designed four building blocks as part of a large-scale housing program in the Spangen polder. The Spangen district was developed and built from 1913. The urban design by P. Verhagen (under the supervision of architect Berlage) provided for strict management of the issuance of the blocks with architectural quality (Van Helleman, 2018). The Mathenesserweg is designed by L. C. Van der Vlugt. This street creates a line of sight to the Lee Towers, which forms an orientation point for the neighbourhood. It is 95 metres high and therefore a real eye-catcher. Its colossity and distinct appearance add to the sense of belongingness.

The urban design is characterised by the symmetrical double cross where the axis continues over the PC Hooftplein towards the Sparta stadium. The Mathenesserdijk is also an important crossroads for public transport.



Map 16. Urban design of Tussendijken (Author, 2022).

## Tussendijken

Tussendijken forms the heart of Rotterdam Delfshaven. The shopping street Schiedamseweg is located on the south side of Tussendijken, in the north the Mathenesserweg connects the district with Schiedam. Park 1943 together with the Visserijplein forms the centre of the neighbourhood. The eastern border of Tussendijken is formed by the Mathenesserdijk. This place has mainly residential blocks overlooking the Delfshavense Schie.

Tussendijken is located in between two important roads, the Mathenesserweg and the Schiedamseweg. These roads connect the neighbourhoods also with the rest of Rotterdam. The roads form an important part of the urban fabric. They unconsciously steer the visitor through the area in a certain direction and it is a place where different urban activities come together.



Map 17. Urban design of Bospolder (Author, 2022).

## Bospolder

Bospolder was built between 1910 and 1930. It was a pleasant working-class neighbourhood, to the despair of residents. The main program, besides the Schiedamseweg, is residential. The urban fabric seemed to be designed around the central Bospolderplein.

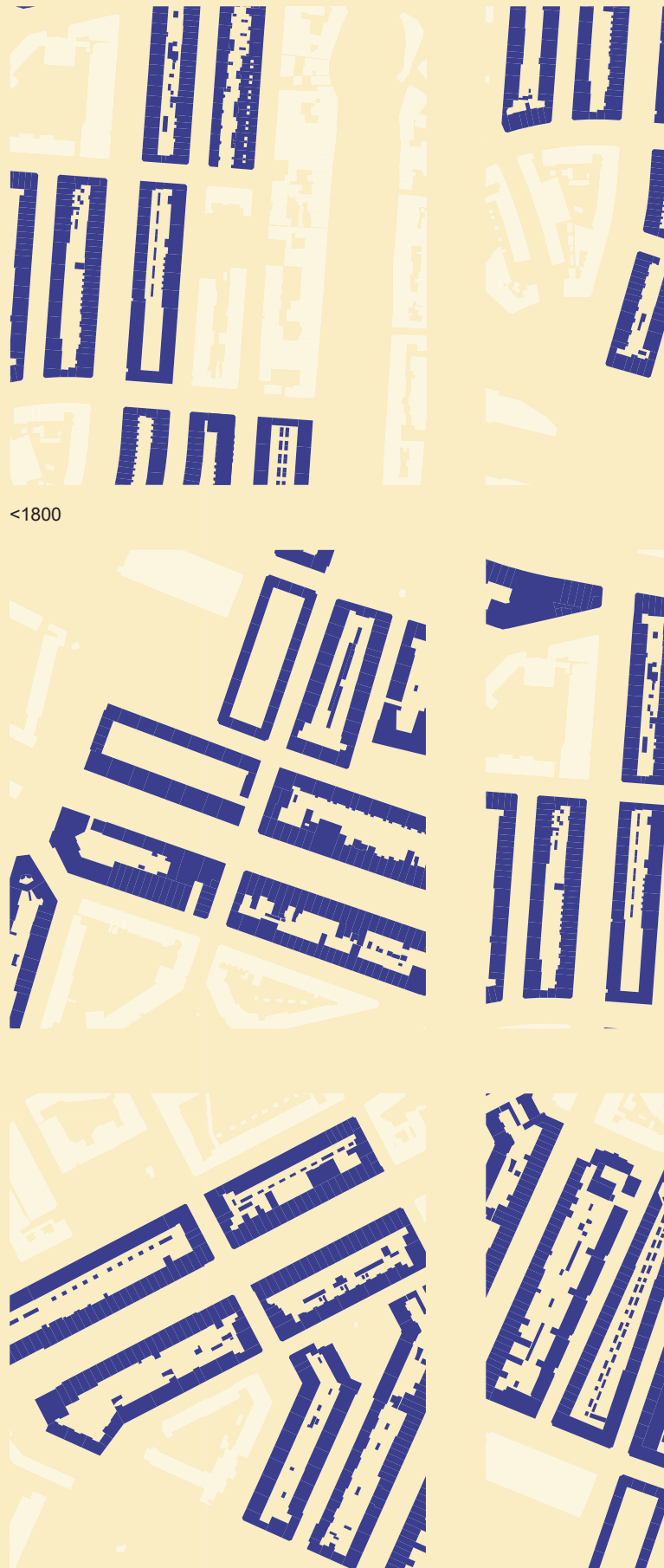


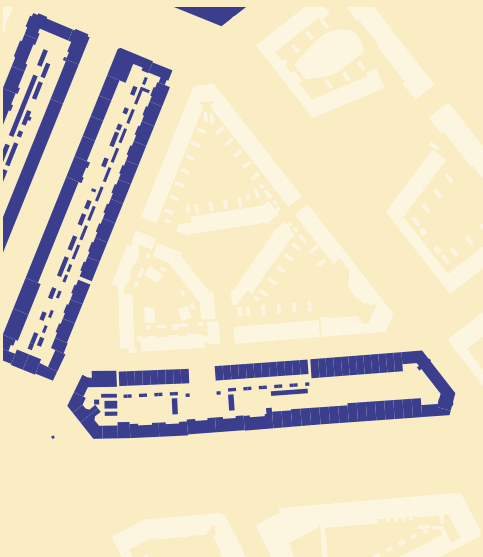
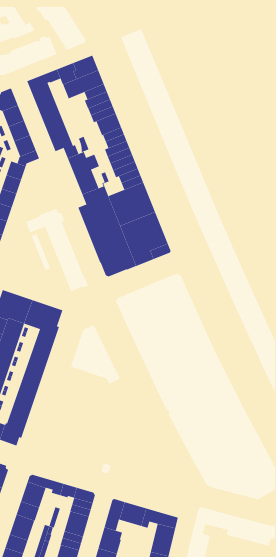
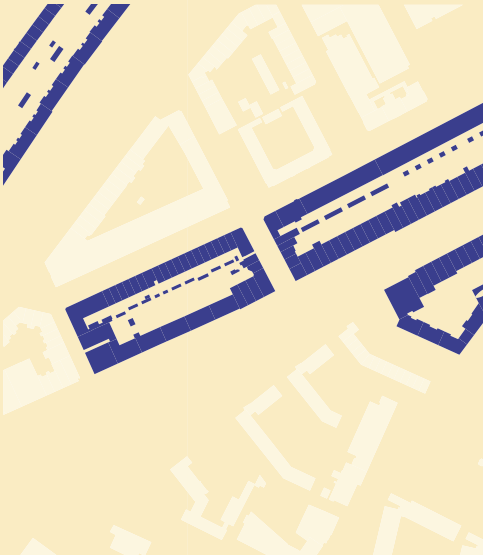
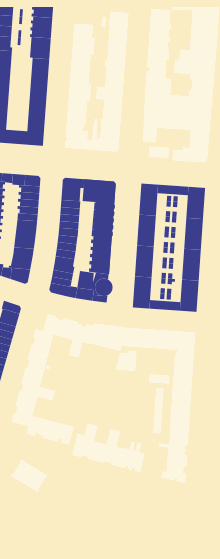
### 5.3.1.3 Urban fabric

To the right of this text various urban fabrics are shown. Below the fabric is the year in which the building block was built.

The configuration of homes shows how people live in the neighbourhoods. Many of the older residential blocks consist of closed blocks with a centrally located semi-private outdoor space. This varies from large to smaller, and from linear shaped blocks to square- or polygonal shaped. The houses rarely have a (large) front garden.

It can be seen that even in newer buildings the trend towards having central courtyards has been maintained.





>2000



### 5.3.1.1.4 Architectural design

Not only attachment or sense of belonging towards certain remarkable buildings that typify the area can be established, also lessons can be learned for future design. The buildings described below are analysed on the basis of clear urban design or architectural character contributing to liveability, social-economic diversity or sense of belonging.

#### Mathenesserweg

The street is characterised by the typology of the high street. Architectural characteristics include the horizontal orientation of architecture and grid-defined plinth. The heads of the street are marked by red and blue LED light advertising which end at the corner of the building block. The 'heads of Mathenesserweg' are characterised by two Turkish cafeterias. One decorated with red light, the other with blue. When you enter the district via



the Mathenesserbrug, this reinforces the linearity of the street. The light decoration has been extended to almost half of the street.

These elements are part of the neighbourhood identity because this specular and complementary way of decoration is unique. The two colours stand out but make unity together. It is clearly a landmark of the street.



## Schiedamseweg

The Schiedamseweg has a non-coherent, changing architecture. When you look at the street you see a lot of life and connected vibrance to shops and restaurants where people walk in. The shops and restaurants have open facades changing from one elevation high, approximately 4 metres up to almost two elevations high.

The changing architecture comes probably from the different years the

buildings were built. The building styles relate to the construction year. You can see that before World War II mostly bricks were used with the application of white, wood looking, framed windows. Also, the building facades have detailing in form with sometimes within and protruding facades.

The buildings which are built after war mostly look to be built with cheaper

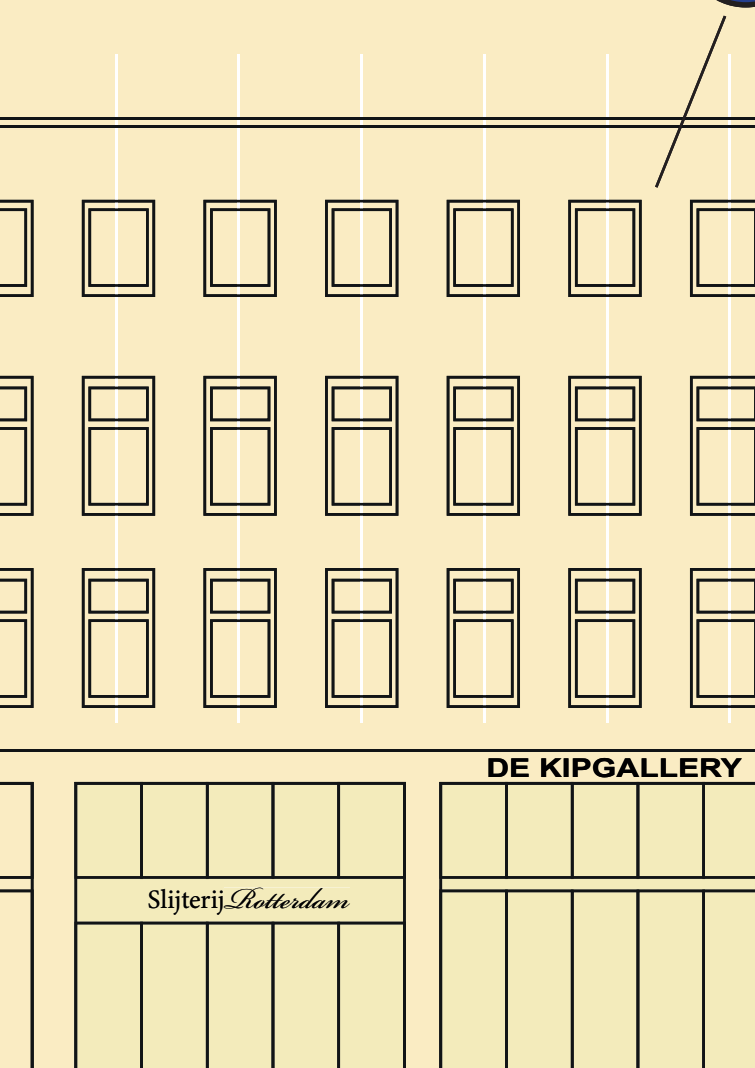


architectural rytm

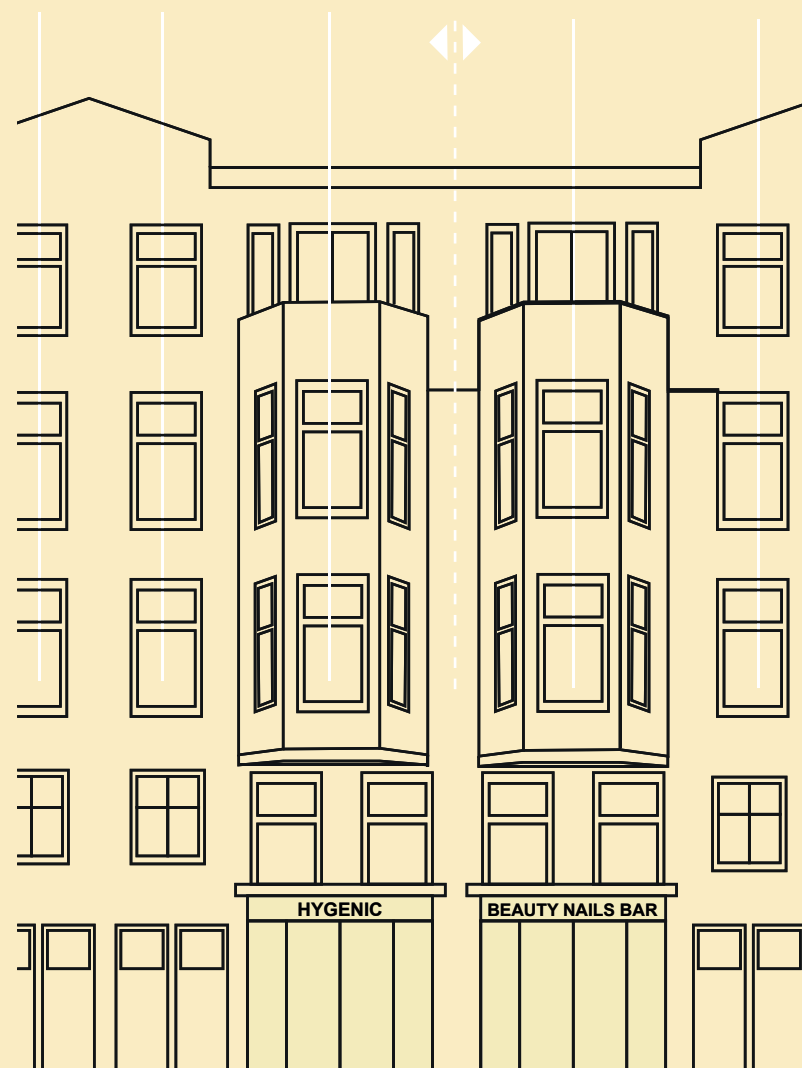
1923



built before WOII



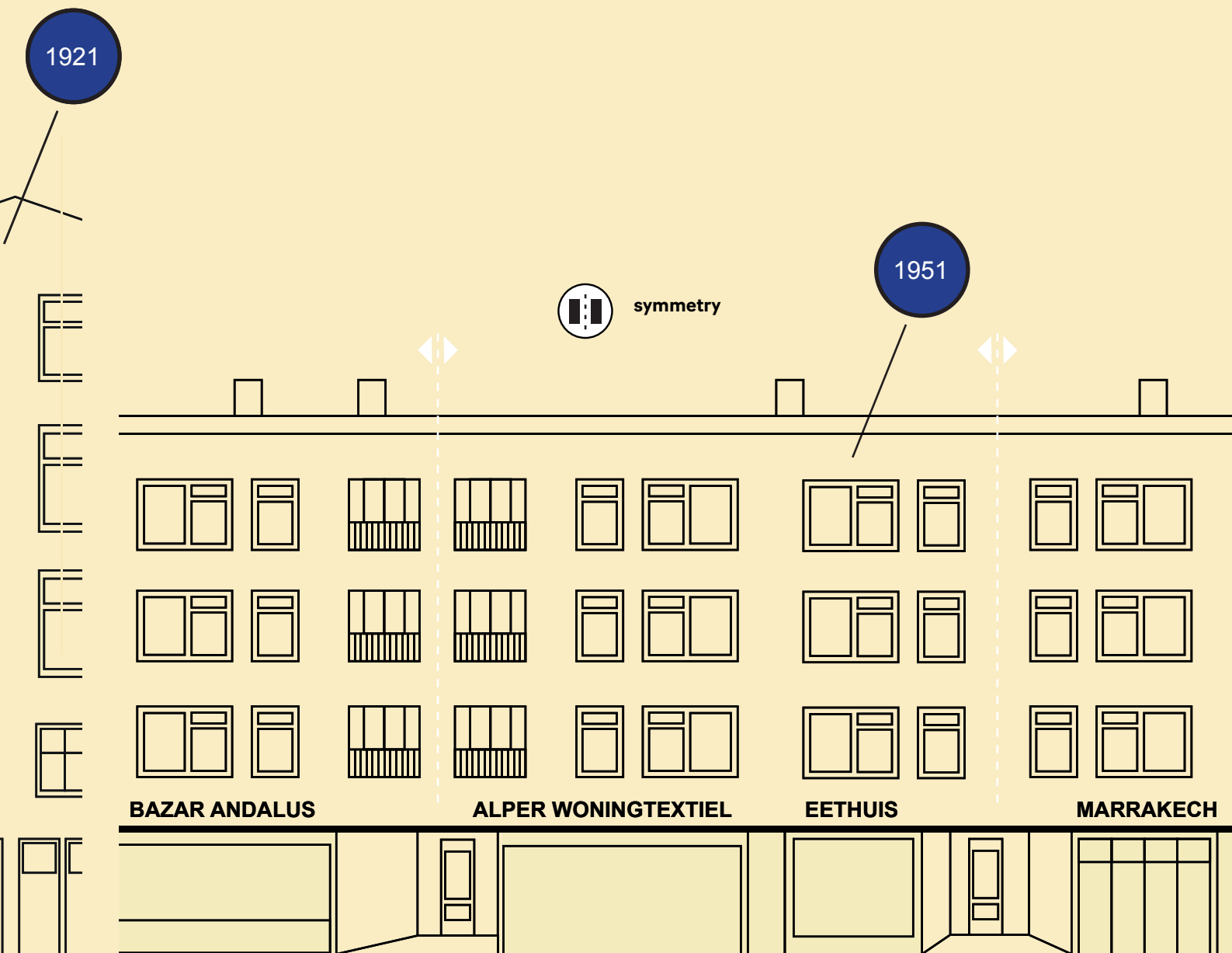
low price facilities



inside out stores

materials. The facades are flat. Even if the facades include balconies they are measured in the flatness of the facade.

Both the pre- and post-war buildings have a clear standing plinth. Above the plinth, almost all shops are marked by a written company name. These are often assisted by LED lights.



## Remarkable buildings

Not only attachment or sense of belonging towards certain remarkable buildings that typify the area can be established, also lessons can be learned for future design. The buildings described below are analysed on the basis of clear urban design or architectural character contributing to liveability, social-economic diversity or sense of belonging.

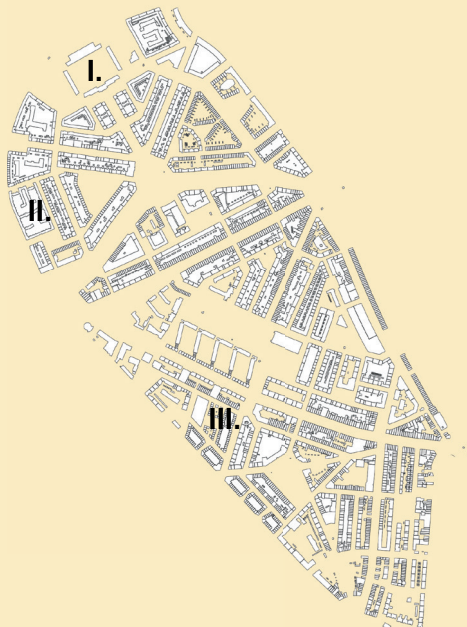


### I. Het Kasteel

The first version of 'Het Kasteel', translated as 'The Castle', was built in 1916, to a design by the architects J.H. de Roos and W.F. Overeijnder. The first football stadium in the Netherlands was opened on Sunday 15 October 1916. Only the building with the two turrets, to which the complex owed its nickname The Castle for decades, was preserved during the renovation in 1999, including the construction work by Willem Coenraad Brouwer.(Sparta Rotterdam, n.d.).

What is special about the stadium is that the facade is built in brick. This feels homey and in this way fits in the residential areas of Spangen built with strive to unity in architecture. The mostly empty parking lot, however, leads to low liveability during the day when the club is not playing.

Still, the hundred-year-old football club is literally central to Spangen. Spatially, there are points for improvement for liveability. But in function it cannot be missed because of the great cultural value it has for some.



Map 18. Remarkable buildings I, II & II.



## II. Justus van Effenblok

The Justus van Effen complex is one of the most important monuments in Rotterdam. The groundbreaking residential block was designed by architect Michiel Brinkman. The housing block, which was completed in 1922, has an upper street, an elevated residential street, in front of the houses on the first floor. This makes it the first gallery in the Netherlands. The Justus van Effen residential block is a milestone in Dutch public housing (van Helleman, 2018). It consists of a strong feeling of community and was also built to be unit.

That the complex is named a monument shows the appreciation. For people who are living there it seems to create a sense of belonging. Lessons can be taken of the architectural design for new building blocks.

It is part of the public housing and provides in that way affordable housing. It also has an interesting architectural design with a communal garden in the middle. This contributes to the social cohesion of the neighbours.



## III. Le Medi

The architecture and urban design of Le Medi are inspired by the architecture of the countries around the Mediterranean Sea and are characterised by beautiful colours, mosaics and Mediterranean ornaments.

During the development of Le Medi, the wishes of the future residents were central. The housing product is defined by habits and lifestyle of the intended target group. This resulted in a special housing concept in which all homes were offered as a basic type with the option of extending them in various ways during construction or in the future. Le Medi is based on the following essences: walled city, living around your own inner world, water element, central space, growth opportunities, gates and access and colour, materialisation and Mediterranean ornamentation (ERA Contour, 2021). It forms a unique design that is a symbol of the integration of residents and lifestyles. The aesthetics of the design blend in with the environment, but have a different design behind the doors. This can be a design direction to contribute to a strong sense of belonging.

## 5.3.1.5 Signature program

The daily life of residents and users of space is divided by the daily life activities. These activities take place in the socio-economic program of the neighbourhoods. Some of these places are mentioned earlier because they have a double value in terms of neighbourhood identity. This program takes place inside (public) buildings, but also at certain public spaces.

### Dominant axes

**The dominant axes are an example of these places with a double value. The dominant axes have in addition to important connectivity qualities, a program of shops and catering establishments. Both with their own character. This is different from an 'average Dutch shopping street'. What this character means and what the part of identity plays in this is explained further on.**



### Mathenesserweg



The Mathenesserweg is an important arterial road between Schiedam and Rotterdam. The eastern entrance is the Mathenesserbrug. Seen from the west, the entrance is next to Marconiplein. Looking at the program, it changes from mainly living in the west, to a commercial and (fast food) restaurant program towards the Mathenesserbrug. For the Mathenesserweg there is a residents' organisation focused on 1998 (BOM, n.d.). The reason for its establishment was the great nuisance of the drug trade and prostitution in the street. Mathenesserweg has a long history of problems and subsequent projects and interventions. This led to an assignment from the triangle (mayor, police chief and

chief public prosecutor) to the city marine Bospolder-Tussendijken to implement measures to reduce nuisance and structurally improve liveability. For this it is stated in 'Revised council proposal establishing the Bospolder-Tussendijken zoning plan(2021)' that it is necessary to exclude new undesirable functions and to transform as many buildings as possible into homes, since homes do not have a negative impact.

Throughout the street, especially towards the Mathenesserbrug, there are still small-scale, non-typical Dutch shops. These stores connect to the current population and provide affordable life products. In this way, the shops give the street a different character than you would see in 'typical Dutch shopping streets'.



### Schiedamseweg



The Schiedamseweg forms an important connection between Historic Delfshaven and Marconiplein. It is, just like Mathenesserweg, also an important route to Schiedam. At the street there is not only an important carroad, but it also has tram and metro lines. The street consists of small-scale, generally non-Dutch-looking shops. The shop windows are full of goods and advertising is done by means of light advertising. Multinationals or retail chains are almost impossible to find. Only two larger supermarkets: Dirk van de Broek and Jumbo. There is also a McDonalds. Unlike Mathenesserweg, almost the entire plinth is full of non-residential programmes.

### Public spaces

**The neighbourhoods have different**



**public spaces with important programs which play a big role in the everyday activities of people. Using these kind of public spaces creates the certain neighbourhood identity and the feeling of belongingness**



### **Marconiplein**



Marconiplein is an important public space in function. It is well connected to Schiedam Central train station. Within a 3 minute metro ride, you are already at the train station. The square feels chaotic and entrances are hard to find. This creates room for improvement.



### **Bospolderplein**

Bospolderplein is a central square in Bospolder. The district has not many large public spaces for people to meet, so this is probably of great added value. The main function of the square is the playground for children. Something that matches well with the current residential groups.



### **Visserijplein**



Every Thursday and Saturday this square functions as a multicultural market with about 176 stalls. Here goods are very affordable and it is a way for different inhabitants to meet. The square is an extension of Park 1943. The square is an important part of social interaction and cohesion.



### **Dakpark**



As an important part of a valuable physical environment supporting mental and physical health. The park contributes in this way to the liveability of the area. Especially because it is one of the few

larger green spaces in the immediate vicinity.



### **Park 1943**



Park 1943 is located in Tussendijken. The park owes its name to the mistaken bombing of 1943. The park is located next to the roof park against the districts, the only large green space in the district. With this, it contributes strongly to the liveability of the neighbourhoods.



## **Buildings**

**In addition to the previous mentioned identity features, there is also another important building that determines the identity of the neighbourhood.**



### **Sparta stadion**

The hundred-year-old football club is literally central to Spangen. For some, it is of great cultural value. The value of a football stadium became clear with the announcement of the new design of the Feyenoord stadium. The municipality's plan is to make Zuid Rotterdam more liveable (NOS, 2021). The resistance comes from the idea that the club with the expensive stadium is too overconfident. But the current stadium, De Kuip, is also an important part of the identity of the football club. The stadium was built in 1935 and is therefore less old than the Sparta stadium. The stadium survey by Feyenoord supporters' association De Feijenoorder showed that the majority of the members have a preference for modernisation of De Kuip. The unique atmosphere, history, Feyenoord identity and iconic location are mentioned as motives for modernising the current stadium (De Feijenoorder, 2022).

### 5.3.2 Personal attachment to place

To understand the personal attachment to place individuals are interviewed and asked about their relation to these neighbourhoods. The interviewees are longtime residents of the neighbourhood and therefore have been attached with this place to some extent for a long time. What makes this connection to the place is explored through questions about their daily activities, experiences and use of the neighbourhood.

The interviews can be found in the appendix 10.2.

Summarised, the current liveability in the neighbourhood is experienced as okay to good. Activities in the neighbourhood which are mentioned missing are functions for spontaneous meetings with people you don't know. Such as cafes. Both Jack and Aad can't quite name what it is that has tied them to the neighbourhood for so long. Aad indicates 'happening to be', where Jack also indicates that by the time he and his wife found the house this was a suitable house - but he had no further connection with the location. So reasons lay more in the quality of the house, then they lay in the quality of the neighbourhood. Jack mentions the nice house with a garden, as well as Aad mentioned the spacious houses which are sensitive to gentrification. The neighbourhood they both mention as a pleasant place to stay is the neighbourhood located on the east side of Bospolder: Oud Delfhaven.

The personal opinions on gentrification differ. Aad thinks it contributes to liveability, while Jack thinks it decreases

binding between residents. 'Making the neighbourhood more diverse is good, but bringing in too many new types of residents will decrease social relations'.

Another pertinent comment Jack makes is the comment about controlling poor livability. He argues that when more people complain about bad liveability, it will be tackled sooner. You could therefore conclude that by allowing a public space to be used more, whether stationary or moving, bad liveability will be tackled sooner.

**Conclusion:** Some of the answers from the interview can be translated directly into urban design. For example, the question about social encounters: inside cafes or on the street. Besides, Oud Delfshaven is an important part of daily activities and thus the identity of the neighbourhoods. It is said about making the residents more diverse: making too much 'diverse' of the current population composition leads to a decline in social relations and social cohesion. And at least : the more people use the poorly liveable, public space, the sooner it will be tackled and enforced.



## **JACK BIL**

Jack Bil is an active member of the BOM (Residents' Organisation Mathenesserweg) and attaches great importance to social relations in the neighbourhood. He experiences that the neighbourhood has improved over time, but is concerned about the introduction of new, wealthier populations failing. He lives in a residential group with like-minded people, young people and youth counsellors.



## **AAD DE VRIES**

Aad de Vries is 73 years old and has lived at Mathenesserweg since 1976. He sees himself as not overly attached to the neighbourhood and has established his administration office under his house. He was born also in the neighbourhood of Mathenesserdijk and made a lot of friends here. The places he likes to go the most are the cafes in Oud Delfshaven and the market at the Visserijplein.

### 5.3.3 Conclusions

Towards the end of the gentrification curve, in phase 4, the neighbourhood identity could ensure that current residents groups continue to feel connected to the place and that new residents groups feel less the need to colossally move to the gentrified neighbourhood. Therefore the neighbourhood identity is used as an assessment tool for design decisions. The tool provides a list of identity features grouped by physical identity, economical identity and social identity.

- Physical identity
- Social identity

This chapter focuses on the physical identity features, they can be grouped within themes or by scale.

- The **themes** are: history of the landscape and settlements, urban design, architectural design or socio-economic program.
- The **scales** vary from: neighbourhood scale, dominant axes, public space, builingscale to humanscale.

#### History

The history of the location caused in the physical identity mostly the current housing program and for the social identity the current low-income residents. Because of these residents the economic program is mostly based on their ethnicities.

#### Urban design

The three neighbourhoods together seem to form a unity by on the one hand the inclusion of the Delfshavense Schie to the east of the areas and by the S-weg, the Vierhavenstraat combined with the Dakpark. Together these features form the

physical barriers of the neighbourhoods in relation to the surrounding urban fabric.

The neighbourhoods are connected by the Mathenesserweg as an important connection route between Rotterdam West and Schiedam. Schiedamseweg is also an important axis in the urban fabric by connecting Delfshaven and South Rotterdam with Schiedam for cars, but also for public transport. For the Schiedamseweg, the program of these districts mainly consists of businesses and companies and for the Mathenesserweg a combination of the same program and housing.

#### Architectural design

Architects of the past have created a certain form of unity at the building level with the use of brick, which is experienced as aesthetic. Pre-war buildings are generally highly valued. Subsequent adjustments by other architects that detract from the unity of the building and the decline in the quality of materials are despised. Unity in architecture made the neighbourhoods of pleasant urban design and contributed to the architectural values.

#### Socio-economic program

The socio-economic program is clearly a distinctive element of the neighbourhoods. Not only does this contribute to a diverse living-work district and liveable design, it is also part of the daily activities that contribute strongly to the neighbourhood identity. This program with small-scale, affordable shops and restaurants are important urban principles for this thesis.

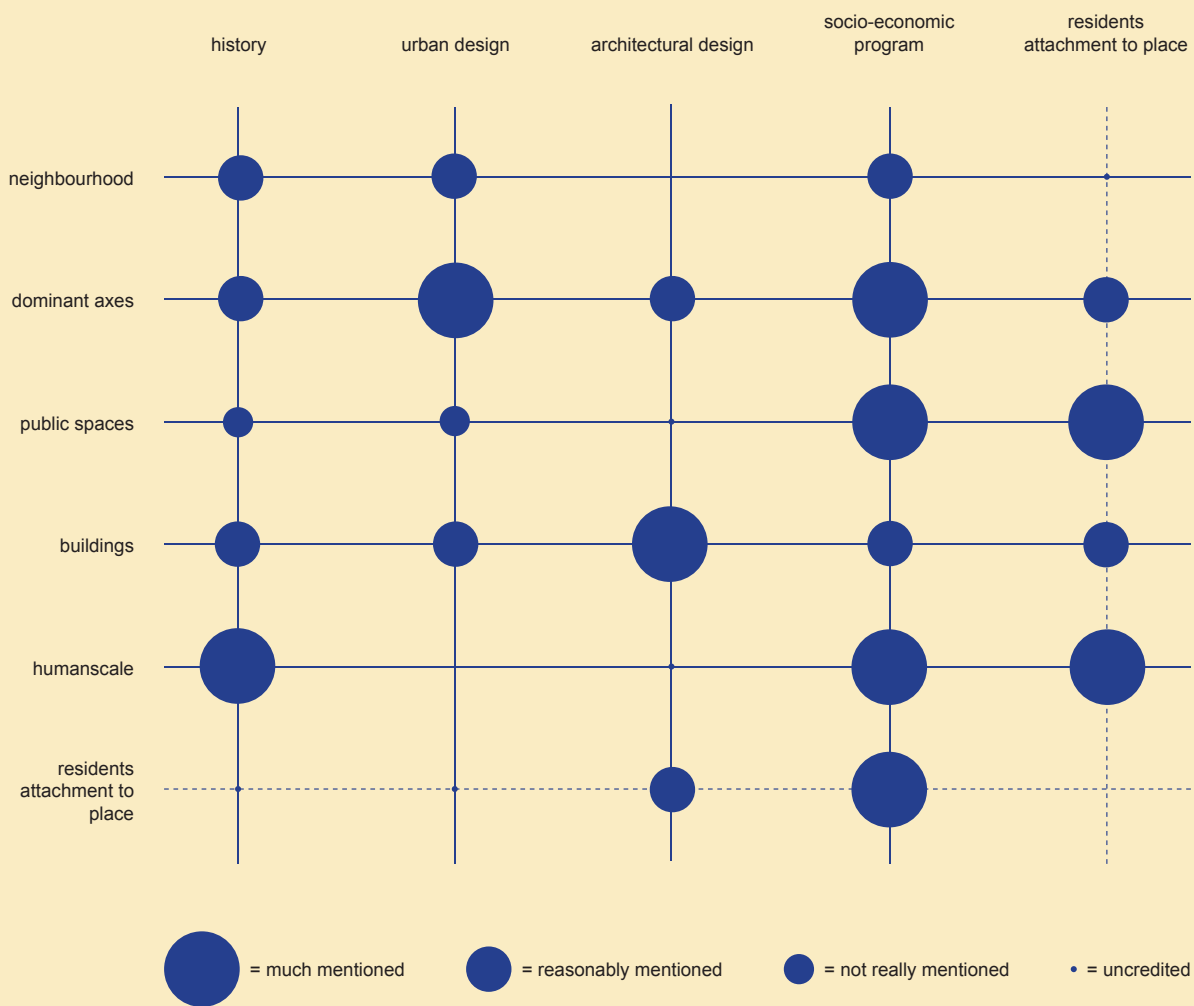


Figure 26. Frequencies for naming valuation of different scales and themes for neighbourhood identity contributions(Author, 2022).

### The validation contribute to neighbourhood identity

By scaling the identity features under these themes and visualising what scales they are most present on, the table above shows relevance of the themes and scales for the current neighbourhood identity.

The history of the place was important for the current social and physical identity. It may not be mentioned often by the current residents directly, but indirectly by mentioning validation of the architectural design it can be determined. The housing

program especially overlaps both social as physical aspects of the design.

Moreover, socio-economic programs stand out. It is mentioned variously in all kinds of scales. It is also called the most in feeling of attachment for residents.

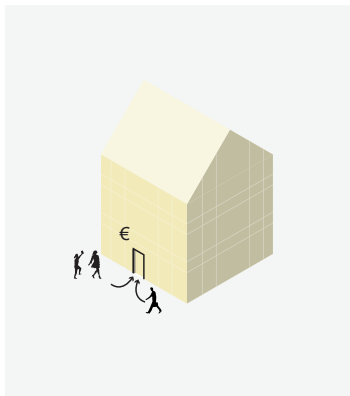
The program of public spaces is also mentioned a lot and plays a big role in everyday activities. It is valued strongly by long-time residents.

## Program of action

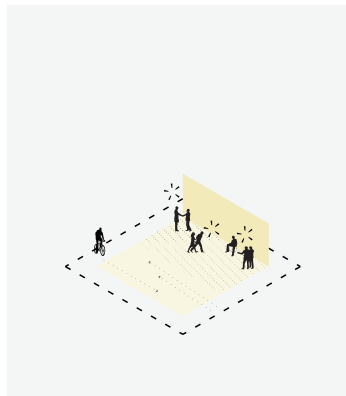
The program of action is mainly based on the 3 phases in the gentrification curve which focuses on urban design. These phases are about offering a housing program, creating meeting places and a socio-economic program that is part of the current neighbourhood and its inhabitants.

These phases have been investigated on the basis of the social and physical identity

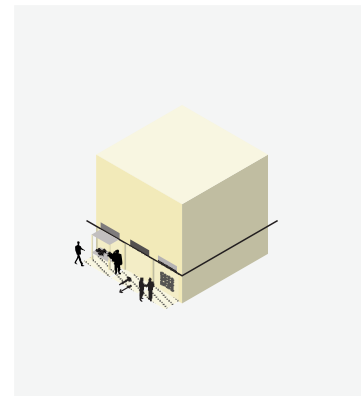
of the neighbourhoods. It can be concluded from this that the neighbourhood identity that must be preserved and perhaps even strengthened consists of offering the same characteristic program in the plinths, characteristic housing program and frequently used public spaces. These mainly take place in everyday activities and distinctive characteristics of the neighbourhood.



The affordable **housing stock** is of great added value to the neighbourhood identity on various scales. It is on a medium scale of about five floors high. The architecture contains a sense of **unity** and has a closed facade with private gardens or a **collective public space inside** the block. New design will have to guarantee these living qualities and preserve current social housing program and build more private owned houses for the free housing market.



The **lively and vibrant public spaces** exist for activities that belong to the current resident groups, but also offers space for meetings between current and new resident groups. The public spaces created by inside out program. Which creates accessible design for everyday activities and stimulating encounters between residents. Also, slow traffic is stimulated instead of fast traffic for liveable design.



The **typical small scale economic facilities** are located in **plinths**. This program mainly ensures a influences of the historic demographics of current residents. Colorful and busy facades attract and its goods take place both behind the glass and on the street. These kinds of small businesses and their characteristics should be promoted in both current and new design. Especially the preservation of affordable products.





## 5.4 Diversifying socio-economic program

Now that important features for the identity have been set out, it is possible to look at how the urban program can be mixed so that important identity qualities that ensure the sense of belonging are guaranteed. For this chapter the following sub question will be answered:

***SQ4: How can the socio-economic program be redesigned to realise improved liveability and contribute to socio-economic diversity?***

The urban socio-economic program will have to match current identity features, together with providing a diverse range for the needs of a mixed population. In doing so, the current program has to be analysed to be able to see where additions or adjustments are required to meet a viable and diverse urban design. In this chapter, the current program is explained in more detail on the basis of the housing, public space and (public) facilities categories referred to in chapter 5.1.

Easily placing and attracting new target groups and their wishes is not enough for sustainable urban development. There will have to be a program that also contributes to the creation of social cohesion.

Leefbaarometer measures on five different indicators: housing stock, physical

environment, facilities, residents and safety. In order to convert these into urban indicators that are related to the socio-economic program, this chapter looks at: housing stock, physical environment and facilities. In this research they are ordered slightly differently, namely: housing stock, public space and (public) facilities.

# 5.4.1 Housing stock

To achieve socio-economic diversity, it is important to adjust the housing stock by varying or adding to it. The ownership plays a major role in affordability and therefore also for spatial justice. The difference between rental and owner-occupied houses is also important for attracting a diverse population.

## 5.4.1.1 Ownership

You can divide the ownership into three main groups: rent-corporation, rent-other and private buy. Housing corporations must provide rental housing for people with lower incomes. This is the most important article for housing associations from the Woningwet 2015(Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2021a).

Nearly 70 percent of all rental homes are owned by housing associations(Centraal Bureau voor de Statistiek, 2020). The most common housing Corporations

in the neighbourhoods are Woonstad, Havensteder, Municipality of Rotterdam and Woonbron.

**Conclusion** - Housing corporations provide affordable housing. It has already been described how almost entire streets are bought up by real estate developers to rent it out to students for relatively high prices. With this the social cohesion is thereby endangered. Looking at the maps, the main roads are almost entirely private. By switching between corporations and private ownership, the identity of the street could be preserved and this also opens up socio-economic diversity.

### Legend

- = private
- = Woonstad
- = Havensteder
- = municipality of Rotterdam
- = Woonbron
- = other corporations
- = unknown

### Ownership

Private, corporate or municipal



Map 20.      Ownership detailed, clustered and generalided (Author, 2022).

### 5.4.1.2 Rent versus owner occupied houses

To achieve socio-economic diversity, it is important to see the perspective of the housing stock in Rotterdam in relation to the neighbourhoods. By comparing the number of rental or owner-occupied homes, it is possible to gain insight into what adjustments may need to be made to the housing stock.

**Conclusion** - In order to achieve socio-economic diversity, it has previously been said that the statistics of Rotterdam should be used as normal. This will mean that the housing stock will have to adapt so that it can come closer to the

quantities of Rotterdam. However, it was also previously described how rental corporations contribute to affordable housing and, more than market housing, can maintain a stable price. A design decision could be by not detracting from housing associations, but by trying to build additional private homes.

#### Legend

- = Nederland
- = Rotterdam
- = Delfshaven (wijk)
- = Bospolder
- = Tussendijken
- = Spangen

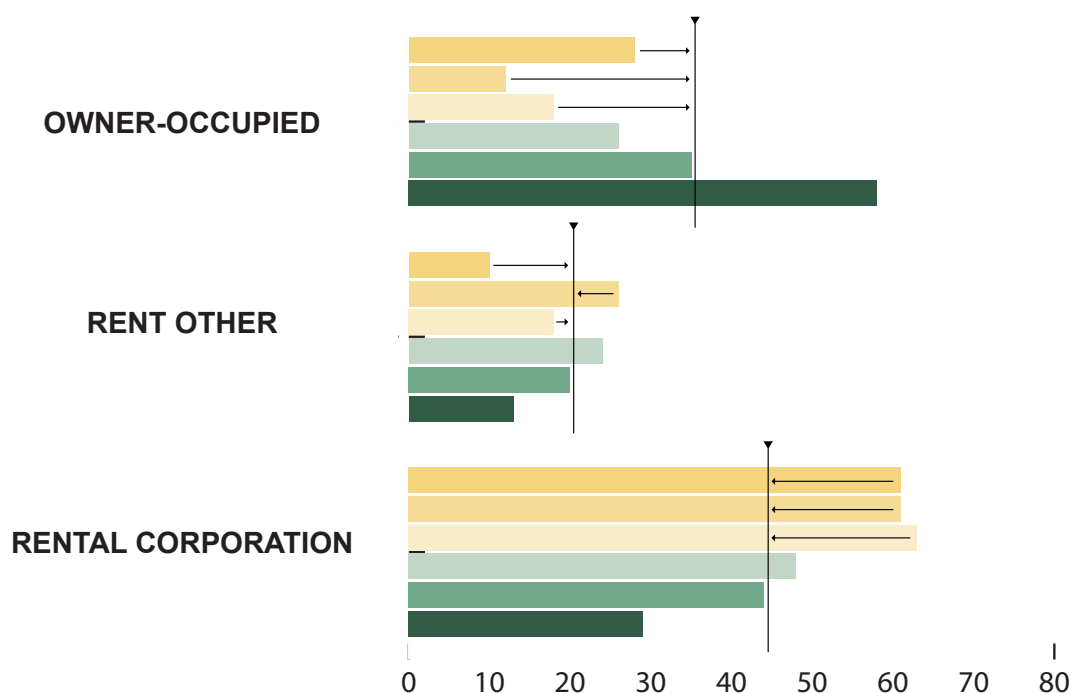
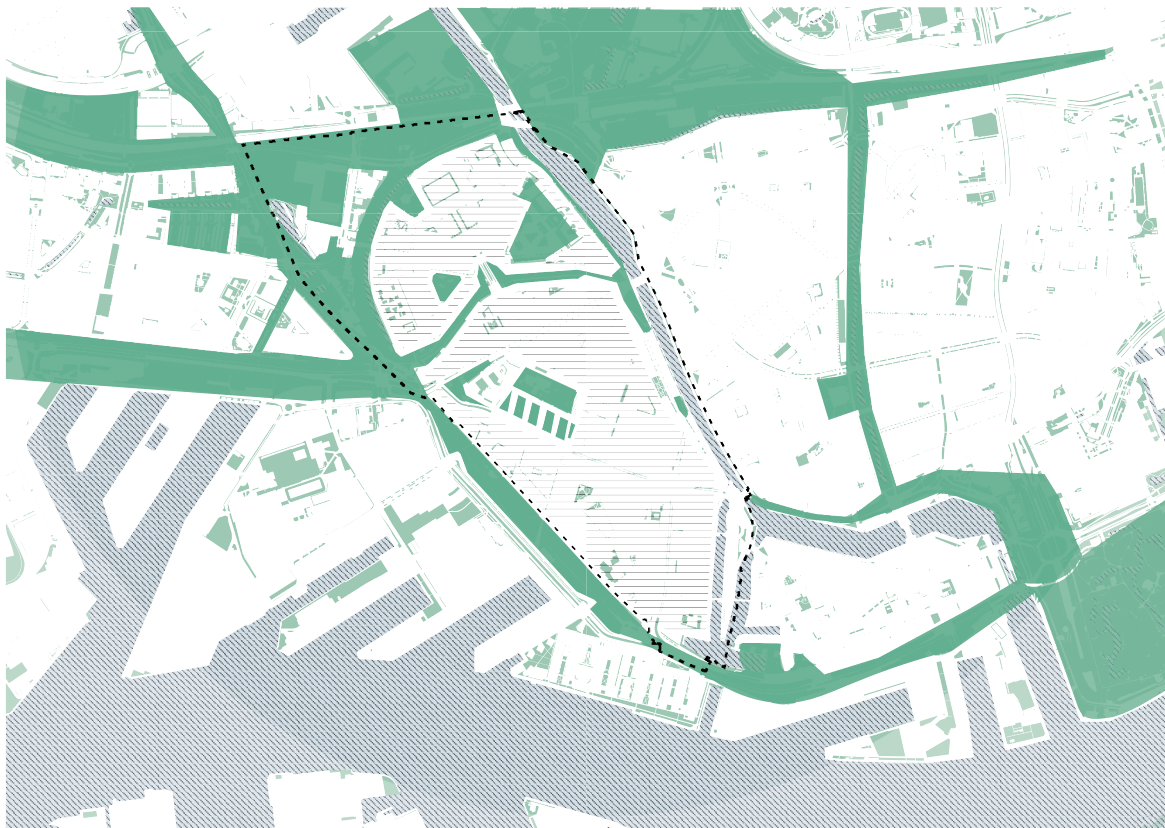


Figure 27. Distribution of amount of buy, rent-other and rental corporation housing (CBS, 2019) (Author, 2021).



Map 21. Green-blue structures in and surround the neighbourhoods (Author, 2021).

## 5.4.2 Public space

Public outdoor spaces are spaces that are open to everyone. You do not need permission to enter these areas. They can be divided into green-blue structures and grey structures.

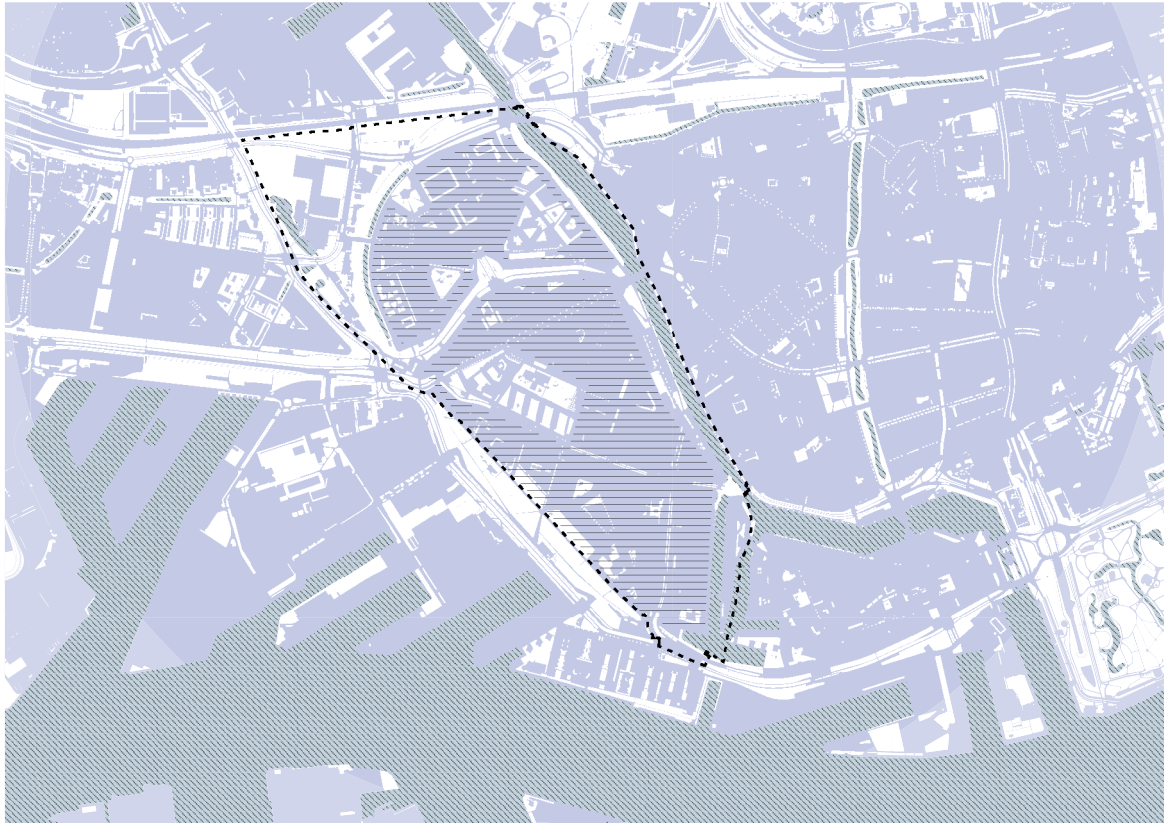
### 5.4.2.1 Green-blue structures

As mentioned, green-blue structures can be divided into green and blue. The green structures are about surfaces that contain 'green', this is about vegetation. Green is an important element for liveability. With the increasing Urban Heat Island, the ratio of green and grey is becoming increasingly important for liveability. Due to too much paving, it can become relatively much warmer in the city than in the rest of the country.

Water also contributes to liveability. It can provide cooling, but also reduce noise. It can be used for recreation as well as for transportation.

#### Legend

- = green structures
- = green connections
- ▨ = blue structures
- = outline of the neighbourhoods



Map 22. Grey structures in and surround the neighbourhoods (Author, 2021).

#### 5.4.2.2 Grey structures

Opposite the green and blue structures are the 'grey' structures. These grey structures consist of main roads and side roads, but also walkways, bicycle paths and pavement around public transport or for the placement of (public) transport vehicles. In addition, the tiled squares under the grey structures are also divided. These grey structures are all designed primarily for the movement of humans. So its main function is transportation, but it is also partly used for recreation or parking.

Map 21 make visible how the neighbourhoods are linked within their surroundings. The Mathenesserweg, Schiedamseweg and Mathenesserdijk are important axes for the accessibility of the neighbourhood. The north of Spangen on the other hand looks remote and disconnected.

#### 5.4.2.3 Functional public spaces

The green and paved public space is shown on the opposite page on Map 21. Some public areas have already been discussed and validated above. The others could contribute with redevelopment to an urban development program that could bring the current and new target groups together.

##### Legend

- = grey structures
- = grey structure inside neighbourhoods
- = blue structures
- = outline of the neighbourhoods





#### Legend

- = public green spaces
- = communal inner spaces
- = mostly paved, public squares
- = road structure
- = public transport lines

Map 23. Public spaces (Author, 2021).

### 5.4.3 Facilities

Services can be divided into commercial services and non-commercial services. These form a destination for residents of and travellers to the neighbourhood. Mapping these two differently, is not of added value. What that is, however, is highlighting the streets that do not have residential as their main function. These are the roads that are also important in the contribution of accessibility. This relationship is an important finding. As described in 5.4.2.2 Grey structures, Spangen is not that accessible.

The Mathenesserweg and Schiedamseweg have been discussed extensively before. It can be seen how the Grote Visserijstraat mainly consists of functions other than housing and that the Spanjaardstraat also has many functions on the side of the Schiedamseweg, but that as the street runs to the south, these functions change into housing. These roads are shown on the map on the right (Map 22).

Mathenesserweg and Schiedamseweg have previously been named as important elements for neighbourhood identity. These two roads should continue to maintain their liveable aspects. By placing new functions elsewhere, purchasing power in these streets may decrease and with it the liveability. It must therefore be carefully considered that if a new program is introduced, additional financial support will also have to be realised. For certain program it means that additional residential buildings will have to be added.

The abstraction of map 22 leads to Figure 27 in which the residential program (in grey) is shown opposite the commercial

program. While there is indeed a different program in Tussendijken and Bospolder, it is clear that in Spangen there is clearly less non-residential program. This is supported by the graph in figure 28.



Figure 28. Residential program versus commercial program (CBS, 2019) (Author, 2021).

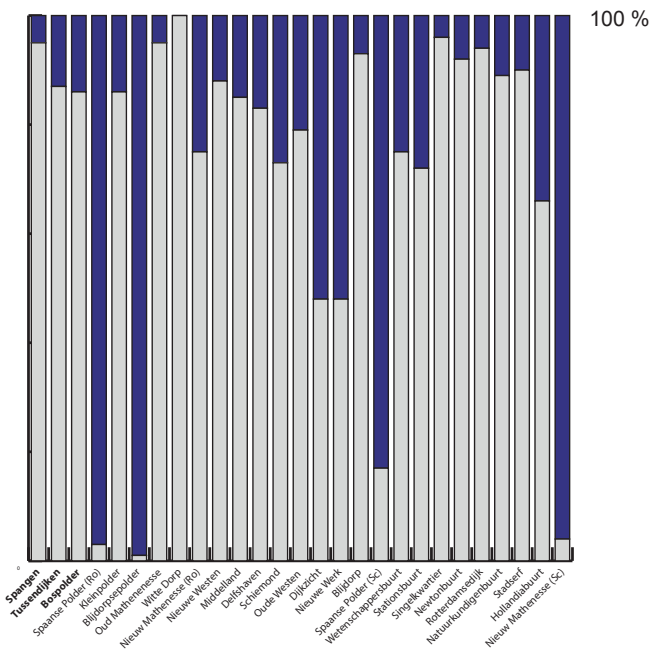
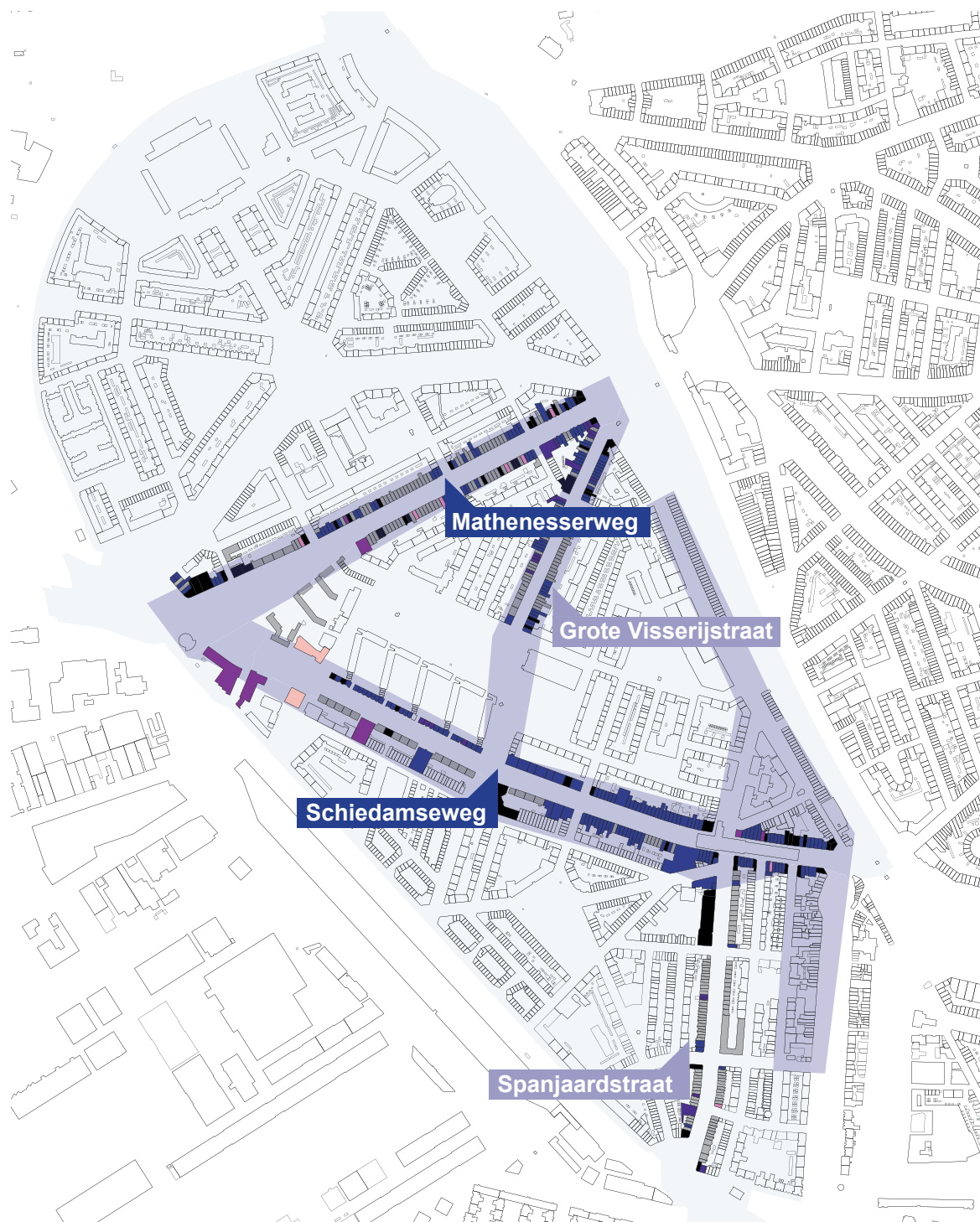


Figure 29. division of living and working (CBS, 2019) (Author, 2021).





#### Legend

- |                       |                          |
|-----------------------|--------------------------|
| ■ = meeting function  | ■ = lodging function     |
| ■ = health function   | ■ = educational function |
| ■ = industry function | ■ = sport function       |
| ■ = shop function     | ■ = residential function |
| ■ = office function   |                          |

Map 24. Functions at the main and secondary road structures in the neighbourhood (Author, 2021).

## 5.4.4 Conclusions

At the right in Map 25 the conclusion map of the current socio-economic situation in relation to the urban development program is shown. Active, liveable axes are clear to distinguish. The connections with the environment are also clear. Where little seems to be happening, there are interesting places for redevelopment.

The sub-conclusions per chapter together form the basis for chapter 5.6 design. They will use this to make lending decisions for the strategic master plan and its visualisations. They will also become part of the initial form for the final design guides.

The following statement can be described after the validation of the existing socio-economic program in relation to the research theme:

**Current Housing stock** - There is a clear division of ownership in the neighbourhoods. The houses are generally privately owned along major axes and the northern water. Spangens largest owners are Woonstad en Tussendijken and Bospolder Havensteder. These together form important stakeholders.

Housing associations are generally able to maintain a more stable rent than occupied private homes. Since real estate developers are currently not limited to buying these buildings and re-letting them for higher rents.

Nevertheless, the comparison of home ownership with Rotterdam indicates that the number of owner-occupied homes in particular will have to increase in order to

achieve a socio-economically inclusive community. That is why it will be necessary to look at places where new homes can be built, or at buildings that are outdated and need to be replaced. This is discussed further in chapter 5.5.

**Public space** - The big amount of grey structures is positive towards an accessible design for cars, but also creates inconveniences toward liveability for pedestrians and cyclists. Big grey spaces can turn into heat islands and they also resonate sound.

Looking at the ratio of green-blue and grey in the neighbourhoods, it can be concluded that there is a need to add greenery, especially in Tussendijken. This will contribute to the liveability of the area.

Remote areas create an unsafe feeling, which reduces the liveability. Opportunities will have to be looked at how this north of Spangen can be better reached.

**Facilities** - The facilities form the characteristic streets, mainly Schiedamseweg and Mathenesserweg. These characteristic streets must be preserved. For the development of other shopping streets, it is necessary to look for support for creating a new lively program for a more lively street in Spangen Noord, for example. This is necessary to allow the characteristic streets to retain their character.



**almost no non-residential program in  
Spangenberg**

**more density in facilities towards  
Mathenesserbrugg**

**shopping street Schiedamseweg**

0 100 200m N

Map 25. Conclusion map current status of the socio-economic program(Author, 2022).

## Program of action

A program of action has been drawn up on the basis of the findings described in this chapter. These are written for the parts: ownership, green-structures, connections and work-live division.



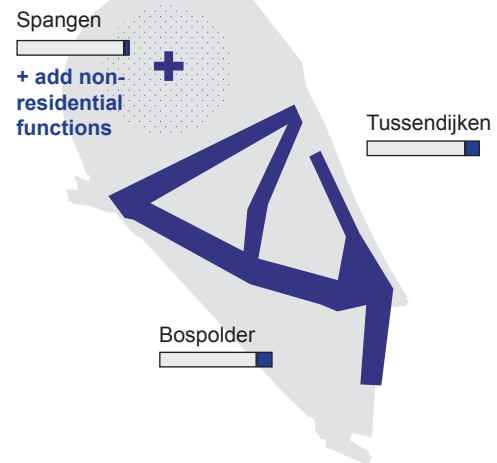
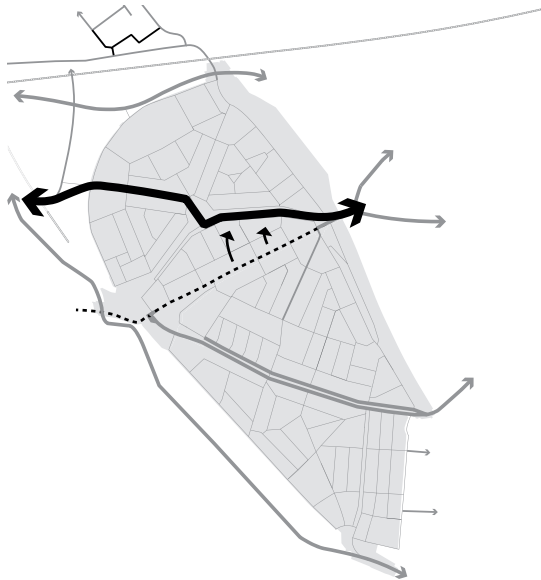
### Ownership

- A large part of the housing stock is in the hands of social housing corporations, which contributes to the composition of the inhabitants and thus to the social neighbourhood identity.
- Private owner-occupied homes are also desirable in order to achieve a diverse and sustainable population.
- Rotterdam has about 45% social housing. The neighbourhoods around 60. The starting point is to keep the balance to the maximum of 55% social housing /45% of private owned.
- In order to realise more owner-occupied homes, additional buildings will therefore have to be built.

### Green-structures

- The neighbourhoods are surrounded by green structures, which will be safeguarded or even reinforced.
- There is little greenery, especially in Tussendijken and Bospolder. Greening is desired.
- Spangen has a good green axis through the Mathenesserdijk. Preserve these and, where possible, make them more liveable.





## Connections & accessibility

- There is no important, direct connection between the Mathenesserbrug and Spangen.
- Introduction of this improved, new axis offers several possibilities for a more liveable urban design.
- In order to strengthen the axis of the Mathensserbrug to Schiedam, the emphasis on the Mathenesserweg will be shifted to that of the new axis. For example, by removing the economic program from the Mathenesserweg and placing it on the Mathenesserdijk.
- This means that consideration should be given to the redesign of the entrance in Spangen Noord-West.

## Work-live division

- Compared to other neighbourhoods, the working-living ratio in Spangen is mainly based on housing.
- For the realisation of a socio-economic diverse population and liveable space program diversification is desirable.
- Introducing new, non-residential, programs leads to a more socio-economic diverse neighbourhood.

## 5.5 Spatial opportunities and urgencies

As described in chapter 5.4, the housing stock must be diversified. For this penultimate research chapter, an answer is given to the sub-question:

### ***RQ5: What spatial opportunities and urgencies are there to realise a sustainable liveable neighbourhood design?***

In order to realise sustainable urban development and renewal, it is important to map out which elements are due for renewal and where there is room to make a change. These can be divided into urgencies and possibilities.

Economic development determines construction production, but construction also depends on government housing policy. Van Hoek then refers to spatial planning policy and the regulation or over-regulation of the housing market. ‘Spatial planning is absolutely number one,’ he says. There are too few construction sites. ‘During the discussion about concrete locations, you keep seeing the same dogmas. We have to densify the inner city, you are hardly allowed to use the green space, we have to build close to stations’(Clahsen & Verbraeken, 2021).

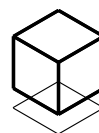
Schreuder also states (2022) “Building a lot of houses is not the only solution to the housing crisis”. He describes how others point to sharing or splitting homes. Gerard van Bortel: „The Dutch live quite spaciouly. Every Dutch person has about 65 square metres per person. Those square metres are underused. Many people live as a couple in spacious single-family homes.

For urban development it is therefore important to look at what is possible and what is desirable with the housing stock. This includes looking at the transformation of:

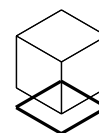
- the **building stock**
- or **public space**.

In Figure 29 on the right, options are described for adjusting the building stock or public space.

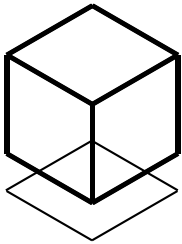
#### **BUILDING STOCK**



#### **PUBLIC SPACE**

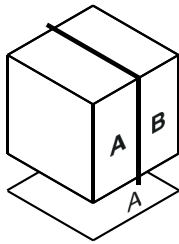


# BUILDING STOCK



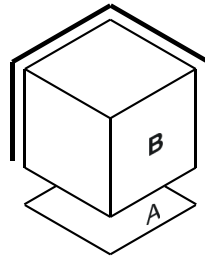
## new construction

New buildings are being built on undeveloped land. A loss in public space but an addition to the housing stock.



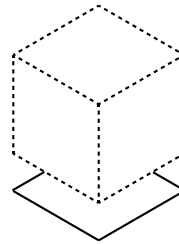
## division

Splitting houses provide houses for multiple family compositions. It reduces the housing stock but increases housing differentiation.



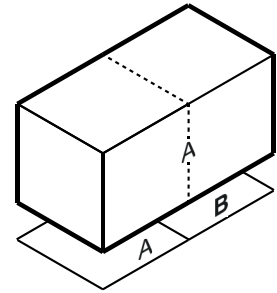
## transformation

Houses that are not of the desired quality or furnishings can be transformed. In addition, the socio-economic program can also be (partially) changed.



## demolition

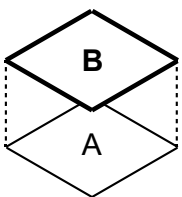
Demolition of houses can create new (public) outdoor spaces, but decreases housing stock but could increase housing differentiation.



## combination

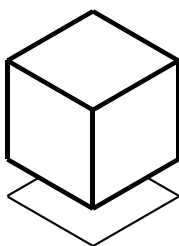
Combining houses decreases the housing stock, but it increases housing differentiation.

# PUBLIC SPACE



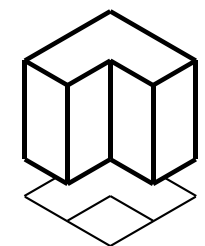
## program change

The current program can be (partly) changed.



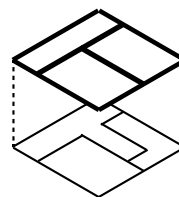
## build on

The space can be used for additions to the building stock.



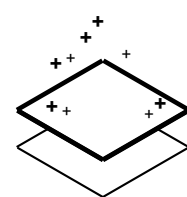
## build partly on

The space can be used for additions partly building stock, partly public space. These can reinforce each other.



## change network

Urban network can be changed on a larger and smaller scale. This promotes accessibility and willingness to reach.



## improve program

A not very drastic change is to change the quality of the current program. By simple interventions, the functionality can be greatly increased.

Figure 30. Options for customizing the building stock (Author, 2021).



# 5.5.1 Urgencies

The urgencies for creating sustainable development for a liveable environment concern the quality of the housing stock and the quality of the public space. That is why the dilapidated buildings and Urban Heat Island are examined in the following chapters.

## 5.5.1.1 Dilapidated buildings

To contribute to liveability the physical state of housing should be of a certain quality. A building does not have a fixed expiration date. In addition, new homes are often of better quality, so they can be occupied for longer or used for other functions. Westeneng states that (2018) many houses from 1900-1920 really need a serious makeover, he says. “That also applies to the smaller homes from the 1950s.”

Below in Map 27 the construction years of the buildings are shown. They are grouped into three.

The buildings are older than 1920 years. These homes are probably of reduced quality, but may carry a characteristic identity with them.

The houses after 1920 to 1980 are already of poor quality. After the Second World War, a large number of buildings were built that were constructed quickly and functionally. These buildings often lack a certain form of technical quality, but also social quality. These are both reasons to look at this part of the housing stock for renovation or perhaps rebuilding.

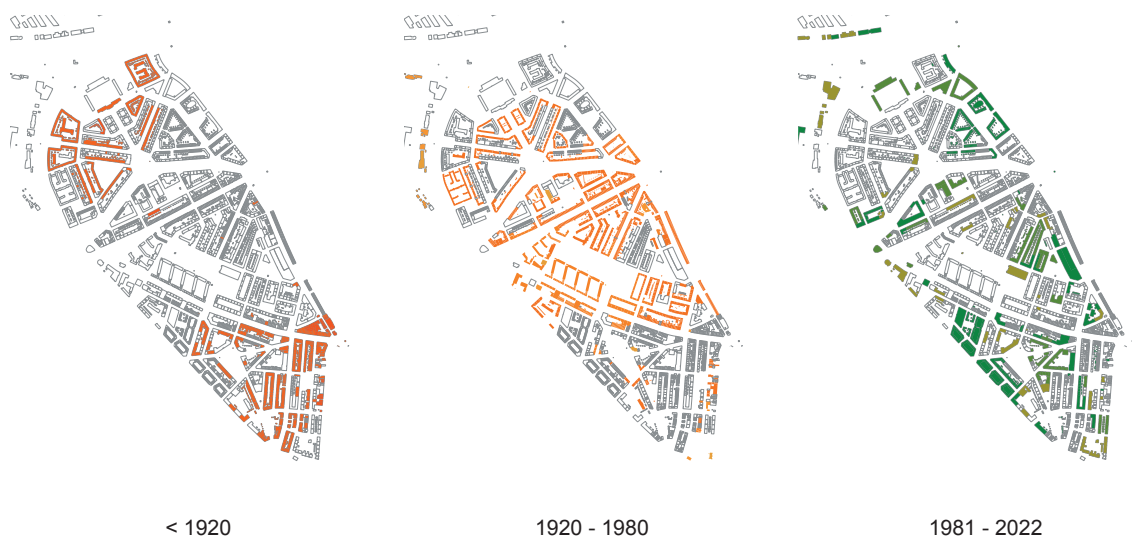
It is sustainable to maintain buildings that are still young and good. That is why the homes from 1981 are marked in green. These buildings will be tried to preserve.

### Legend

■ = < 1900	■ = 1945-1960	■ = 1980-1990
■ = 1900-1920	■ = 1960-1970	■ = 1990-2000
■ = 1920-1945	■ = 1970-1980	■ = 2000 >

### Building age

Year of construction



Map 26. Construction years (CBS, 2019) (Author, 2021).

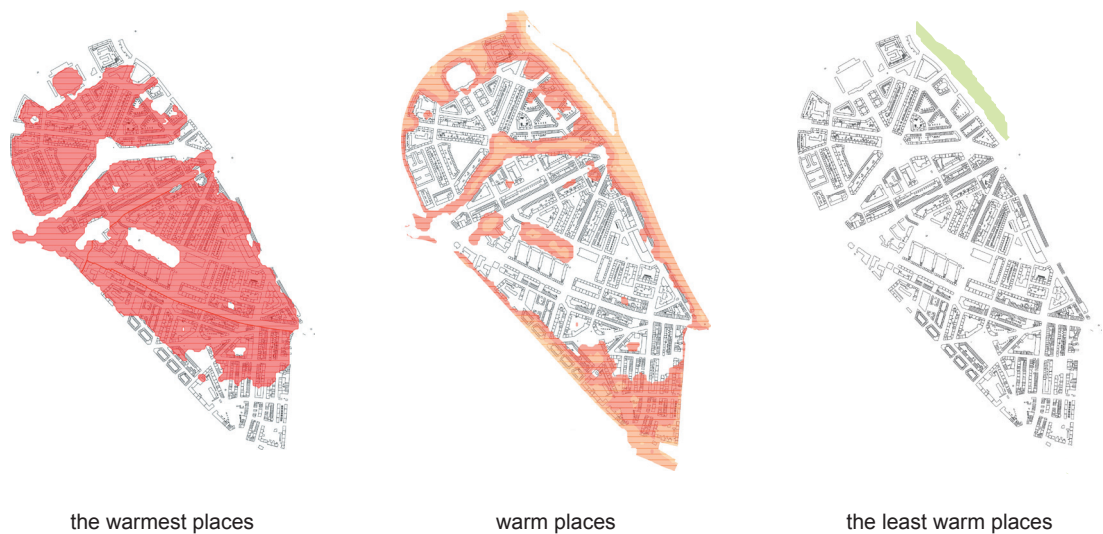
5.5.1.2 Urban Heat Island

The maps displayed in Map 28 show the temperature difference between urban and rural areas in the Netherlands. This is also known as the urban heat island effect or urban heat island effect (UHI). The maps indicate on a scale of 1 to 5 how warm the surfaces remain in times of heat. Buildings, houses, roads and stones retain a lot of heat. Large cities on the map of the Netherlands show red. Cooling is important for the quality of life in a neighbourhood. On hot summer days, the difference can be much higher than a few degrees. Due to the heat island effect, it cools down very slowly in the city in the evenings. Especially babies, children and the elderly who live in the city can suffer from a high temperature at night. The areas indicated in red are areas in which the public space or roof landscape is in need of cooling. This can be done by adding greenery or water.

**Legend**  
scale

■	= 1
■	= 2
■	= 3
■	= 4
■	= 5

Urban Heat Island



Map 27. Urban Heat Island (Geodan, n.d.) (Author, 2021).

## 5.5.2 Opportunities

In concept you have five options to add up to the buildingstock or building differentiation: New construction, division, transformation, demolition or combination of existing buildings. Some of these options are more or less related to urban design or architectural design. For this thesis the focus lays on urban design. Still, suggestions could be made for buildings which are for some reason not in need of urban change but more in need of architectural change.

To create an overview of what spatial opportunities there are to contribute to sustainable urban renewal two important aspects are mapped: building-less spaces and the connectivity of the neighbourhoods.

### 5.5.2.1 Building-less spaces

In a nolli map, public open spaces are plotted against private buildings and private outdoor spaces. This map immediately shows which spatial open spaces are still available to build on. In Map 28 are the non-built public spaces shown together with important elements for the neighbourhood identity which should be preserved. The area in Spangen North-West in particular is clearly attractive for redesign.

#### Legend

- = private inner space or surroundings
- = public space
- = important identity axes
- = important identity public spaces in appearance
- = important identity public spaces in function

### Open (public) spaces

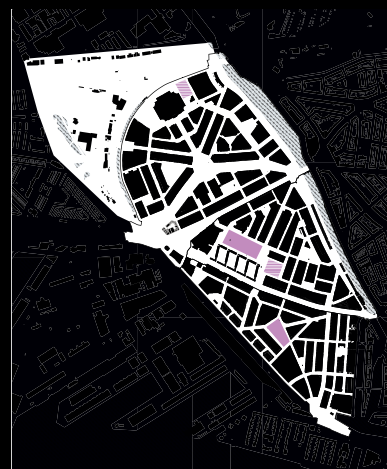
nolli map with potential open places to add buildingstock



all non-built public spaces



all non-built public spaces without neighbourhood identity according chapter 5.3



all non-built public spaces without neighbourhood identity public spaces according chapter 5.3

Map 28. Public open spaces (Author, 2021).

### 5.5.2.2 Connectivity

Earlier in chapter 5.4 the grey structures that connect the area to the rest of the city are discussed. The primair, secondary and tertiary connection roads with the surroundings are shown in Map 29.

Since segregation is about cutting off certain populations from the rest of the city, connectivity could be a solution to include the community with the surrounding.

Looking at Figure 32 you can see where the ‘unlinked spots’ are. The Dakpark at the south west is a true blockage. The North of Spangen is connected through this kind of tertiary roads and are not really dominant. This could be the reason Spangen does not have much liveliness in the streets.

**Legend**

- = public spaces on site — = connection public spaces
- = public spaces nearby ➡ = public transport connection
- ▬ = important connecting road

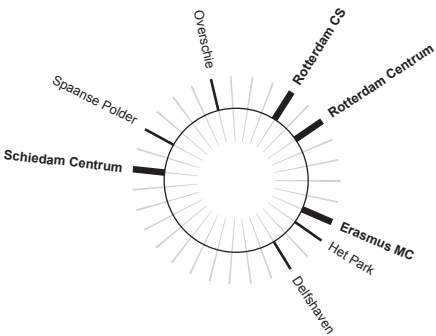


Figure 31. The surrounding connectivity (Author, 2021).

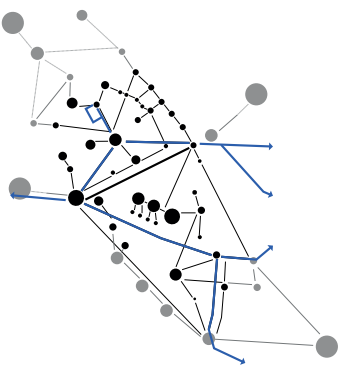


Figure 32. Schematic connectivity with the environment (Author, 2021).

### Main axes, secondary axes and tertiary axes

Dominant urban structure



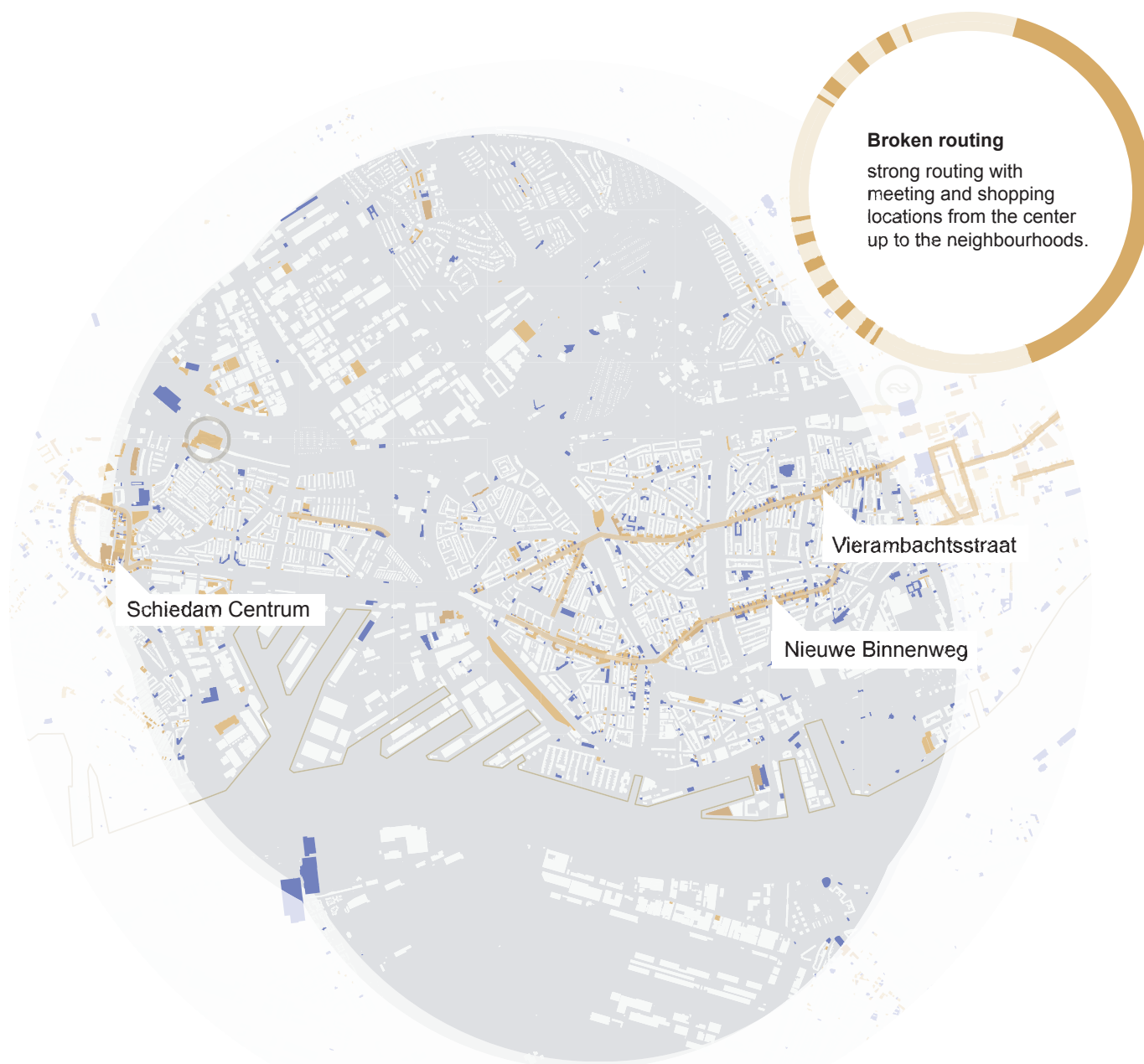
Ac. 1

Ac.2

Ac.3

Map 29. Dominant urban structure (Author, 2021).





**Nieuw Mathenesse:** The Nieuw-Mathenesse business park is being overhauled. An important driver is the agreement to add 6,000 homes in Schiedam by 2030. There will also be a maximum of 40,000 m2 of work space, so that an inner-city residential and work area will be created.

the neighbourhoods: Vierambachstraat and Nieuwe Binnenweg. These streets partly become Mathenesserweg and Schiedamseweg. From Schiedam Centrum there seems to be a start from the Franslaan. But there seems to be a gap in this structure between the Mathenesserweg or Schiedamseweg and the Franslaan.

#### 5.5.2.4 Continuous socio-economic structures

If you look at the shopping street structure of Schiedam and Rotterdam, you will see that two shopping streets run from Rotterdam Center towards





### 5.5.2.5 Conclusions

The combination of the developments in the area and the existing economic axes from both city centres makes it an opportunity to connect them. This means that for redesign there are opportunities in shifting the axis of Mathenesserweg to that of Spanjaardstraat or towards the new M4H development area.

## 5.5.3 Conclusions

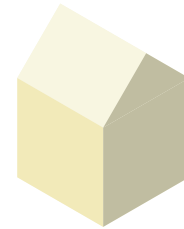
The design decisions about current urban design need to be changed for the benefit of the research aim. Qualities are tested essentially on achieving liveability and a socio-economic diverse program with in mind preserving or reinforcing neighbourhood identity.

**Urgencies** - The current building stock is an important aspect of the neighbourhood identity and will have to be preserved or renovated with care. For the other outdated buildings in future an appropriate program will follow the demand for a housing program described in chapter 5.4 for the population groups described in chapter 5.2.

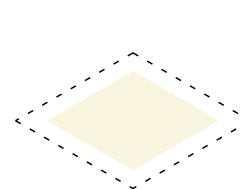
**Opportunities** - To contribute to liveability and socio-economic diverse population it is important to connect the neighbourhood to the rest of the city. Strengthen the connection of Spangen with the surroundings therefore could be a design proposal fitting in the research and design aim. In this same area, there is a spatial opportunity for redesigning public space with the low quality or added value to the neighbourhood identity.

By applying this to the three aforementioned pillars for physical urban tools for liveability and socio-economic diversity (Chapter 5.1.2) and physical urban tools for liveability and neighbourhood identity (Chapter 5.1.3). In conclusion, the maps show the current layout combined with strategic proposals for decisions for the redesign of the

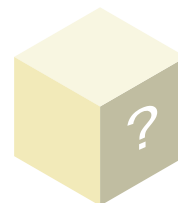
- building stock,
- public space
- and facilities.



building  
stock



public  
space



facilities





### 5.5.3.1 Buildingstock

Looking at the opportunities and necessities for adapting the building stock, we looked at the unbuilt areas that are not tied to the neighbourhood identity. An important place that comes to the fore is the area to the north west of Spangen. Options for urban design for adapting public space are mainly for construction or demolition and for the current existing building stock: adjusting in size or fitting in a new program.

Looking at the outdated housing stock, there are several buildings that need improvement or renovation now or in the future.

Additional construction in Spangen North-West can contribute to the densification of the area and thus to an increase in the supply of homes. For example, the demand for owner-occupied homes to contribute to socio-economic diversity. In this way it can also contribute to housing stock differentiation and program differentiation.

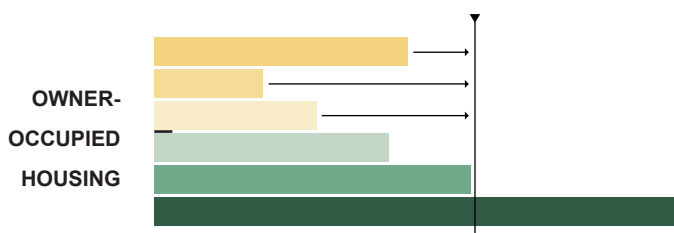


Figure 33. Distribution of amount of owner-occupied houses (CBS, 2019) (Author, 2021).

#### Legend

- = Nederland
- = Rotterdam
- = Delfshaven (wijk)
- = Bospolder
- = Tussendijken
- = Spangen

#### Legend

- ▨ potential densification area
- non-public space or building
- build < 1920
- 1920 - 1945
- 1945 - 1965
- 1965 - 1980
- vacant or unused buildings



0 100 200m N



### 5.5.3.2a Public space

Important public spaces are the roads that enhance the accessibility of the area or - failing that - weaken it. Segregation is about separating and isolating certain groups. A literal approach to this is to make the area more accessible. For example, it is shown on the right how the entrances to the area manifest themselves. To the east, the area appears to be marked with clear entrances. In the west in particular, complicated, obscure infrastructure seems to make the area less accessible or at least less attractive. Partly on the basis of the research for future urban development, the connection between the Mathenesserbrug and Schiedam does not appear to be of added value.

Also, the connection to the new M4H area is one that is desired in the future. That is why the urban design for this area will also have to provide an answer. However, it is only easily connectable for slow traffic only by means of stairs over the Dakpark or via roads north or south of the Dakpark, where the ground is somewhat level again.

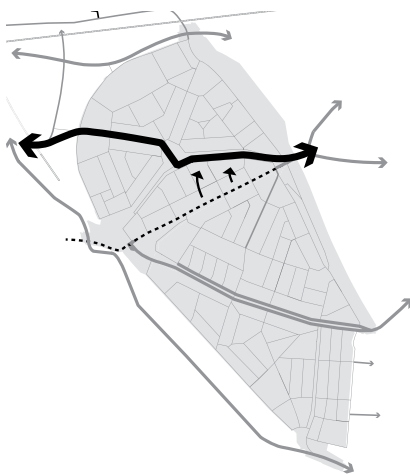
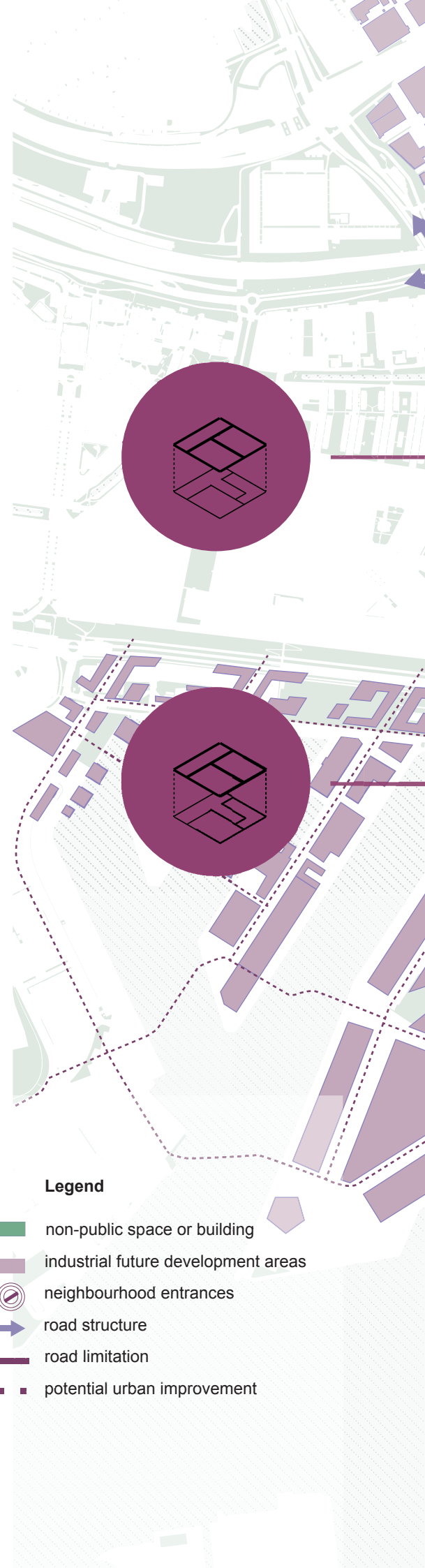
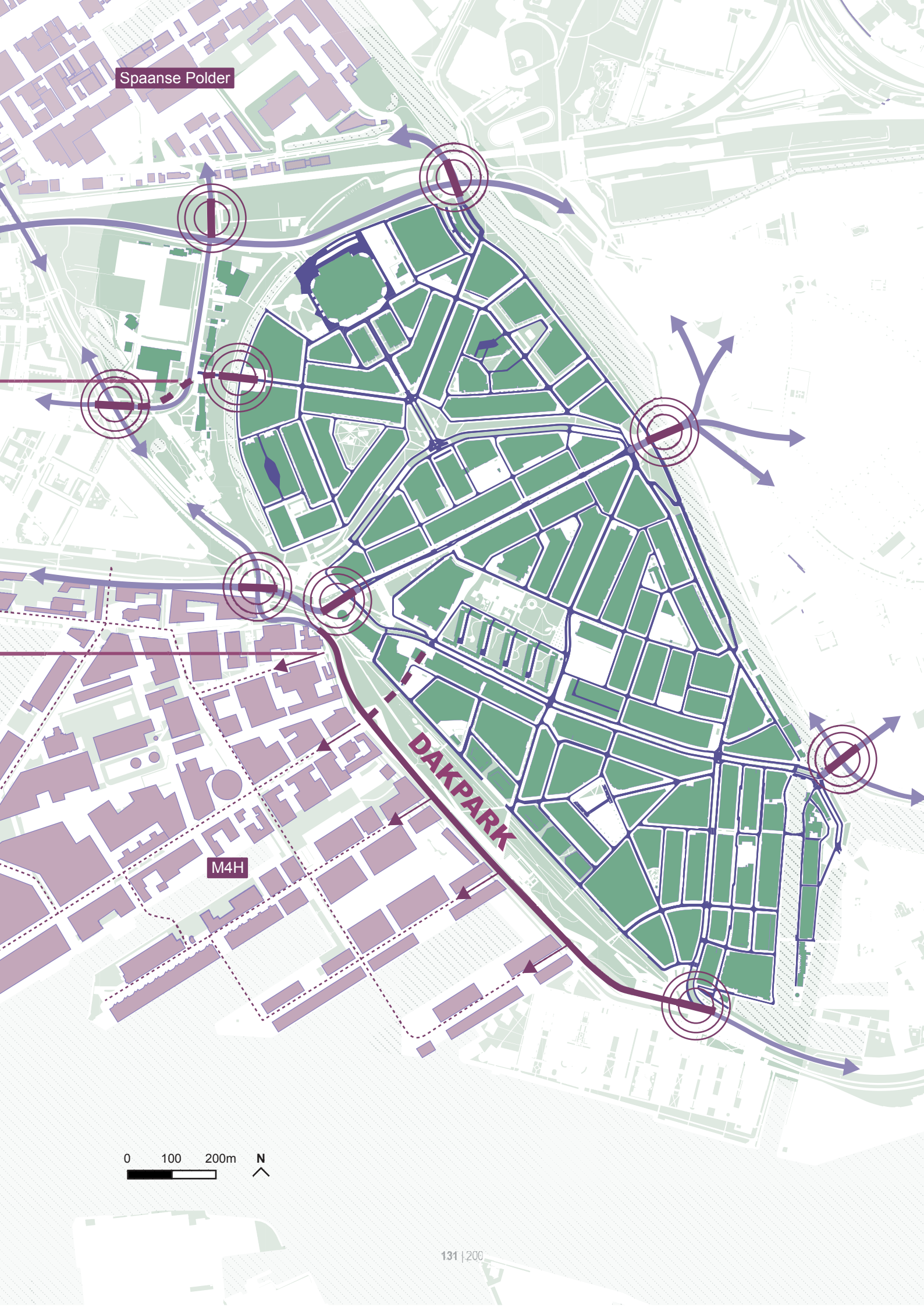


Figure 34. Improve connection Mathenesserbrug - Schiedam (Author, 2022).



#### Legend

- non-public space or building
- industrial future development areas
- neighbourhood entrances
- road structure
- road limitation
- potential urban improvement



Spaanse Polder

DAKPARK

M4H

0 100 200m N



### 5.5.3.2b Public space

This public space, which is mainly designed for the car, in turn also has consequences for the climate. An important one is the Urban Heat Island effect. By means of (large) paved surfaces it is difficult for the heat to leave the city. On the right is the map showing the hottest parts of the Urban Heat Island effect (in pink) opposite the built environment and its courtyard. The pink areas that lie between the buildings can be redesigned to help reduce the Urban Heat Island effect. By creating green connections. In this way, these green spaces not only contribute to this, but also to the liveability and ecology of the area. The areas in Tussendijken and Bospolder in particular seem to be in need of green. The southern part of Bospolder seems to remain partly cooled by the water and the centre of Tussendijken by the 1943 park as well. Greening could offer a solution, especially in the western part. The important opportunity for adapting public space lies in this issue of improving public space.

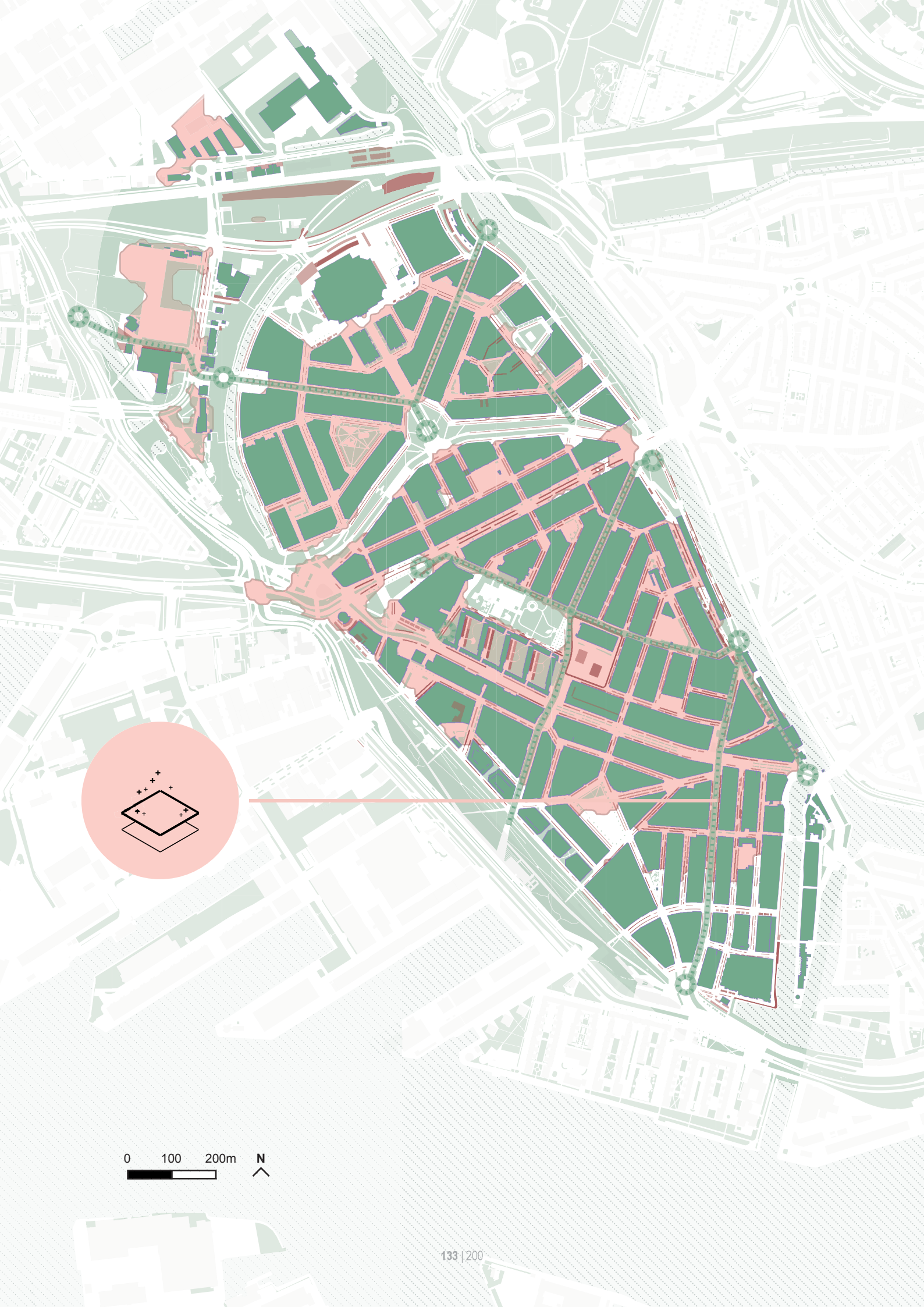


Figure 35. Potential green structures (Author, 2022).



#### Legend

- Urban Heat Island hottest places
- hardened car parking
- non-public space or building
- potential groen connections



0 100 200m N



### 5.5.3.3 Facilities

The facilities have been mentioned before, but the extent to which this theme fits into this thesis is big. In addition, the map is shown with the existing economic program and its axes in which they occur most often and a suggestion for redesign. Redesign is in line with existing structures such as in Schiedam and with new developments such as the M4H. It also fits in with the idea of making Spangen more socio-economically diverse.

Modification of the building stock mainly takes place at the level of adding a new program and redesigning the design of the infrastructure. This contributes to differentiation in the social-economic program, which contributes to both the diversity of facilities and the liveability.

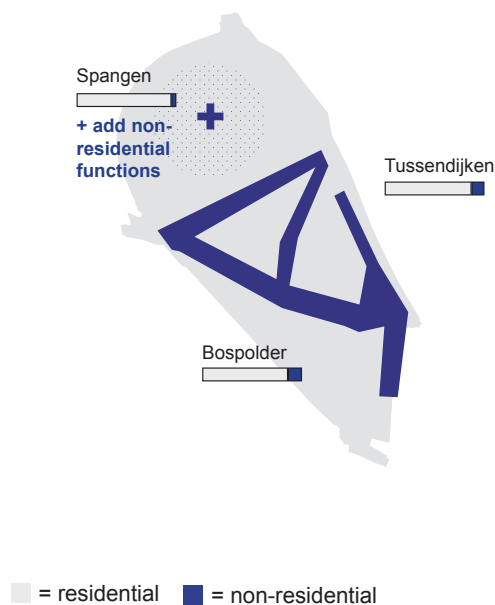
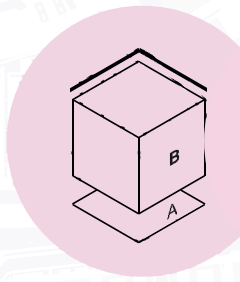


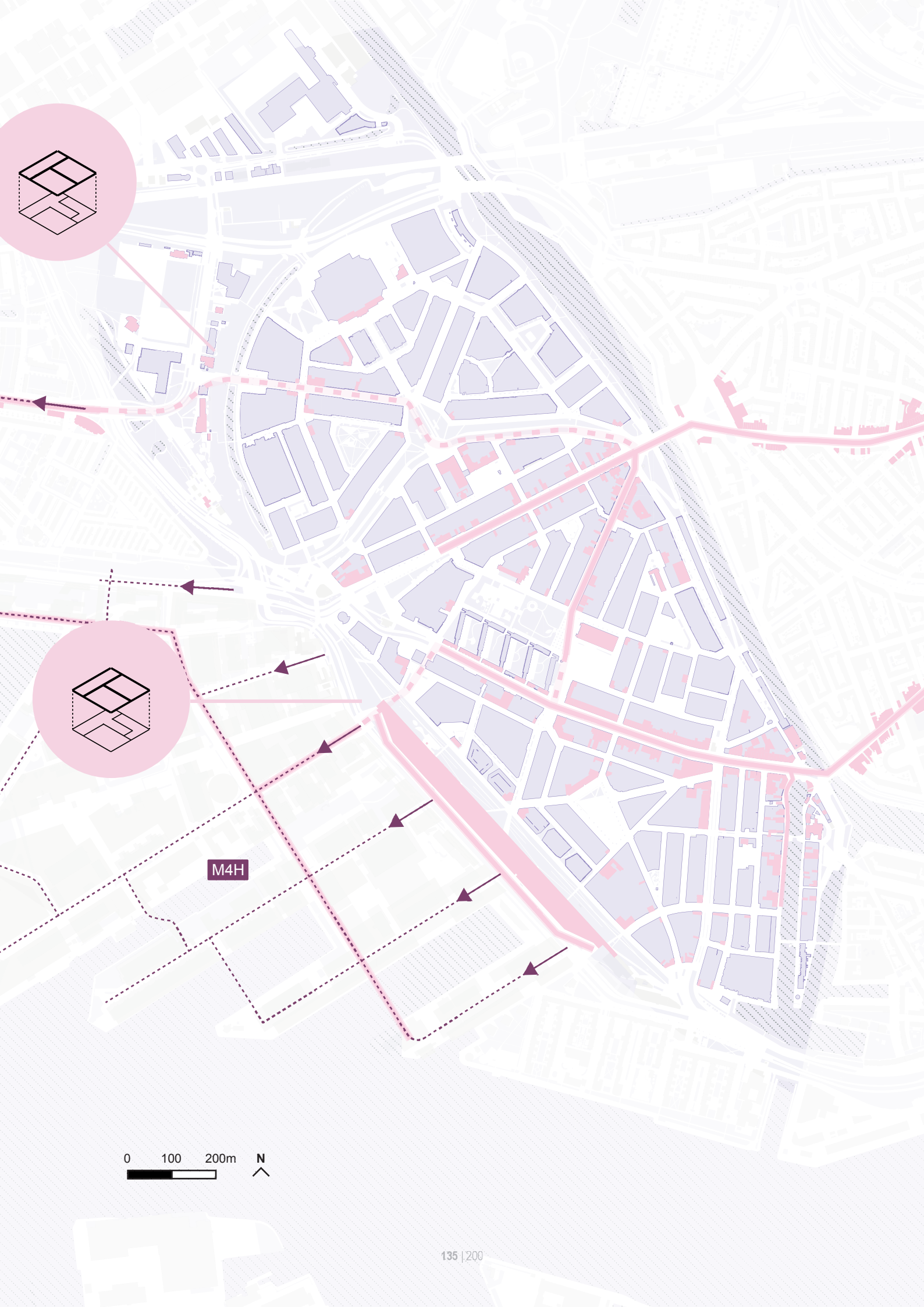
Figure 36. Work-live division (Author, 2022).



Schiedistrict

- Legend**
- shop or meeting facility
  - non-public space or building
  - new routes of developing area
  - potential new connection
  - lively axis
  - missing link in lively axis
  - urban developing area





0 100 200m N

### 5.5.3.4 Conclusions

A sustainable and resilient design strategy requires integral design. That means responding to what is around the development location and what will be around the location in the future. Urban development often involves building periods of decades. That is why anticipating the future is of great importance.

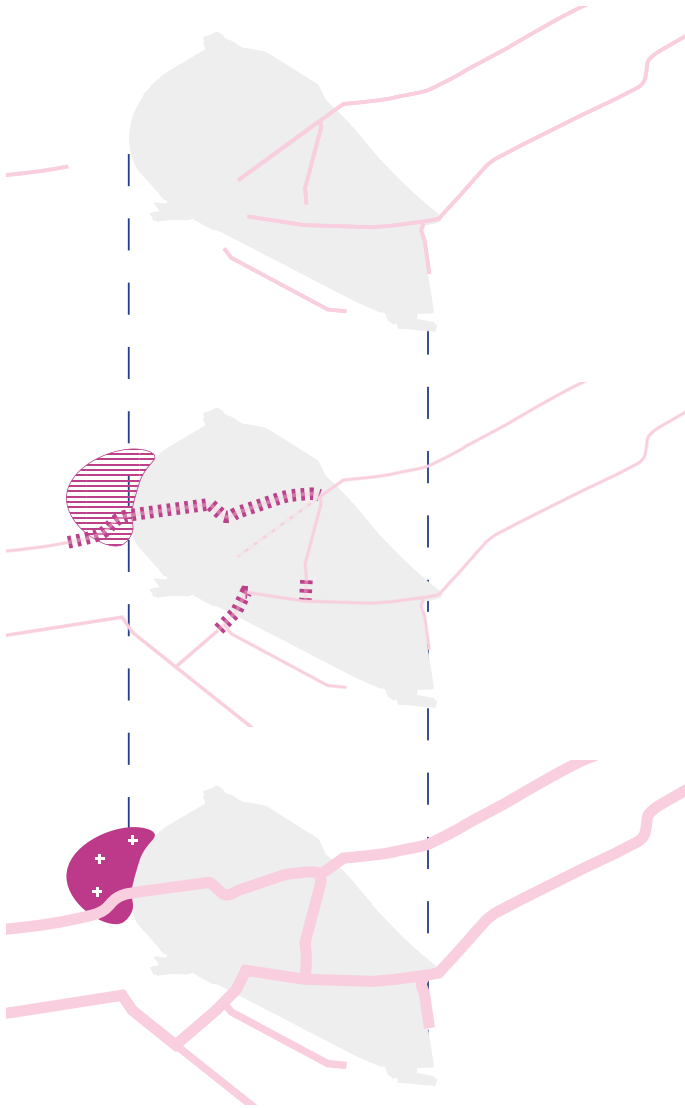
All this together can be summarised in the figures indicated next to it. A broken network of which is redesigned on the basis of spatial findings and requirements for realising a socio-economically diverse neighbourhood with an improved liveability. This forms the basis of the strategic master plan, which is explained in more detail in the next chapter: design.

>>

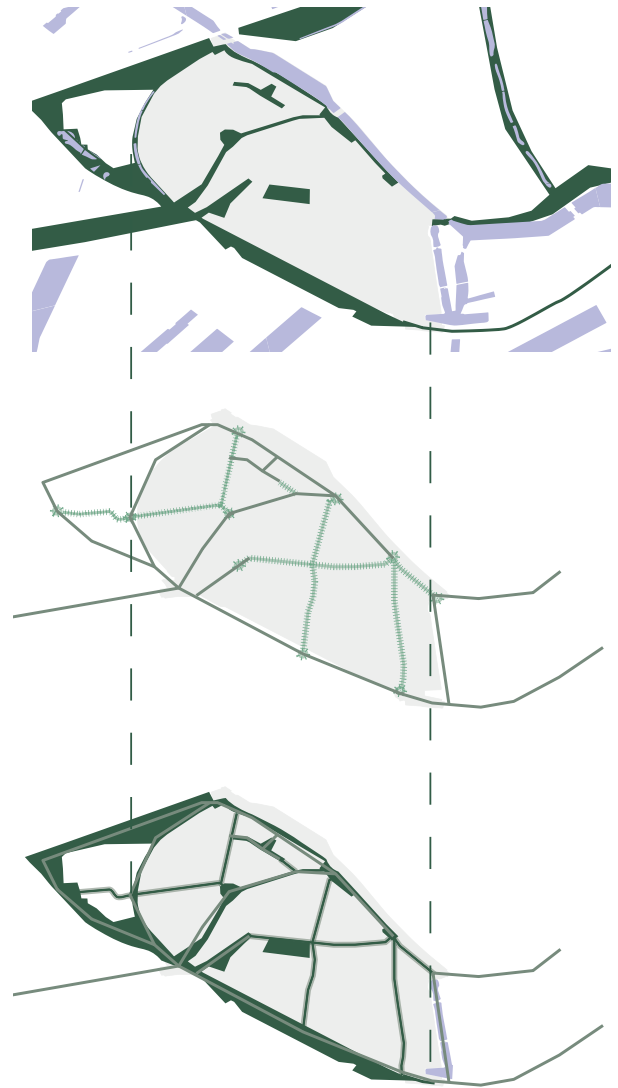
today

missing links

**design**  
connected  
network



# SOCIO-ECONOMIC



# ENVIRONMENTAL





## 5.6 Design

This final chapter will include the outcomes of the previous research answering the question:

*How can urban design contribute to a socially sustainable form of urban development in the Spangen, Tussendijken en Bospolder increasing liveability, socio-economic diversity and a preserved or reinforced neighbourhood identity?*

The final design will include design guides, a strategic masterplan and atmospheric visuals. Based on the preceding research, various urban interventions are set out for the realisation of a socio-economic diverse community, improved liveability and contribution to current neighbourhood identity.

### 5.6.1 Strategic masterplan

Coming into the strategic master plan are the two extended structures as described in the conclusions of chapter 5.5 spatial opportunities and urgencies (chapter 5.5.3.4).

**Pink:** The pink axis represents the vibrant, livable, and vibrant axis. In this, a socio-economic program ensures visiting the public space and contributes to the

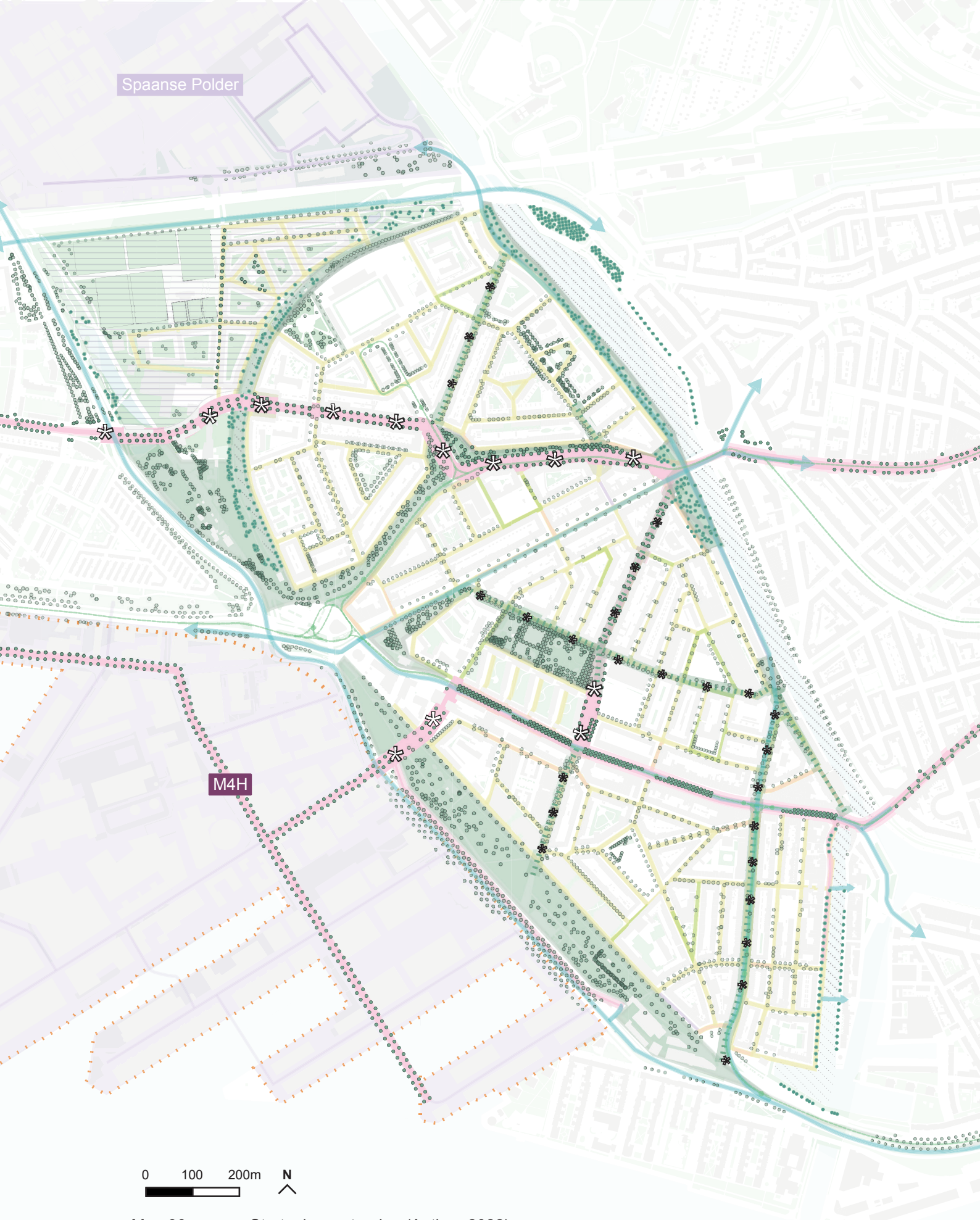
neighbourhood identity. Liveliness is not only created by the facilities, but also by frequent use of the axis: as a result of a balance between fast and slow traffic.

**Green:** The green stands for the quiet, but pleasant and liveable areas where the invitation to use the space has been realised. The function is mainly residential with pleasant sidewalks and greenery. Public space in which residents like to be. In addition to encouraging the use of space socially, the axis also contributes environmental qualities.

**Yellow:** Yellow represents the spaces in between. This has no priority for the design but is kept as it is. In this way he mainly contributes to the current identity of the district.

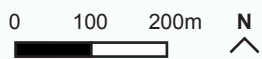
#### Legend

- lively and vibrant axis
- mixed axis with facilities and housing
- housing axis
- green axis
- main route fast traffic
- school area
- public transport
- trees
- water
- green
- industry area
- trainstation
- densification area
- development axes
- existing urban development plans



Spaanse Polder

M4H



Map 30. Strategic masterplan (Author, 2022).

## 5.6.2a Design guides

To answer the main question about combining liveability, socio-economic diversity and preserving neighbourhood identity, an action plan has been drawn up on the basis of the three phases of gentrification that urban design influences.

On the right-hand side are the phases (P2, P3 and P4) mentioned above, with the urban design instruments for liveability and a diverse socio-economic program. Below that, the combination with the current neighbourhood identity follows. The phases arise from the gentrification curve of chapter 2.4 and are again abstracted below (figure 37).

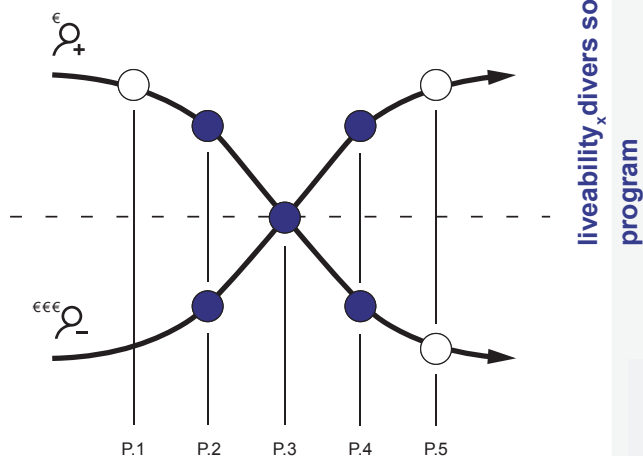


Figure 37. Gentrification phases for urban design (Author, 2022).

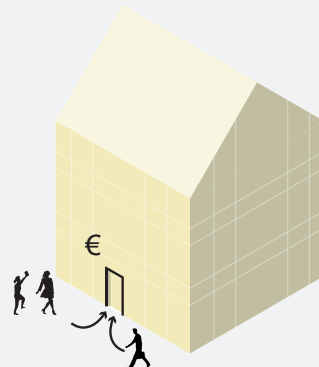
# P2

**The growing interest for centrally located affordable neighbourhoods**

liveability  $\times$  diverse socio-economic program



liveability  $\times$  diverse socio-economic program  $\times$  neighbourhood identity

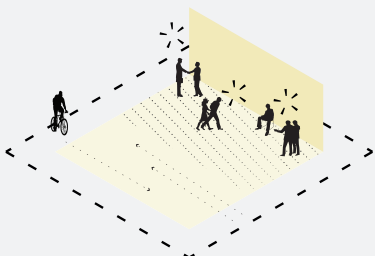
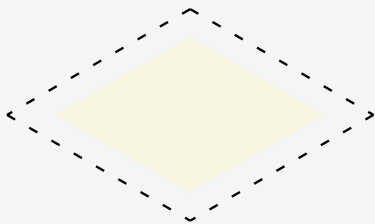


**preserve current (social) housing.**

**construct new owner-occupied houses.**

# P3

**Noticeably changing  
population composition in the  
public realm**

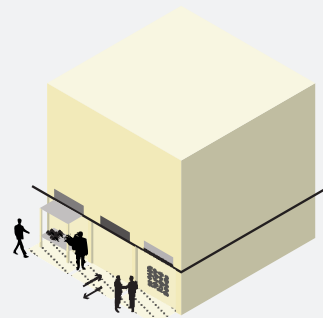
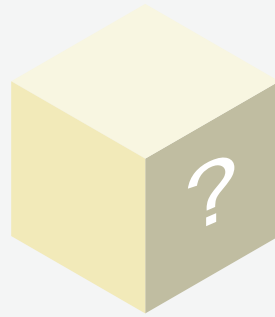


**public spaces for the use of  
small-scale entrepreneurs.**

**shift focus on slow traffic  
instead of fast traffic.**

# P4

**The emerge of new, more  
expensive, socio-economic  
program**



**small scale enterprises with  
affordable goods**

**added with financial support  
in the neighbourhoods.**

## 5.6.2b Design guides

Based on previous research and the aforementioned three pillars, appropriate to the three phases, a number of design guides have been set out.

# P2

### Phase 2

social housing for stable socio-economically diverse inhabitants

- keep the balance of social housing and free sector housing
- never realise less than 55% of the social housing in the neighbourhoods
- focus on building new owner occupied housing instead of changing social housing into private owned - change cannot be easily reversed
- develop extra residential housing where possible to answer the demand
- build new affordable or medium-priced owner-occupied houses for 'social climbers'
- build (a small) number of higher-end owner-occupied homes
- avoid demolishing as many homes as possible, current houses contribute strongly to the current neighbourhood identity



# P3

# P4

## Phase 3

vibrant, liveable and stayable public spaces for slow traffic and small business owners

- create connections between existing public spaces
- create liveable and lively routes
- improve connectivity neighbourhood by improving entrances to the area
- provide public space for the display of goods for shop owners of small enterprises
- encourage the use of slow traffic instead of fast traffic
- preserve or reinforce the spatial qualities of the main axis Mathenesserweg and Schiedamseweg
- improve existing green structures
- improve public areas with low sense of security

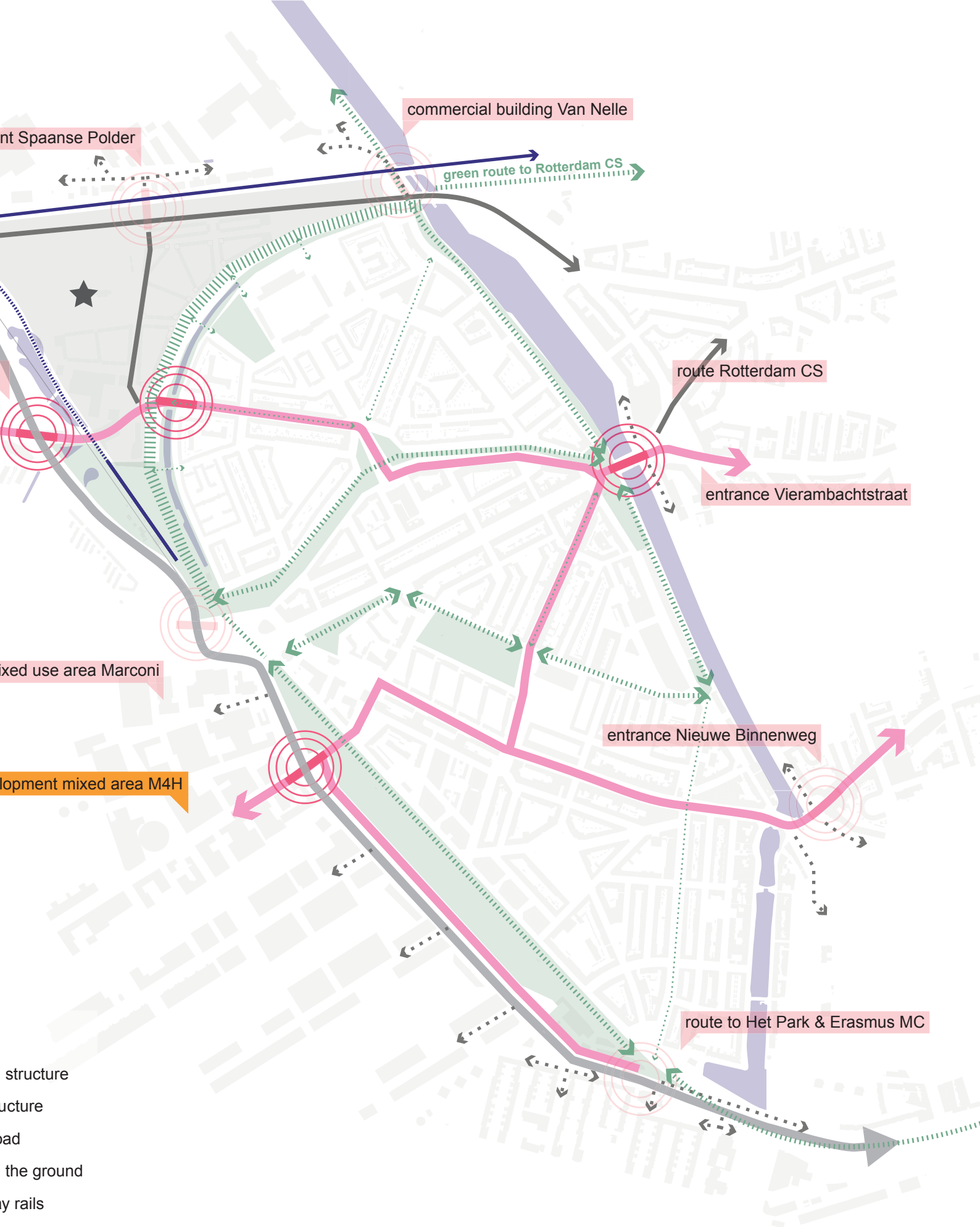
## Phase 4

small scale enterprises with affordable products

- preserve small scale affordable businesses instead of large chains with expensive, luxury goods
- preserve public spaces where people feel belongingness towards such as the local market
- extend existing vibrant shopping routes
- create financial support for current and future companies by densifying the area







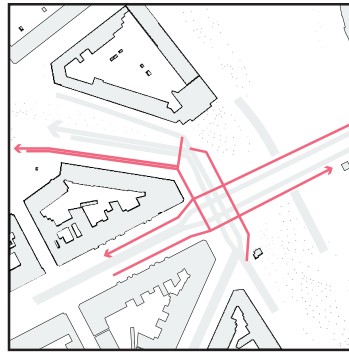
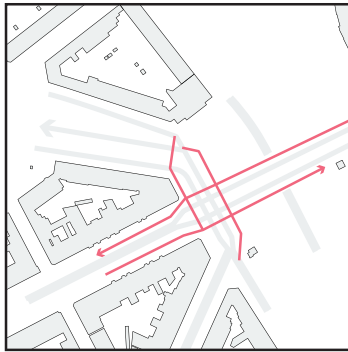
Map 31. Routing and connectivity map(Author, 2022).



## Improved accessibility

In order to make the new main axis attractive, improved accessibility for the axis are needed. Listed below are the important access nodes and suggestions for new design.

1



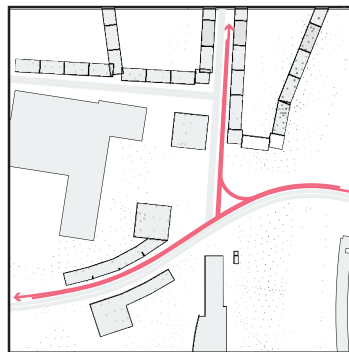
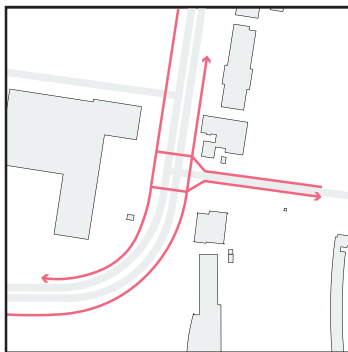
### Mathenesserbrug

- When entering the Mathenesserbrug towards the neighbourhoods, turning to the right (over the Mathenesserdijk) is unattractive for cyclists.
- New design separates slow traffic from fast traffic.

25 50m



2



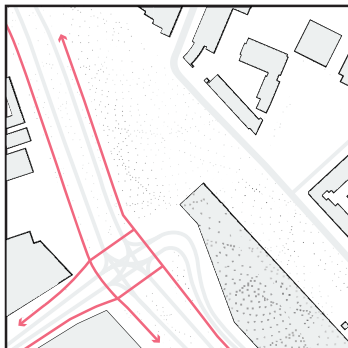
### Franselaan

- The main road structure has been relocated to connect Spangen with Schiedam.
- The bicycle paths have been placed separately to the north of the road to facilitate access to the new development area.

25 50m



3



### M4H

- The connection with the new M4H development area is still absent.
- Opportunities lie on the northern side of the Dakpark, where the ground level is almost even.
- This is in line with the current street structure.

25 50m



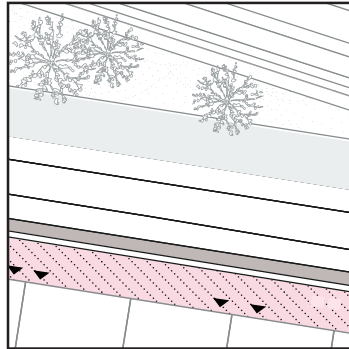
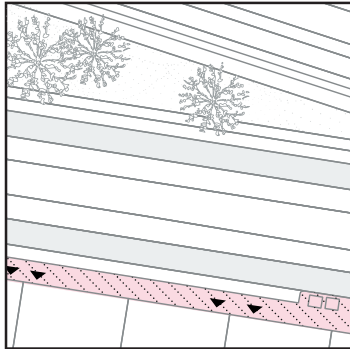


Map 32. Entrances map(Author, 2022).

### 5.6.5.2 Lively and liveable streets

Safe urban design for pedestrians and cyclists must be guaranteed for liveliness and liveability. Especially in a neighborhood where the car seems to be dominant. Design with space for the small business owner and user of the area to stay.

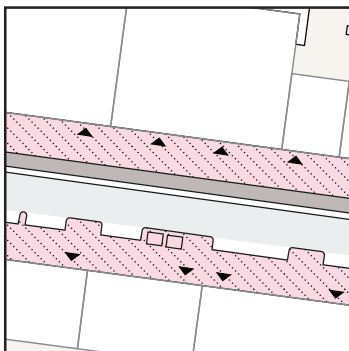
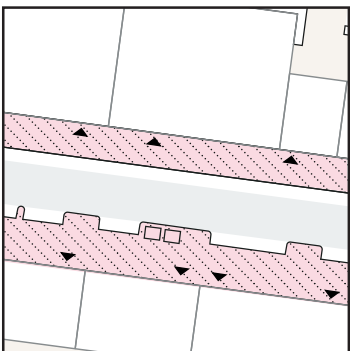
1



#### Mathenesserdijk

- Safe walking and cycling is encouraged by separated paths.
- This also creates more space for small businesses and inside out shops.
- That makes for pleasant encounters on the sidewalk.

2



#### Bilderdijkstraat

- The sidepaths were already walkable, now also the street is cyclable and safe.
- A pleasant, green space in which to stay.

3



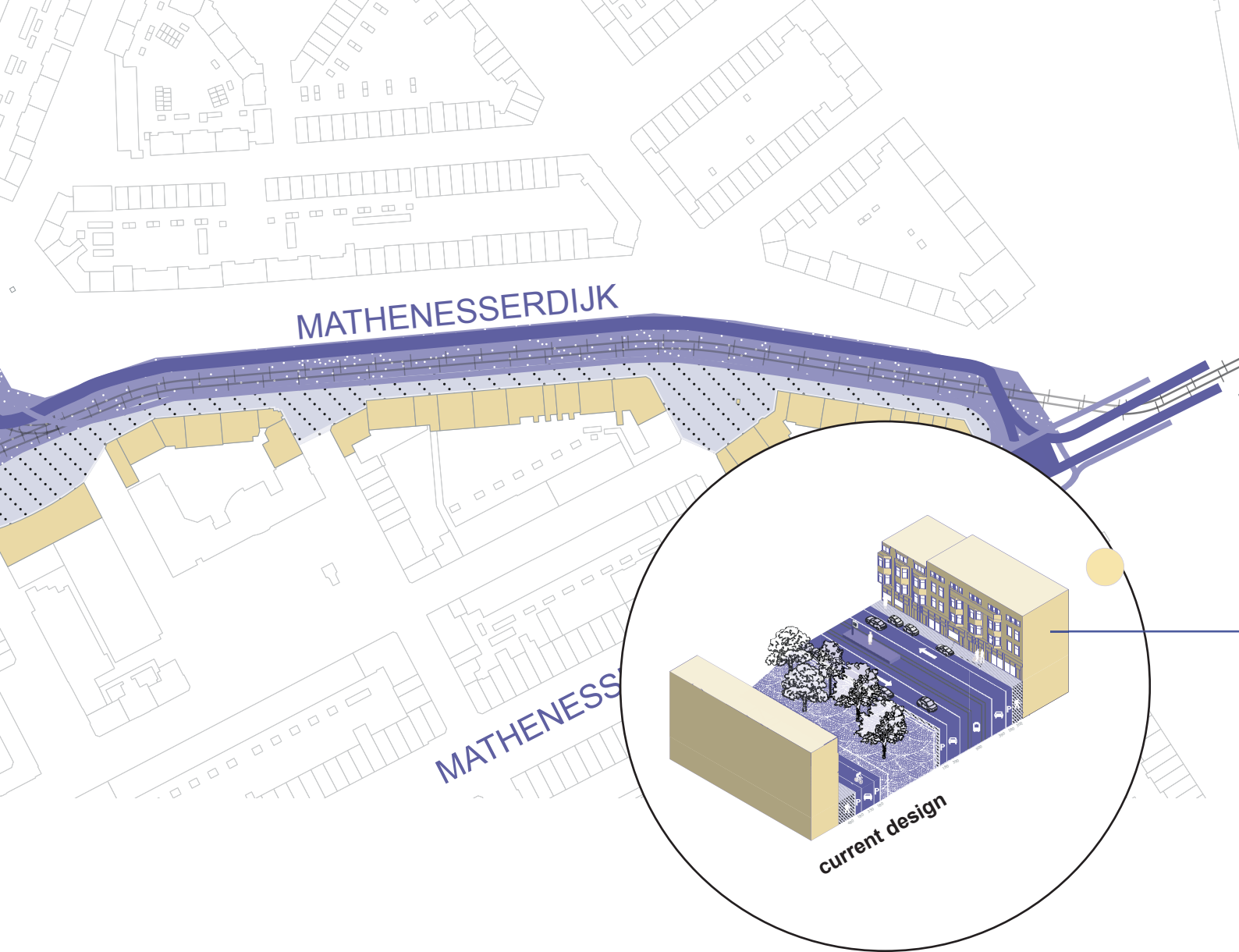
#### M4H

- The connection with the new M4H development area is still absent.
- Opportunities lie on the northern side of the Dakpark, where the ground level is almost even.
- This is in line with the current street structure.



Map 33. Lively and liveable routes(Author, 2022).





## CURRENT VERSUS NEW DESIGN

The current design of the Mathensserdijk pays a lot of attention to fast traffic. Small businesses now on the road seem squished on a narrow sidewalk. New design offers liveable design for the characteristic features of the neighbourhood.

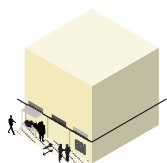
### Public space

- free standing bicycle path
- widened footpath
- added greenbelt



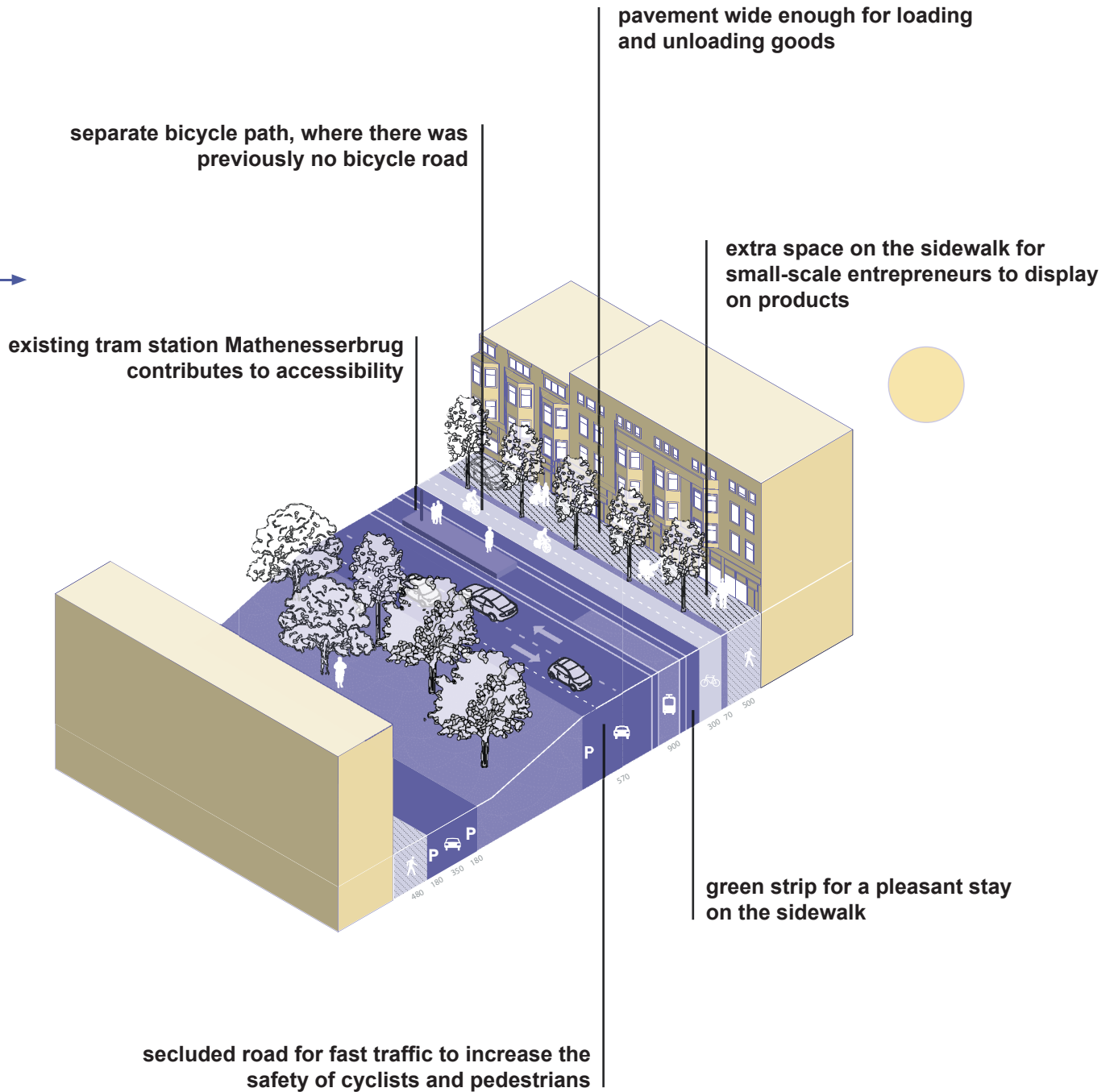
### Facilities

- more space for displaying goods
- safe and pleasant space to stay on the sidewalk

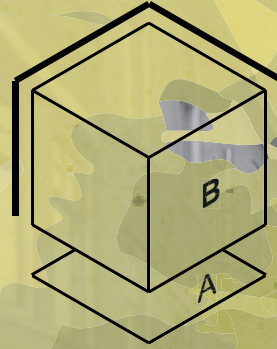


1

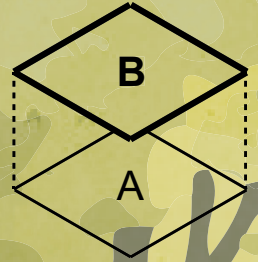
# MATHENESSERDIJK







transformation



program change



no multinationals



low price facilities



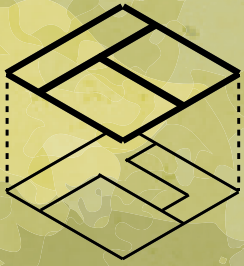
cafe



walkable places





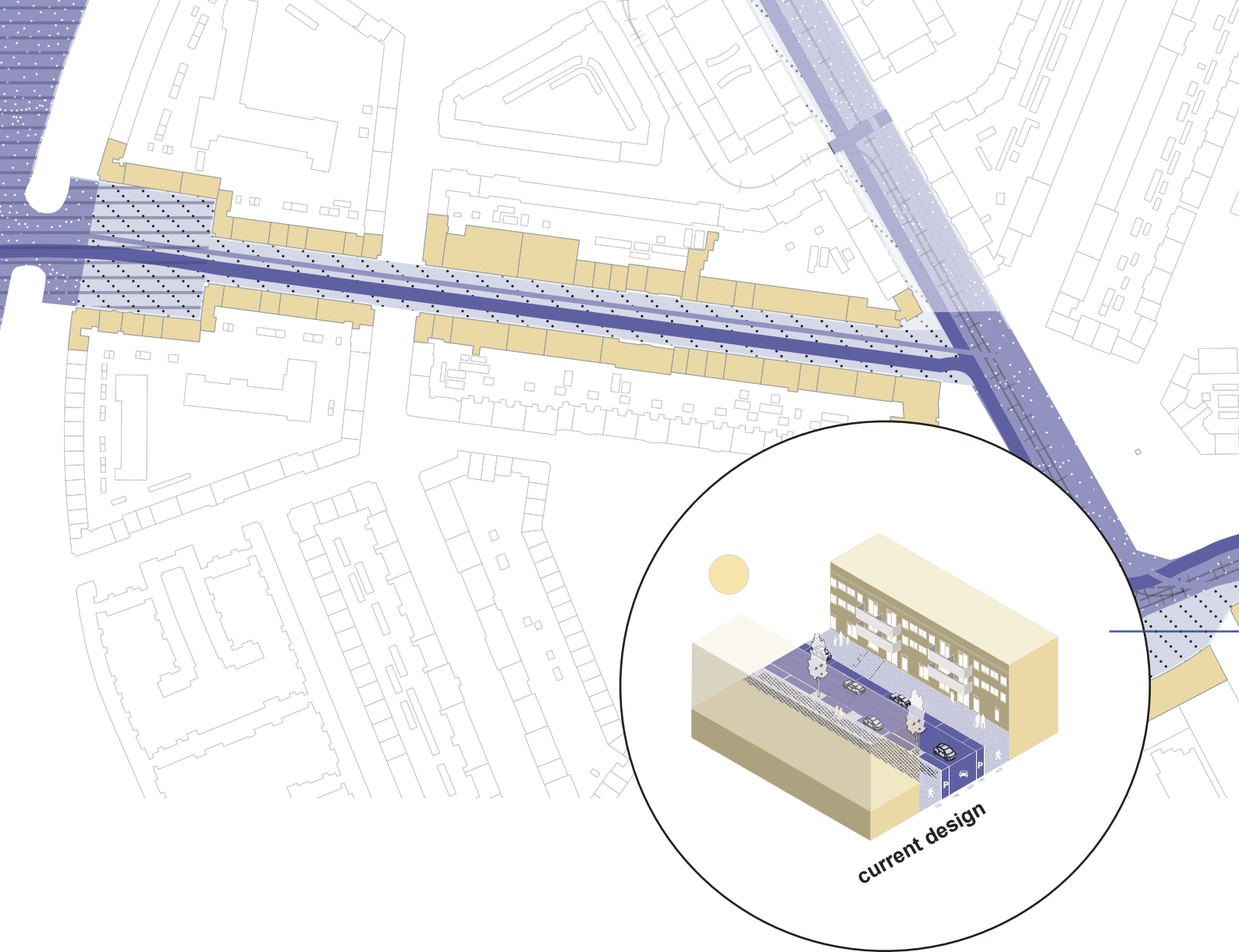


change network



improve program





## CURRENT VERSUS NEW DESIGN

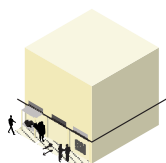
In the current design, the sidewalk is wide and walkable. The public space is virtually paved and mainly closed in the plinth.

### Public space



- part of the sidewalk from the north side is narrowed
- so it can make place for pleasant cycling and staying on the south side of the street

### Facilities



- the sidewalks are wide to carry goods on the street
- especially the south side, the sunny side is pleasant for activities such as restaurants or cafes

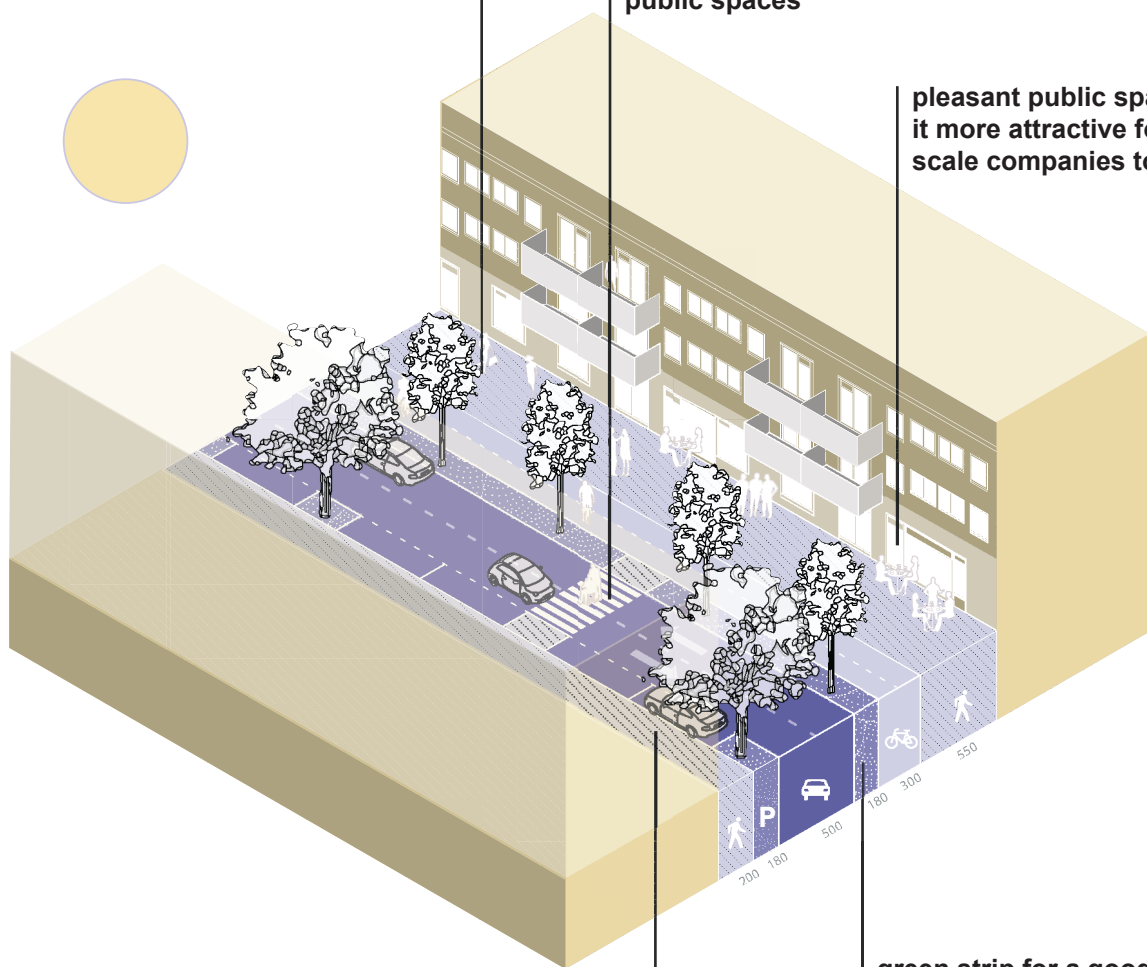
2

## BILDERDIJKSTRAAT

attractive wide sidewalk in the sun to  
be and to stay

safe crossing places for walkable  
public spaces

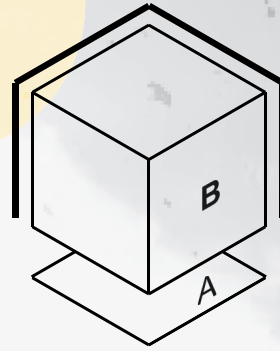
pleasant public space makes  
it more attractive for small-  
scale companies to settle



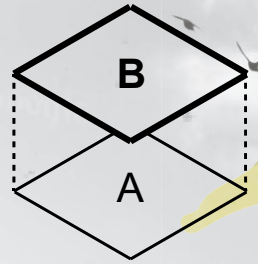
partly preserved parking spaces for  
residents of the neighbourhood

green strip for a good green  
connection and pleasant and  
safe stay on the sidewalk





transformation



program change

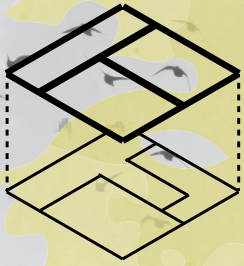


walkable places

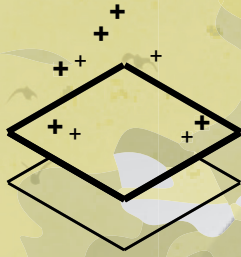


safe road crossings





change network



improve program



program differentiation



low price facilities



bikeable places



accessibility



qualitative green

qualitative green

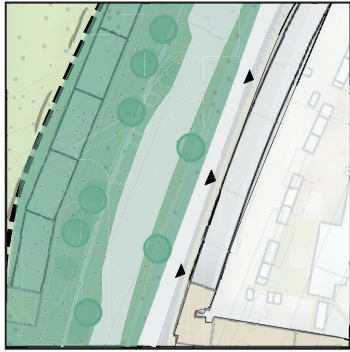


### 5.6.5.3 Green axes for physical and safe liveability



Green connecting axes contribute to ecology, as well as to counteract the urban heat island effect and therefore for sustainable urban design. In addition, being surrounded by greenery is also good for (mental) health users of the public space, as well as it can be a barrier between fast traffic and slow traffic. In many ways, therefore, of value for urban liveability.

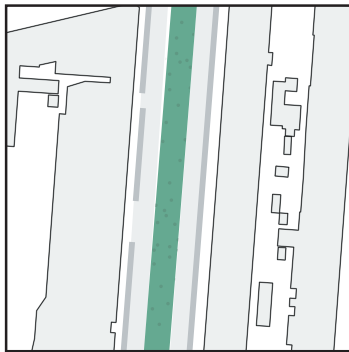
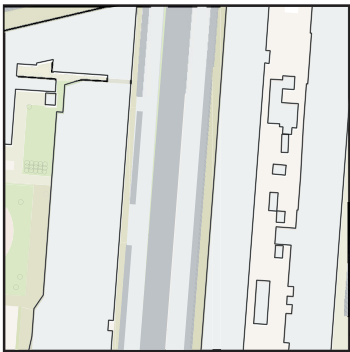
1



#### Spaansebocht

- Removing the embankment created by the old train track creates larger, green space for an improved park.
- With residential functions on both sides.

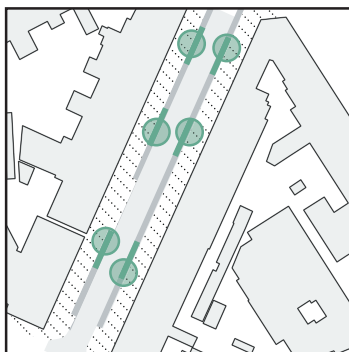
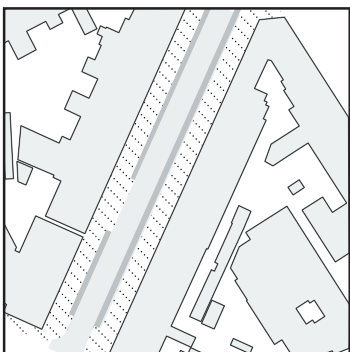
2



#### Spanjaardstraat

- The area where the tram runs can become an important and strong green axis by greening the tram track.

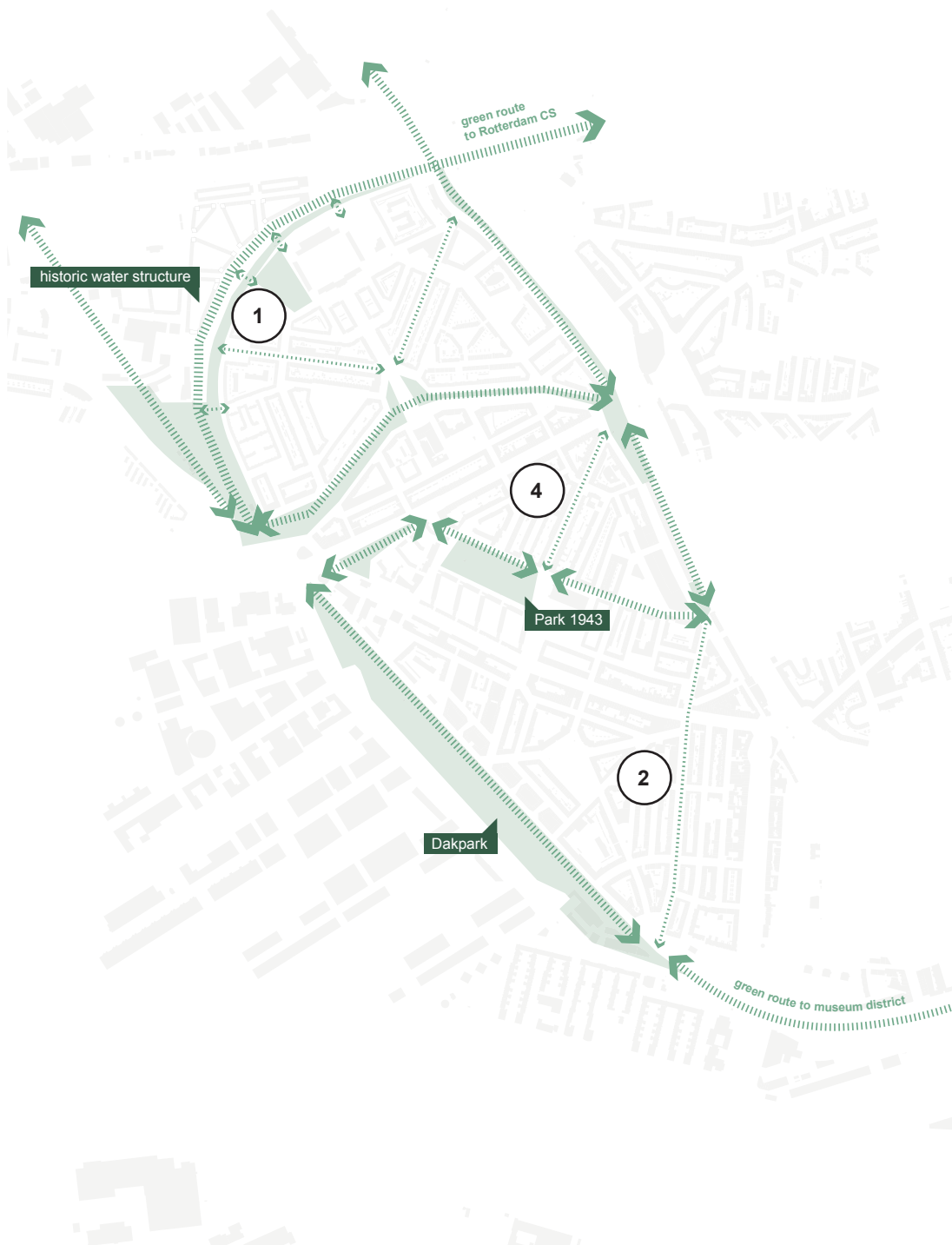
3



#### Grote Visserijstraat

- Partly replacing parking spaces with greenery contributes to the reduction of urban heat island.
- Besides, it gives a safer and clearer feeling about the street.





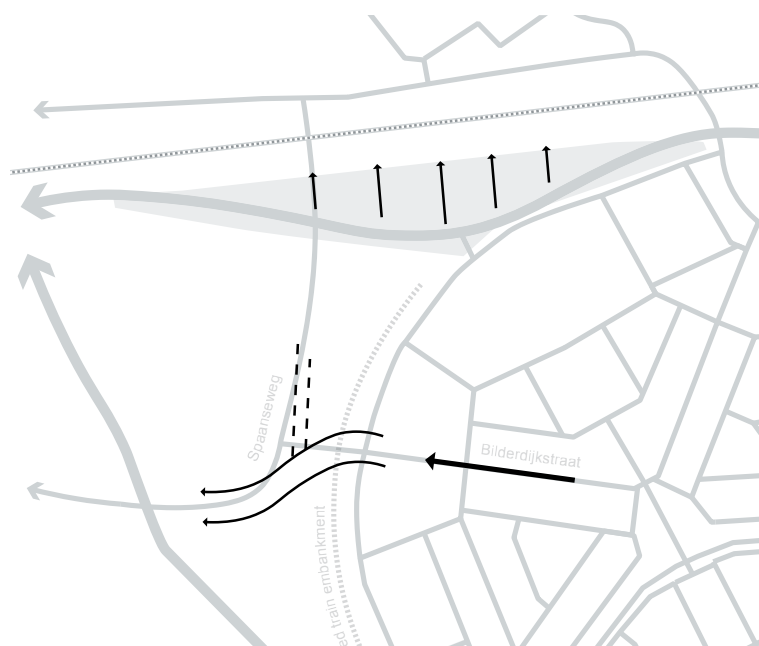
Map 34. Connecting green structures for liveable design (Author, 2022).

## 5.6.6 Mixed use area Spangen Noord

Spangen Noord offers an opportunity to densify and to provide an answer to the demand for a new, mixed socio-economic program. Replacing or replacing parts of the current program contributes to this. New access to roads and the realisation of green structures are also being considered.

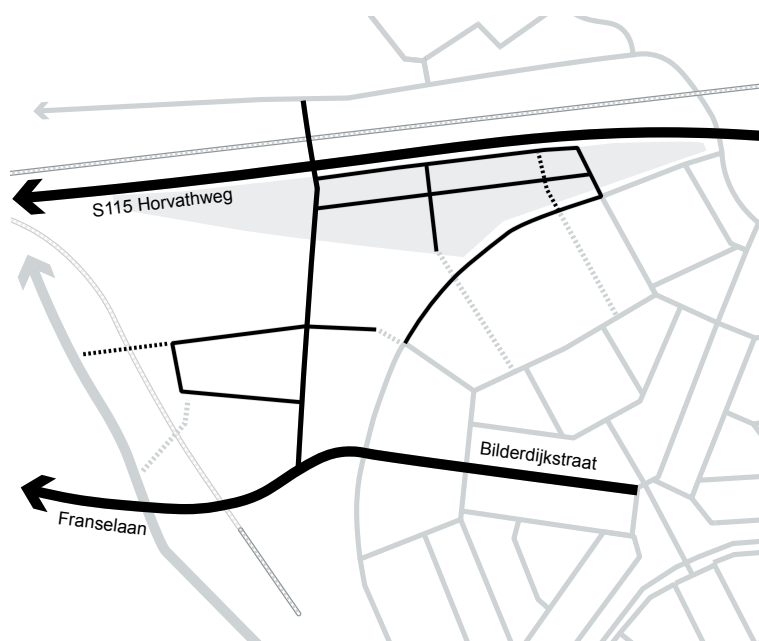
### 5.6.6.1 Roadstructure

Changing the main structure and efficient layout for optimal use of public space.



#### Secondary road today

The western route from Bilderdijkstraat in the direction of Schiedam is currently a non-continuous axis. This is subordinate to the Spanish road. This can be reversed to stimulate the route. In addition, the S115 cuts through a large public space where redevelopment can be of great added value for optimal use of the space.



#### Main axis design

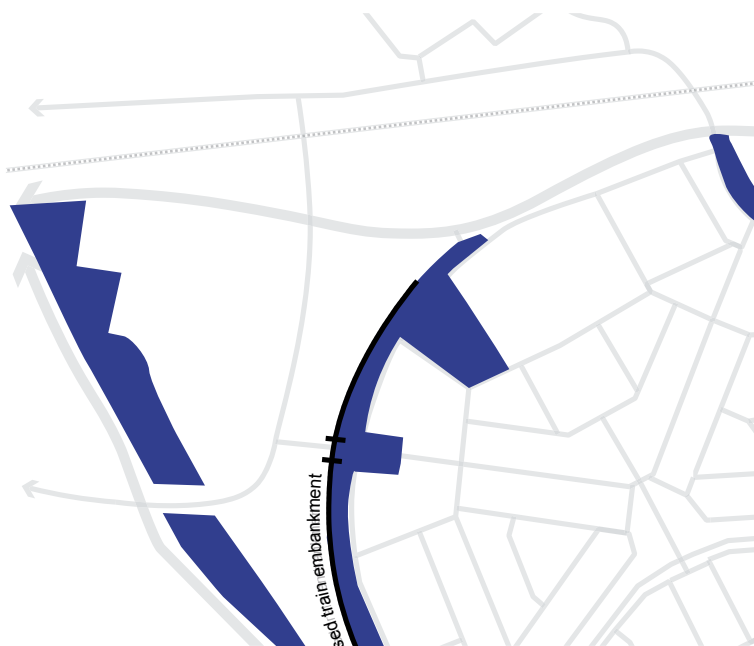
Shifting the S115 has created a lot of space. A whole new street network and new functions can be applied that can contribute to liveability or or socio-economic diversity by the possibility to increase the housing stock. In addition, there is a through road in the direction of Schiedam that contributes to traffic flows and to the attractiveness of using the axis.

#### Legend

- = public space
- = old train talud

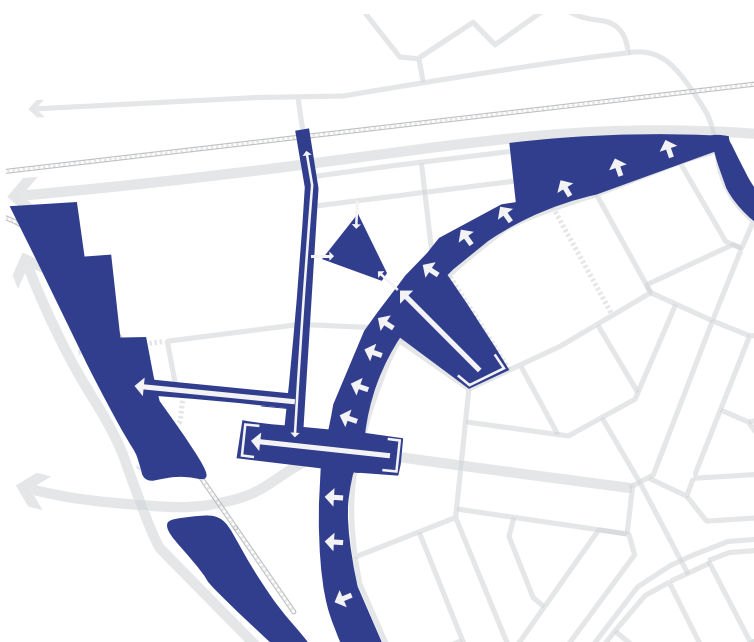
### 5.6.5.2 Public spaces

Today, the in-between area of Spangen and Schiedam is poorly connected and stands alone.



#### Bordered space today

The current old train slope creates a major barrier for the connection between Schiedam and Spangen. The shutting down of this strongly contributes to the connection and upgrading of the public space.



#### Connected public spaces design

Removing the physical barrier of the train slope creates connection and enlarges the green belt. The water and greenery can be used optimally, due to two sides' experience. The current square space at Bilderdijkstraat can respond to the open space in front of the school as well as integrating the park next to the Sparta Stadium.

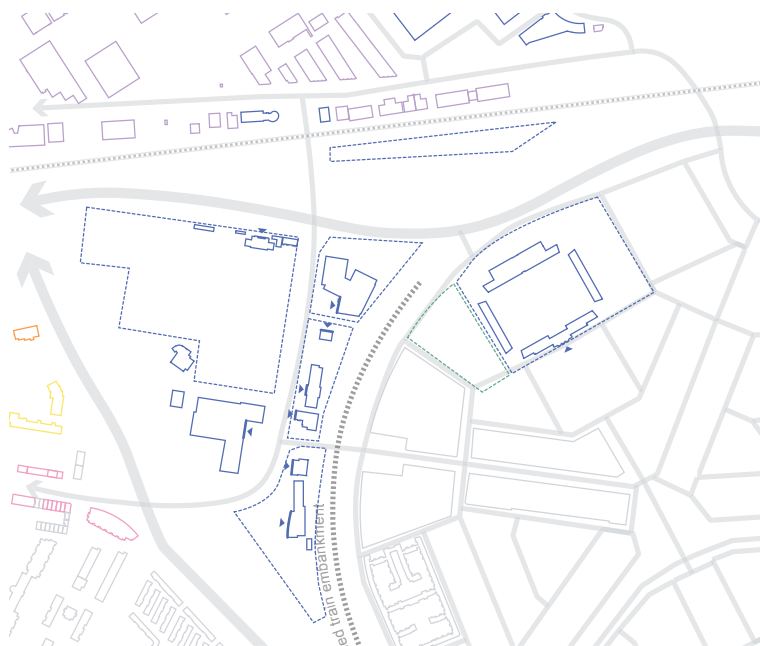


### Legend

- = residential plinth 17-9h
- = day activities plinth 9-17h
- = day activities public space 9-17h
- = park 9-17h
- = mixed plinth ~ 24h
- ↔ = connection more hour program
- = new public space / park
- = new residential space
- = new sport field design

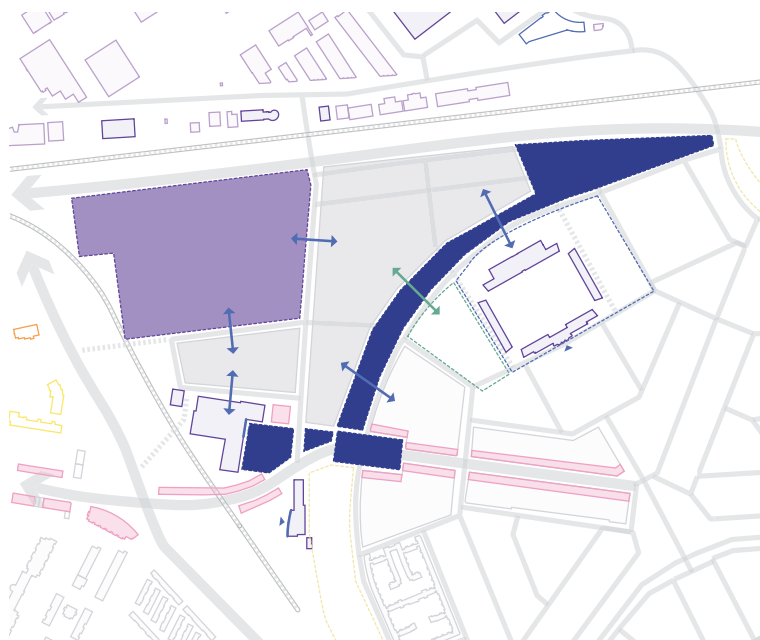
## 5.6.5.3 Plinth program

The organisation of activities based on hours.



### Single hour program today

Main program from 9-17 is creating remote places and with that the feeling of unsafeness and places attractive to crime.



### Introduction multiple hour program redesign

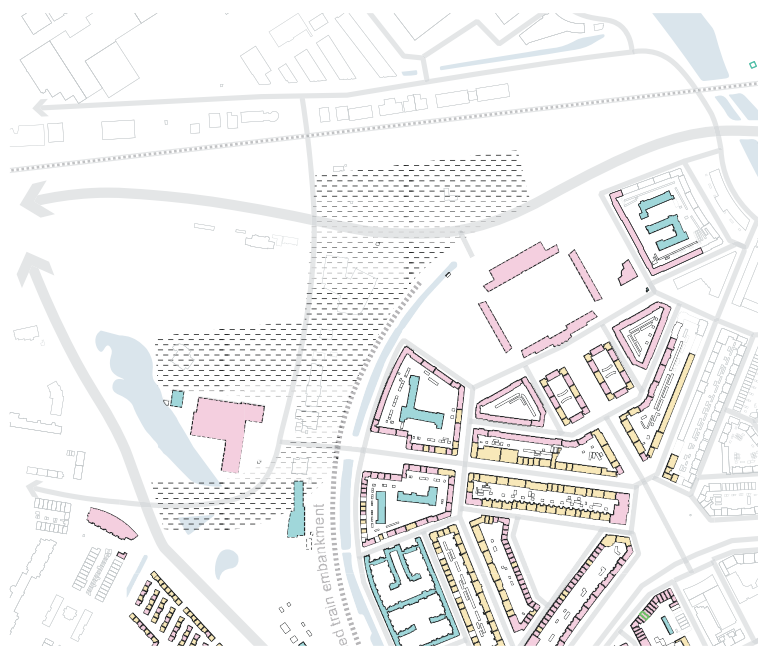
As opposed to a program that is only available during the day, a housing program is realised. For creating a more hourly program. In this way, functions such as the sports club and the park where social control was missing outside the hours of use are improved. This creates pleasant, liveable places.

#### Legend

- = private
- = Woonstad: social housing
- = municipality of Rotterdam
- = densification area

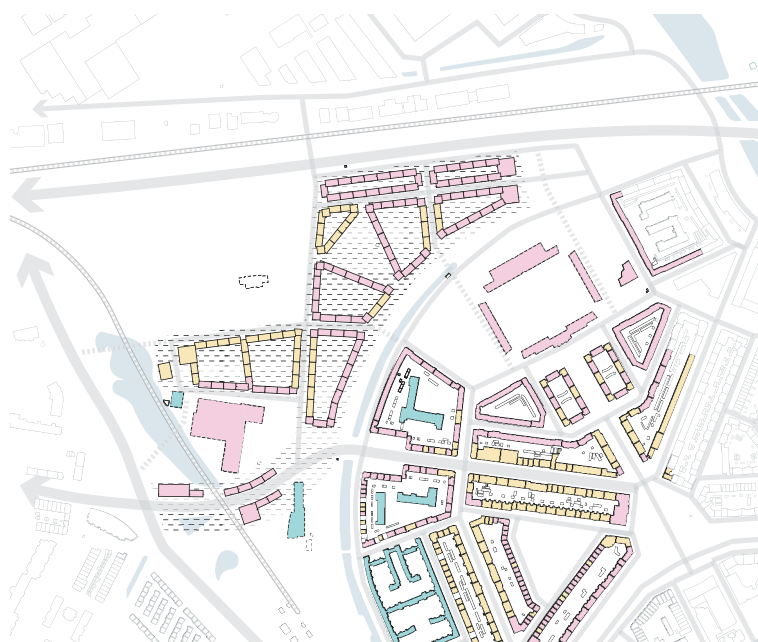
### 5.6.5.4 Ownership

The majority of the housing stock is social rent. Private ownership dominates along the water and the main axes (Mathenesserweg and Schiedamseweg).



#### Social housing versus owner occupied houses today

Especially in Spangen, the housing association Woonstad controls the larger part of the housing stock. Only to the east, along the water are a few in private ownership.



#### Meet socio-economic diversity redesign

To fit the current social identity, around 55% of the homes remain social housing. With the addition of about 1,000 extra households with relatively more private owned housing, the percentage of social housing is slightly changing but the amount is not. This change contributes to socio-economic diversity.

### 5.6.5.5 Design Spangen Noord-West

In this way, the established design principles are implemented in Spangen North-West.

The axes described earlier do justice to the redesign of public space and the introduction and preservation of characteristic small-scale enterprises. Those are two of the three pillars for this design for socially sustainable redevelopment. Because the housing program is the third pillar mainly for the preservation of identity, adapting the current housing program has been avoided as much as possible. Where there is a lot to achieve spatially, the area northwest of Spangen is. Here the liveability is low and there is a lot of undefined public space. This makes the location extremely suitable for redesign.

In the current design of Spangen, the location is secluded by a few metres high old, unused, train talud. Because it has a separating effect, it does not contribute to the neighbourhood identity or to the stimulation of connection. That is why the train slope has been removed in the redesign. This offers the opportunity to connect with the current housing stock. In addition, the Bilderdijkstraat square will also be upgraded in this way, because in the new design it will be adjacent to a green park. Staying in this space is therefore a lot more attractive.

At first there was a small view from the Bilderdijkstraat towards the school. In the new design, this is a wide line of sight. This has been encouraged in the new design. This creates a large, well-organised public space for the school.

#### **Multifunctional (school) square**

The square is 40 by 80 metres wide. By means of new buildings, the space is framed and thus creates corners for parking bicycles or other means of transport. The square also offers the possibility to take partial transport. Adding this emphasises this point of the axis and makes it more attractive to visit this place. The space for new socio-economic functions such as shops, but also meeting places in the new plinth makes the space attractive to come and stay.

#### **Park next to Sparta**

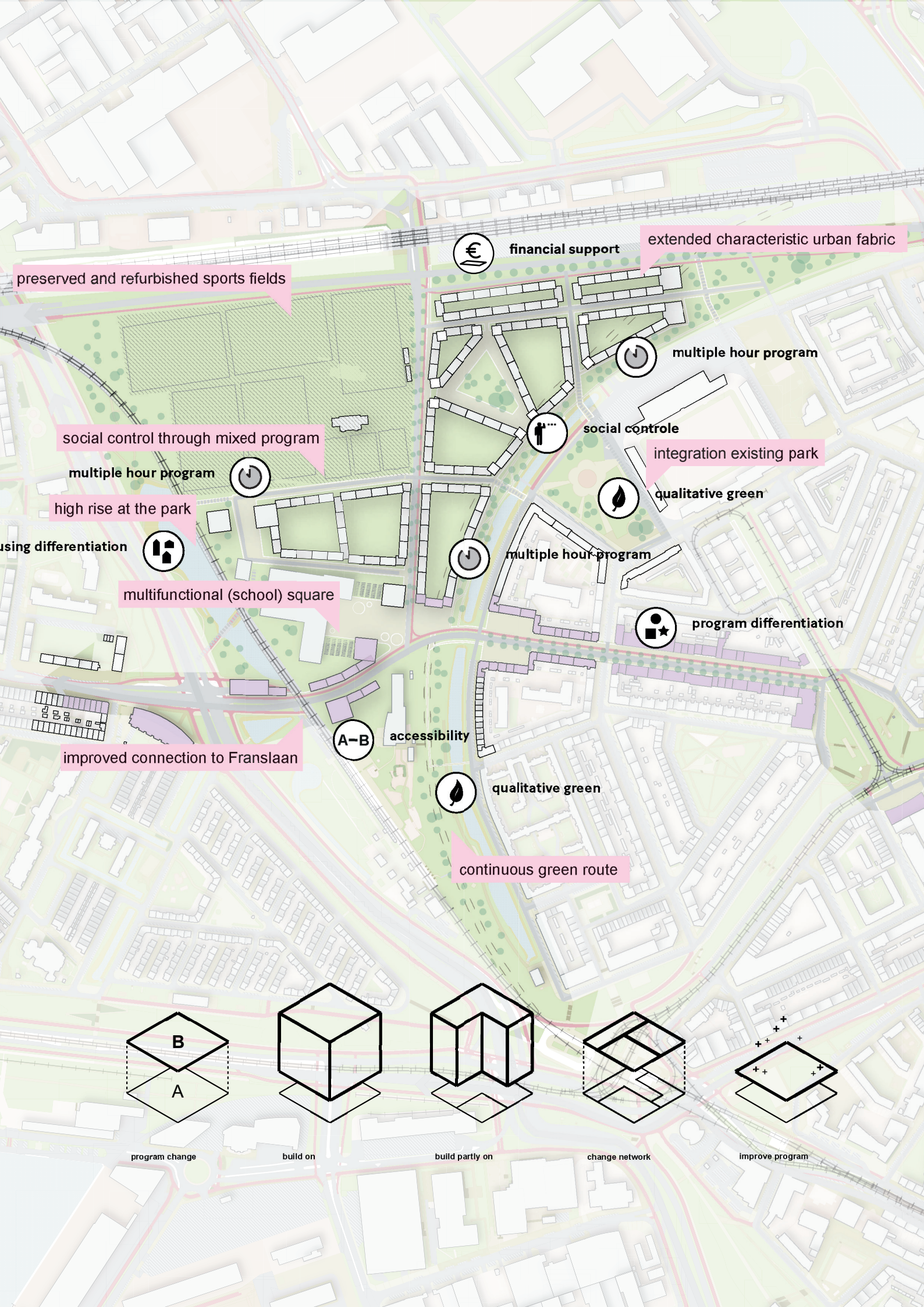
At the moment, the park next to Sparta is completely fenced. This was probably done because the park is experienced as unpleasant in the evening. By building on the park on 4 sides, instead of the current design with 3 sides, more social control is created and safety is assumed. For example, in several places in the design it was decided to place a 'counterparting programme'. By which is meant: program that has a different time of activity and thereby creates longer places to be left unfinished.

#### **Social rent, rent and purchase**

In order to arrive at a socio-economically diverse population, and with it a varying housing supply, it was shown earlier in the study that there is a shortage of owner-occupied homes in the neighbourhood. For successful tenants in the neighbourhood it is difficult to grow in this way, and they are often forced to move to another neighbourhood. This is bad for social cohesion and also for the creation of diversity in the population. In the new design, owner-occupied homes are mainly realised on this site.







preserved and refurbished sports fields



financial support

extended characteristic urban fabric

social control through mixed program

multiple hour program



high rise at the park

using differentiation



multifunctional (school) square



multiple hour program



integration existing park

qualitative green



program differentiation



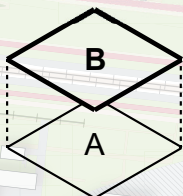
accessibility

improved connection to Franslaan

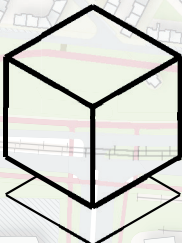


qualitative green

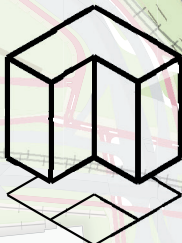
continuous green route



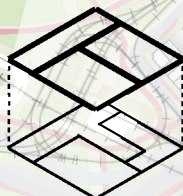
program change



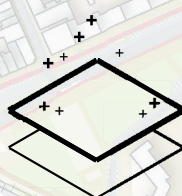
build on



build partly on

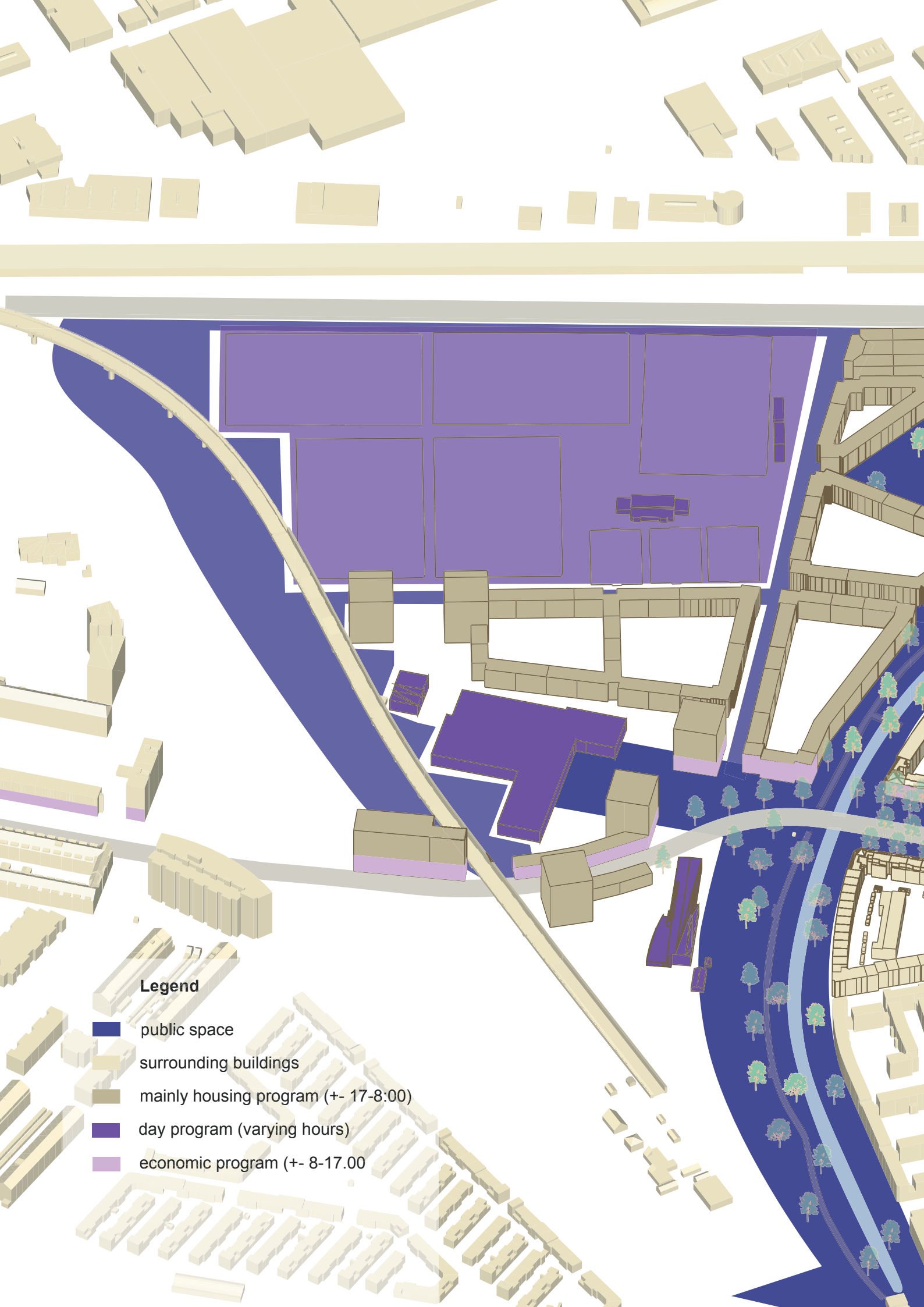


change network



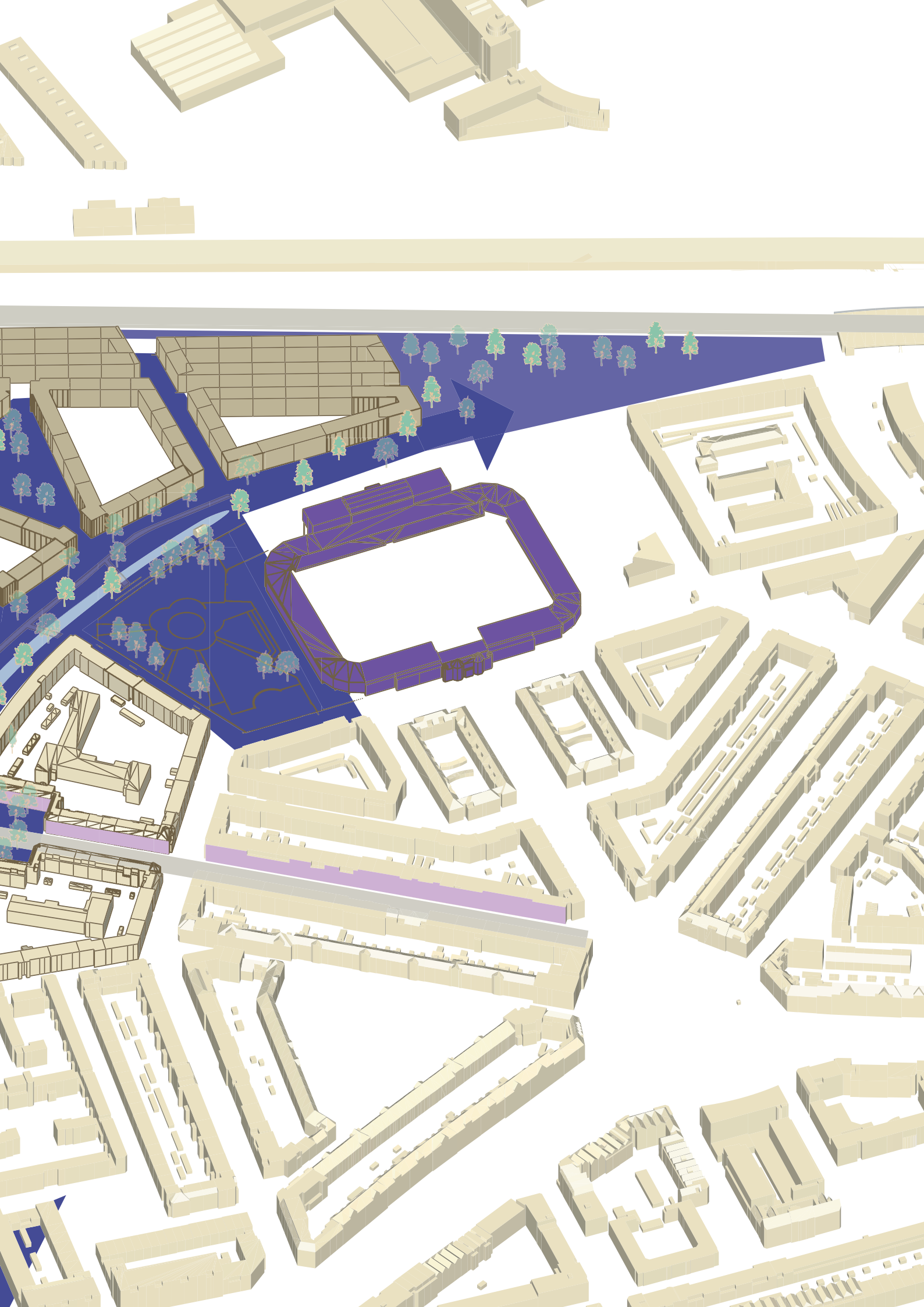
improve program





### Legend

- public space
- surrounding buildings
- mainly housing program (+/- 17-8:00)
- day program (varying hours)
- economic program (+/- 8-17:00)





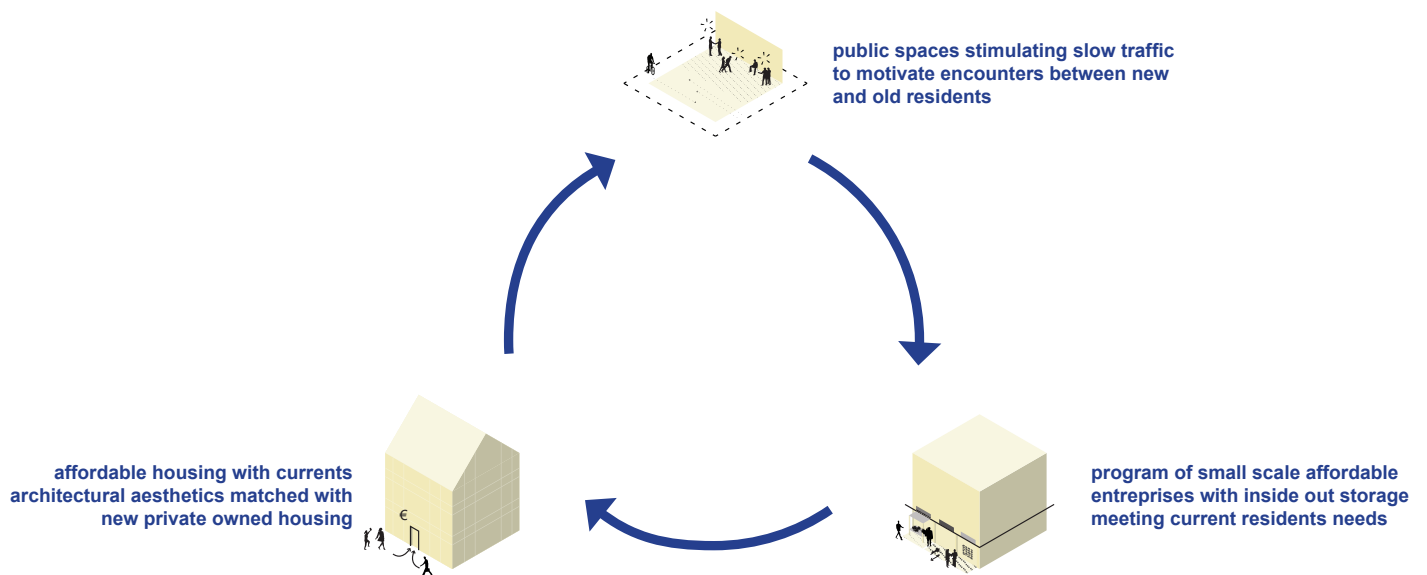
## Conclusion

The research points to three phases where urban design can have an impact on the negative consequences on social sustainability caused by (extreme) gentrification. This phasing makes it seem like the steps should only be performed in this order. This is not entirely true. The design choices depend on each other.

In some good places, the public spaces that the neighbourhoods already contain offer space for encounters and slow traffic. In this way, these places also offer space for local, small-scale enterprises to display their goods on the street. However,

these economic facilities can only take place by increasing financial support by increasing the public that uses the facilities. For example, by adding houses, the number of inhabitants is increased and the density of the district is increased. This offers room for socio-economic diversity by offering a diverse range of housing. In this way, the public in public space is becoming increasingly diverse and it is important to allow encounters to take place in accessible ways in daily routines. This brings you back to the public space where mainly slow traffic ensures pleasant, short or quick, encounters between the old and new residents.

# DESIGN DEPENDENCE



**Conclusions**

The conclusion of this thesis consists of the summarised answers to the previously posed sub-questions, ending with design. The themes of the conclusion are successively: Urban liveability, Social identity against a diverse population, Physical neighbourhood identity, Diversifying socio-economic program, Spatial opportunities and urgencies and finally the Design.



# Conclusions

The main question for this thesis is: *“How can urban design contribute to increasing liveability and a social-economic mix for Spangen, Bospolder & Tussendijken while preserving neighbourhood identity?”*

This question has arisen after approaching gentrification or urban renewal based solely on attracting higher capital-bearing people, which leads to poor socially sustainable design. A desired outcome for the ultimate research is a liveable neighbourhood in which a diverse socio-economic composition is strived, but a certain neighbourhood identity is preserved.

Drawing up the extreme phases of gentrification leads to a curve in which urban design partly plays a role. The three phases in which urban design plays a role relate to the availability of housing stock, the encounters in the public space and ultimately the socio-economic program of the neighbourhood.

The main question is answered on the basis of a set of sub-questions. The findings on the sub-questions are summarised and described below.

## ***SQ1: How does liveability relate to socio-economic diversity and neighbourhood identity in terms of urban design?***

Liveability can be measured in different ways. This thesis adheres to that of the Wijkprofiel. According to the Wijkprofiel, it consists of a physical index, a safety index

and a social index. They can sometimes be directly, sometimes indirectly translated into urban interventions.

For the physical design direct interventions are translated: qualitative homes, housing differentiation for different resident groups, functional public spaces for meeting people or leisure, program differentiation for vibrance and qualitative green contributing to the environment.

For the providing of safety, the interventions are interpreted. Important urban element is the social control for the sense of security. This can be created by long-term encounters, quick encounters or open plinths where activity is happening. Overviewable public spaces also cooperate and a multiple hour program. Other safety aspects can also be interpreted from the physical health and safety, such as walking or cycling on walkable or cyclable designed streets.

For the social index, important urban design interventions are certain facilities or public spaces creating encounters between people. Actively organised, or passively through having the same spatial destination. Actively in facilities such as bars, restaurants or parks. Passively due everyday activities such as education, sports or walking the dog.

Observing the interrelations of these indices with the requirements for socio-economic diversity creates three main urban themes for the operationalisation: building stock, public space and facilities. This is representative of the combination of liveability and socio-economic diversity. The

next step is to look at what neighbourhood identity relates to here.

The neighbourhood identity can also be expressed on the basis of these three themes. Ultimately, the aesthetic values, the frequently used routes, the historical value and the socio-economic program are considered.

### ***SQ2: How can the socio-economic status of the neighbourhood become more diverse and still be part of the social identity?***

In order to determine what socio-economic diversity means at this location, it has been relativized and a standard setting has been determined. The default setting is based on the average for Rotterdam. Comparison of the results requires a design that accommodates people with a higher education and residents with an average higher income.

The pursuit of this standard setting influences the current social identity of the neighbourhood. That it is about moving towards the standard setting and not achieving the total percentage. In doing so, it is not only necessary to look at options for attracting these population groups, but mainly to look at the retention of current residents. Affordable housing plays a major role in this.

### ***SQ3: What are the physical, urban features of the neighbourhood identity in***

### ***Spangen, Bospolder and Tussendijken that people feel belongingness towards?***

(Neighbourhood) identity means something different per person and is therefore a fairly subjective subject. Theory covers the idea of daily activities and the distinction from other neighbourhoods. This sub-question determines the validation of urban identity. In order to be able to approach the subject objectively, sub-topics been determined. A number of subjects have been identified that are mentioned more often and which also have stronger connections to the distinction of the area and daily activities.

The themes of the neighbourhood identity are: historic values, urban design, architectural design and socio-economic program. The scales are: neighbourhood scale, the dominant axes, public spaces, building scale and human scale. All elements were revalidated by the residents' attachment to the place.

The outcome of this research leads to three main pillars for the design. These three pillars combine liveability, with socio-economic sustainability and ultimately preserving neighbourhood identity. The pillars are: the affordable housing program, the lively public spaces and the typical small scale companies.

### ***SQ4: How can the socio-economic program be redesigned to realise improved liveability and contribute to socio-economic diversity?***

With this subquestion the validation of the current socio-economic program of the neighbourhoods is determined. Questions about what needs to be changed to create a lively, socio-economically diverse neighbourhood with a preserved or reinforced neighbourhood identity are answered here.

This was done on the basis of research into the current housing stock (ownership and rent versus owner-occupied houses), the public space (green-blue structure, grey structures for accessibility and functional public spaces) and facilities. Results of the study offered the following action points on the theme of ownership, green-structures, connectivity and the work-live division.

**Ownership :** Because the current housing stock contributes to social identity, it is important to strive to preserve as many existing homes as possible and the ownership program may not contain less than 55% social rent. In order to answer the demand for more owner-occupied homes (in the higher segment), we will therefore focus on realising new housing stock.

**Green-structures :** Because the current housing stock contributes to social identity, it is important to strive to preserve as many existing homes as possible and the ownership program may not contain less than 55% social rent. In order to answer the demand for more owner-occupied homes (in the higher segment), we will therefore focus on realising new housing stock.

**Connections & accessibility :** There is a missing qualitative and attractive entrance to Spangen East and the

Mathenesserbrug. Mainly for slow traffic the axis is not pleasant to use. This makes Spangen a secluded place. Resedesign provides improved accessibility between the Franslaan and the Mathenesserbrug.

**Work-live division :** Compared to other neighbourhoods, the working-living ratio in Spangen is mainly based on housing. For the realisation of a socio-economic diverse population and liveable space program diversification is desirable.

### ***SQ5: What spatial opportunities and urgencies are there to realise a sustainable liveable neighbourhood design?***

In the fifth research question the development locations are explored. By looking at spatial opportunities and urgencies for the neighbourhood sustainable urban development can be realised. To determine the spatial urgencies, dilapidated buildings and the urban heat island effect were examined. For the spatial opportunities, building-less spaces and connectivity were considered. But also on a larger scale to the surrounding urban developments and continuous social-economic structures.

For the spatial urgencies the conclusion is made that the current building stock is an important aspect of the neighbourhood identity and will have to be preserved or renovated with care. For other outdated buildings in future an appropriate program will follow the demand for a housing program such as owner-occupied homes (upper segment) but always with a 55% social housing preserved. Looking at the Urban Heat Island effect, large areas



in Bospolder and Tussendijken were expected to have a strongly increased surface heat in the summer. Cooling elements are desirable in these places for the redesign.

For the spatial opportunities it is stated that for the contribution to liveability and socio-economic diverse population it is important to connect the neighbourhood to the rest of the city. Strengthen the connection of Spangen with the surroundings therefore could be a design proposal fitting in the research and design aim. There is also a clear spatial opportunity in the Spangen North-West area, where there is a big amount of public space which is of low quality or added value to the neighbourhood identity.

By relating these topics to the three pillars of building stock, public space and facilities the design base is set. The new design will consist of a continuous socio-economic network with a newly introduced north western connection. Together with a reinforced surrounding green structure in which green axes are introduced within neighbourhoods for an improved and more liveable environment.

***SQ6: How can urban design contribute to a socially sustainable form of urban development in the Spangen, Tussendijken en Bospolder increasing liveability, socio-economic diversity and a preserved or reinforced neighbourhood identity?***

This question is answering the main question about how to implement the research outcomes into an urban design proposal. As mentioned earlier, the design consists of improving socio-economic axes and environmental axes. Other, subordinate axes are excluded from the design and also retained in design to preserve the neighbourhood identity.

The quality of the socio-economic axis contributes mostly to a vibrant and lively urban design. The program ensures visiting the public space and contributes to the neighbourhood identity. Liveliness is not only created by the facilities, but also by frequent use of the axis: as a result of a balance between fast and slow traffic.

The environmental axis consists of mostly a liveable and pleasant design. The functions are mainly residential and public space invites to go there or to stay.

The design guides are based on the urban design phases of the gentrification curve: the growing interest for centrally located affordable neighbourhoods (P2), noticeably changing population composition in the public realm (P3) and the emergence of new more expensive socio-economic programs (P4). The design proposal reacts on this with the following three assumptions:

- 2. Social housing for stable socio-economically diverse inhabitants**
- 3. Vibrant, liveable and stayable public spaces for slow traffic and small business owners**
- 4. Program of non-typical small scale enterprises with affordable products**

On the hand of the phasing elements some design rules are established.

**P2:** Preserve balance of social housing and free sector housing. Never realise more than 55% social housing in the neighbourhoods. Increase percentage owner occupied houses by building extra residential housing. Build affordable or medium-priced owner-occupied houses for 'social climbers'. Build higher-end owner-occupied homes and avoid demolishing existing houses. The new houses provide financial support for the current and future economic program that is part of the neighbourhood's characteristics.

**P3:** Create connections in existing public spaces and future main routing. Create liveable and lively routes. Improve connectivity neighbourhood by improving entrances to the area. Provide public space for the display of goods for shop owners. Encourage the use of slow traffic and preserve the spatial qualities of the main axis Mathenesserweg and Schiedamseweg.

**P4:** Preserve small scale affordable businesses. Preserve public spaces where people feel belongingness towards such as the local market. Extend existing vibrant shopping routes. Create financial support for current and future companies by densifying the area.

To realise connectivity, the entrances to the areas are controlled by new infrastructure design and building programs. The addition of numbers of homes also increases the use of the axes and thus also increases the liveliness.

In order to realise liveliness and liveable streets, the dominant urban structure for fast traffic has made room for that of slow traffic. Not only have separate bicycle paths been realised, but also wider

sidewalks with the use of greenery. This makes use of the space more pleasant and offers the possibility for local, small companies to store their goods on the sidewalk and thus create a liveliness that fits the current urban character.

For the last axis, the liveable green axis is mainly green applied to the axis that are almost petrified. This greenery not only functions aesthetically, it also provides safety for separating fast traffic from slow traffic.

These axes mainly contribute to improving and contributing to the socio-economic program and the public space. The third pillar of this design, which concerns housing stock, takes place in the development area in Spangen North-West. At this place there is room for redevelopment so that the current housing stock does not have to be touched for preserving neighbourhood identity. The densification of the area also contributes to the financial feasibility of the facilities.

Bringing down the old train embankment offers the opportunity to better connect infrastructures and to integrate and upgrade public space. In this way, the new development location will not become an isolated project, but will fit in with the neighbourhood characteristics.

Liveability has mainly been achieved by guaranteeing social control and optimising the existing green experience. Also new public spaces are introduced: the improved green ring around Spangen and a multifunctional square at the junction on the new axis between Franslaan and Bilderdijkstraat. These function excellently for passive and active encounters for residents and users of the area.

**Discussion**

In the discussion of these thesis the results are interpreted, validity is discussed and limitations are explained in more detail. They are assisted by suggestions for further research.



# Discussion

In this discussion the interpretation from the results and their limitations are discussed. After that the implications and suggestions for further research. The topic which will be addressed are: the hypothesis of (urban) design, sustainable urban design, the validity for setting a standard size socio-economic diversity, the focus on mixing socio-economic functions, defining neighbourhood identity, the realisation of houses in good locations versus bad locations, policies versus design, policies versus ownership and the involvement of stakeholders.

## 7.1 Interpreting results and limitations

### Hypothesis of (urban) design

In a certain sense, drawing up a design assignment is always a hypothesis. Decisions have to be made in order to reach a conclusion, although these decisions are sometimes a bit cumbersome or short-sighted. The three pillars that emerged from the phasing of gentrification have been interpreted and summarised objectively. While the real situation surrounding gentrification or urban renewal is probably more complex. However, design must be realised to be tested for subsequent use. This direction is actually based on research and experience and with that relevant for further research.

### Sustainable urban design

Initially gentrification was the cause of the main problem. There are more urban development plans that are not sustainable, gentrification is an urban

trend that is being discussed in the media a lot at the moment. Focus in this thesis design is on social sustainability in order to design a stable situation for socio-economic minorities. A group that generally has little influence on political decisions. So the focus is on social but also partly mentioned as economic sustainability. A third form of sustainability, ecology, is somewhat underexposed. Ecological aspects are partly discussed in the form of liveability. Ecological challenges are also taken into account to ensure that this liveability continues.

### Validity for setting a standard setting

Taking a normal as standard is debatable and not necessarily realistic. However, it can work as handles. You can also ask yourself whether the standard is something you want. The Netherlands and Rotterdam are very different from each other. It is also said that the Randstad is becoming increasingly popular to live in. The question is whether it is inclusive design if you cannot offer space for precisely the people who want to live there. Because of gentrification and other trends which are already changing the resident composition, reacting on a certain standard setting from today's statistics has to be done carefully. Trends can not be fully overlooked and be anticipated to. A trend can change really quick, as quick as it can suddenly be even more popular or happening.

The challenge is to be careful about attracting higher incomes, because this is already happening. Options for retaining current residents are more attractive. However, this is difficult to measure.

### **Focus on mixing Socio-economic functions**

The exploration of the desired socio-economic functions is done roughly. Now it is much focussing on the abstract idea of mixing. But, going deeper into explaining the type of facilities, the type of public spaces or the housing typologies may be even more applicable for realising socio-economic diversity. This can also support the idea that the functional axes that are now regarded as core identity, can nevertheless respond to the stock of the socio-economic program. For example, looking at what type of schools there are in the neighbourhood and how you can respond to them. As mentioned earlier, there is also segregation in schools, mainly caused by ethnic segregation.

### **Divining neighbourhood identity**

As discussed in chapter 4.1.1 the identity of space or the neighbourhood identity consists of the distinction from other places or the personal connection that users of the place have. This distinction from other places is relatively easy to determine by looking at statistics and the physical observable features. However, determining what the personal connection of users is is a lot more complicated. The conduct of interviews has led to certain insights, but also to the insight that this cannot be summarised. An individual is bound to place in many different ways than another is. Nor can they easily determine for themselves what the real reason is that they are bound, or whether this 'just happened that way'. Or that they themselves indicate that they are not even strongly tied to the place.

### **Determination for minimum social rent**

The survey determined that the current housing program is an important part of

social identity. An important characteristic of the housing program is the large amount of social rent. In all 3 districts this is around 60 percent. As a result, a minimum number of 55 percent has been set for the number of social rent in the district. This number is an assumption and not based on hard numbers. Knowing that a large number of social rents also contribute to the social segregation of population groups. The number is therefore not completely valid, but is used as a reference point. However, it can be assumed that by staying close to this 60 percent, part of the social identity is preserved.

### **Trade-off between realising homes in good locations versus bad locations**

This design has mainly been realised in places that are of bad spatial qualities and bad liveability in order to preserve the neighbourhood identity. Nevertheless, redesigning the existing environment does not by definition detract from the identity of the neighbourhood. This is one to be discussed on a larger scale. The space in the city that is currently being developed is perhaps relatively undervalued. But there are many more areas outside the city where homes can be built.

Clahsen & Verbraeken discuss the sayings of Taco van Hoek (2021). Van Hoek states that the core is that good locations are being developed. "No subsidy is required. There are plenty of options for small-scale construction that suits the environment". Described in chapter 2.1.1 Housing Crisis. The balancing of long-term solutions and short-term solutions must be carefully considered. Professors repeat it after each other: building in the inner city is good and building in the meadows is no longer of this time, et cetera. But if you're doing it nicely, why wouldn't you?" (Schreuder,



2022). To achieve the three goals of this project, realising and answering the housing demand at this location remains the most plausible. The transition of the area is currently already taking place, so looking for a solution outside the area is not or hardly realistic.

### **One-sided insight through interviews**

Conclusions drawn from the interviews with long-term residents are valuable, but not entirely valid due to the small number. The results can mainly be used as inspiration, not as hard knowledge.

## **7.2 Implications and suggestions for further research**

### **Policies versus Design**

This research explicitly looks at how a design can contribute to a problem that appears to be mainly caused by policy. An in-depth study of this policy can provide a solution to gain more insight into whether this assumption is correct and what can potentially change policy. Research into existing, but also policies that are planned to be implemented. This can contribute to spatial opportunities.

### **Policies and ownership**

An important topic which is on the agenda of several municipalities is about the purchase protection. The municipality of Rotterdam is already introducing that to several neighbourhoods, only these three are part of the excluded ones. Understanding by asking them as stakeholders why they choose so, could be important knowledge for this design.

Schreurder (2022) writes about the

thoughts of Johan Conijn towards this problem: “There is no doubt that the behaviour of private investors has pushed prices up,” says Johan Conijn, professor emeritus in the housing market at the UvA. “The owner-occupied home goes to the highest bidder, which in many cases was the private landlord who offered more than the first-time buyer. So if the private investor stops bidding, there will be a price-lowering effect.” This supports the idea that if this continues to be a major problem, action must be taken. It is debatable whether this can be solved in urban design. Policy and rules can sometimes influence this more than physical design does.

Further research into the possibilities of policy to generalise a socio-economically diversity while preserving neighbourhood identity would be of added value.

### **Involving stakeholders**

This social design is currently missing one important element: the people involved. That is why it is important for the next step to research the involvement of stakeholders. Like the municipality, the inhabitants, the housing corporations, active urbanists or architects or community centres. Especially because of the objectivity of measuring identity. For identity is something that cannot be measured, having this tested per different stakeholders can assist the credibility and conviction of the design.

Understanding how housing associations work can also contribute to the idea of whether social rent should be made available for the owner-occupier market, or whether more social rent should be included. It is also interesting whether this is possible at all in the first instance.

**Reflection**

The reflection is divided into a number of different sub-themes based on questions described in the MSc 3/4 Semesterbook 2021. The questions are answered next.



# Reflection

## 8.1 What is the relation between your graduation project topic, the studio topic, your master track and your master programme?

and

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

Graduation topic: **Social sustainable urban development**,  
Studio topic: **Urban Fabrics**,  
Master Track: **half track Architecture, full track Urbansim**.

For me, the choice for this study was always one that was close to myself. From an early age I have been interested in making a home and creating a personal designed place. Later during my studies I started realising that this is not only at home, but also on the street. Looking at places I feel comfortable and places I preferably avoid. I know I am privileged to live the way I live. That is why I would like to contribute to creating a pleasant living environment for as many as possible. The professionalism of architecture and urban design leads to aesthetic expressions with a caring effect in an inescapable

design. For stimulating movements or just standing and staying.

My thesis topic is also about this idea. Understanding the beauty of individuality of a city, a neighbourhood, an area or public space versus seeing the creation of profit and just money which is not always the most durable solution for a comfortable city design. Urban planning provides the foundation for design decisions that will have consequences for everyone's future. Not only the ones who are directly linked to the place. It feels like you can really contribute to changing the world in this profession. Not only afterwards the problems have been caused, but also just before to prevent people from experiencing any problems they don't have to face. There is a wide range of urban designs that show that spatial design actually contributes to creating and preserving a world as we know it.

I want to take an extra step to show people who do not experience the world as beautiful to see the beauty of it and create an environment to feel safe in. Important decisions should be about long term solutions. Changing the city is not free, not only in money but also in resources. Therefore, choices must be made at technical levels, but certainly also at socially sustainable levels. When people agree more, live together and there is peace of mind, other more important problems can be looked after and hopefully solved.

This is how I see the relationships between the different courses of study that I have followed, or are still following.

Urban planning provides a way to solve problems economically, socially and ecologically. Concepts that belong to creating a sustainable future, so that in a few years' time life will still be just as nice as it is now and perhaps even better.

## **8.3 How do you assess the value of your way of working ?**

This question relates to the approach, your used methods and used methodology.

### **8.3.1 Approach**

Developing the curve of re-segregation through gentrification was an important part of the approach of the project. This insight came during the rewriting and thinking of the research narrative just before the P3 presentation. By going through the problem statement again and approaching it urban, the curve of the extreme version of gentrification was created. The analysis and presentation of this graph led to an important finding and provided guidelines for the rest of the research and design direction. Urban themes that arose from the curve were previously researched and established topics and thus intertwined well. The themes became main themes for the research and thus offered the most important 3 design directions for redesign.

### **8.3.2 Determining the problem statement and the exploratory research**

The most important insight I got for this is that repeatedly asking what the question is that needs to be answered is something that early research lacked. Collecting is

easy, but the research gets more direction when a question is actually answered. This is something that seems to be a recurring problem. Ultimately, the right questions are asked, but it would provide much more peace of mind if this was discussed earlier.

### **8.3.3 Methodology**

The methodologies used were well suited to explaining the problem. This was the main objective for this report. However, a major translation effort is missing in design. This will eventually come into its own through the research and design tools.

For the methodology it is mentioned that case studies have been used. These have only not been used in the capacity and in depth that they have been added to this research. That is why it is wise to apply this for the next presentation moment. Case studies can be of great help in suggesting the problem and especially the solution direction. Looking closely at what good solutions have been found, it is also very helpful to see what went wrong.

### **8.3.4 Interviews**

Only two long term residents have been interviewed. In addition to the quantity, the profile of both interviewees also has many similarities. They are both men of the same age who have both lived in the area for a long time. Asking a woman who also lives in the area for a long time may be of greater value. It is also interesting to interview young people who live in the neighbourhood for a shorter period of time. Or the next generation of guest workers. Perhaps their families largely live in these neighbourhoods. In short, holding more interviews can lead to new, useful insights

or confirmation of the current design plan.

## 8.4 How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?

### 8.4.1 Societal relevance

Kraaijvanger (2020) states that the world population will continue to increase at least until 2064. Now that the world population continues to grow and the demand for new urban developments continues, the question of how this can be done sustainably is considerable.

**Gap between rich and poor** - Besides this growing population, the gap between poor and rich is still growing. With that equality was already bad and it is getting worse. Beunderman & Molijn (2021) ask themselves: "Is capitalism derailing in the Netherlands? Inequality is increasing. The statistics on opportunities, income, wealth, housing and work show: wealth at the top is swelling, while the low-skilled, flex workers and young people are getting into trouble". If no action is taken and no action is taken towards equal opportunities in housing, the future will bring the city to the elite. Remie (2016) supports this prediction and writes that cities are turning around. Where they used to be more of a bastion for the poor, now there is less and less affordable housing to be found, according to new research. Remie calls this the 'suburbanisation of the poor'.

Which states that this is partly due to urban policy and will lead to more segregation and inequality in the future.

**Labour market** - The problem does not only arise on the basis of unequal to spatial rights, it also permeates in this way in other institutions. In Amsterdam, for example, prices have risen so high that healthcare workers can no longer live in the city. This has major consequences. This is especially showing now, in times of the COVID-9 pandemic. It is strictly a profession such as care that should have its employees living nearby. This indicates a clear interest in socio-economic inclusiveness. Thereby, there are already initiatives in Amsterdam that give priority to teachers, agents and healthcare workers in the housing market (NOS, 2021c).

**Social cohesion** - Likewise, the problem of segregation also arises in school systems. The segregation of school students into different schools has important implications for educational inequality, social cohesion and intergenerational mobility (Gutiérrez, Jerrim & Torres, 2019). This means that this problem already creates unequal opportunities from an early age. Gutiérrez, Jerrim & Torres conclude that structural factors are likely to be the main drivers of between-school segregation and that education policymakers may need to be much more radical if they are to foster greater levels of integration between the rich and the poor. You could also approach this in a way that fits urban planning and thus state that urban policymakers should also focus in urban development plans on the integration between rich and poor.

**National interest** - This problem does not only cause social problems in the big cities of the Netherlands, but has already



been observed in several other cities in Europe. Tammaru, Marcińczak, Musterd & Van Ham (2019) states the poor are progressively concentrating spatially within capital cities across Europe.

**International interest** - Moreover, the levels of socio-economic segregation in European cities are humble compared to some other places in the world (Tammaru, Marcińczak, Musterd & Van Ham, 2019). For instance, the racial residential segregation of blacks once defined urban America. Massey (2016) found out it caused the sharp rise in inequality and accompanying growth in class segregation.

For my design and research, these themes are important to respond to but also to keep in mind. The results of this research can be used as a basis for international and national issues concerning rapidly changing socio-economic compositions. The consequences of letting these kinds of processes go do not only lead to inequality on a personal level, it ultimately also causes problems in other sectors. Focusing only on short, fast and ill-considered solutions may improve short-term liveability and economic growth, but in the long run it results in relocation of the same problems elsewhere and with the all day growing population it could turn even worse. This is of course not something that happens overnight, but it is still important to keep an eye on these kinds of processes. The philosophy about living together of different population groups is a difficult one, because people often opt for the comfort of living together with like-minded people. But the non-integration of the population caused incomprehension and ignorance to other groups at the time and often led to friction and disagreement.

The chance that this kind of larger growing disagreement will develop into a physical confrontation between each other is plausible and a well-known phenomenon.

## 8.4.2 Scientific relevance

Much research has been done on the sociological effects of gentrification and unsustainable urban development. This often refers to politicians and policymakers who are blamed for creating unequal opportunities in society. Policy is something intangible and is made by people who can be influenced, only if they see importance and mostly when they personally benefit from it. This thesis will contribute to relevance to science by physically answering the problem. By writing a physical plan combined with policy outlines, conceptual ideas about creating equality for socio-economic minorities are turned into urban design elements. Something one simply cannot ignore and in a way forces participation.

## 8.4.3 Scope and implication of your graduation project

Due to gentrification as a subject, the main subject has been further developed to look at where urban design could emphasise. The themes of quality of life, socio-economic diversity and neighbourhood identity were soon addressed. However, these three topics are very broad in their own right. By choosing to preserve identity I choose a really broad concept. In the research it is refined into urban identity. This is still quite intangible. Further research will need to refine this idea. Rethinking is needed to perhaps reword this concept so that it encompasses more the subject matter. It is an art to be able to briefly describe a focused subject.

Neighbourhood identity can be determined in various ways, as described earlier in this study. In the study, this was distinguished by social identity and physical identity. Such as the buildings that are there, the people who live there, the functions that are there, the location, the name, the history, the relationships between the people, the pride in the neighbourhood and so on, make a combination of factors that makes neighbourhood identity. The starting point for the research is to strengthen it, not destroy it. So don't try to replace people, but contribute to the current neighbourhood and possibly add other groups to it.

#### **8.4.4 Ethical considerations**

Creating socio-economic equality by sustainable urban development seems to be of great importance for ethical considerations.

A sustainable resident flow seems to be an attractive goal to realise. Nonetheless, there is an ethical consideration for this. Students and expats in particular seem to be undesirable groups to realise this way of sustainable development. Yet, this exclusion of these population groups is at odds with the idea of socio-economic diversity. It is important that they also get their place. Particularly large concentrations of these groups lead to underdeveloped social relationships. Spreading these groups can therefore be beneficial.

Besides, Schreuder (2022) argues that the flow should be improved and that people should be more tempted to move. This seems to partly contradict what is described in the introduction about a sustainable resident flow. The danger

with encouraging people to move is that it happens to an extreme extent that entire population groups are 'seduced' or, perhaps better said, forced into moving. These short term residents don't really contribute to the idea of social sustainability. They even work against creating social cohesion among the current and new residents.

Changes in the urban fabric will always create conflicts of interest. Countering the rapid process of gentrification also entails ethical contradictions. An important consideration that should be made is why people with money and their investments are subordinate to the people who earn less and thus often contribute less to the economy. An important weighing instrument for this should be on sustainability. So the question is what kind of development will ultimately be beneficial for the ultimate goal for the longest time. Both sides, the rich and the less wealthy, will have to give up some of their demands.

The ethical issue is mainly about whether the redevelopment of a neighbourhood should be for current or new residents. Identity is about daily activities and distinguishing oneself from others. You could therefore say that today's identity is determined by the current inhabitants. So if you're striving for a preserved identity, the answer would be to focus on redeveloping for the current one. However, one of the pillars of development is the creation of a socially diverse population. This creates a duality.

For urban development in a capital city it is rarely possible to develop on urban space that has no function however. A choice would have to be made between modifying

existing buildings or demolishing and building something new. In which current users or owners of the building cannot exercise any rights, at least temporarily. The final design will decide to what extent they will return to what they previously thought they were entitled to.

In addition, the development of public space at a place where no buildings are located is also a dilemma. People tend to think that the public space is theirs, as Hartevelt (2019) stated earlier. A sense of inequality quickly arises when authorities make the decision about this space. When this public space also fulfils a social or ecological function, this entails even more conflicts of interest.

Social, economic and environmental sustainability make these important measuring instruments for ultimately arriving at an urban design that can provide improvements in the liveability for users for as long as possible.

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

The research into gentrification in itself is something that is more useful for other similar situations in similar neighbourhoods. That is, neighbourhoods under pressure from real estate developers who see profit in buying houses and renting them out for higher prices.

The three themes of housing stock, public spaces and socio-economic programs are themes that must be determined and measured against the neighbourhood

identity that applies in that place and is therefore a place-bound concept. It is plausible, however, that a program with affordable products is an important part of identity of neighbourhoods that are at the beginning of gentrification. This can ensure that current residents continue to feel involved and that new, wealthier residents mix better and do not settle in too large numbers. The results of the current neighbourhood identity can be used as an assessment tool after evaluating them on the base of liveability.

Creating liveability consists of various generic elements that can be applied to many urban designs. These have partly been set out for this location and will largely apply to other early gentrifying neighborhoods as well.



**References**

This research and design thesis is assisted by an arsenal of references. These consist of websites, scientific articles, books, reports and images.





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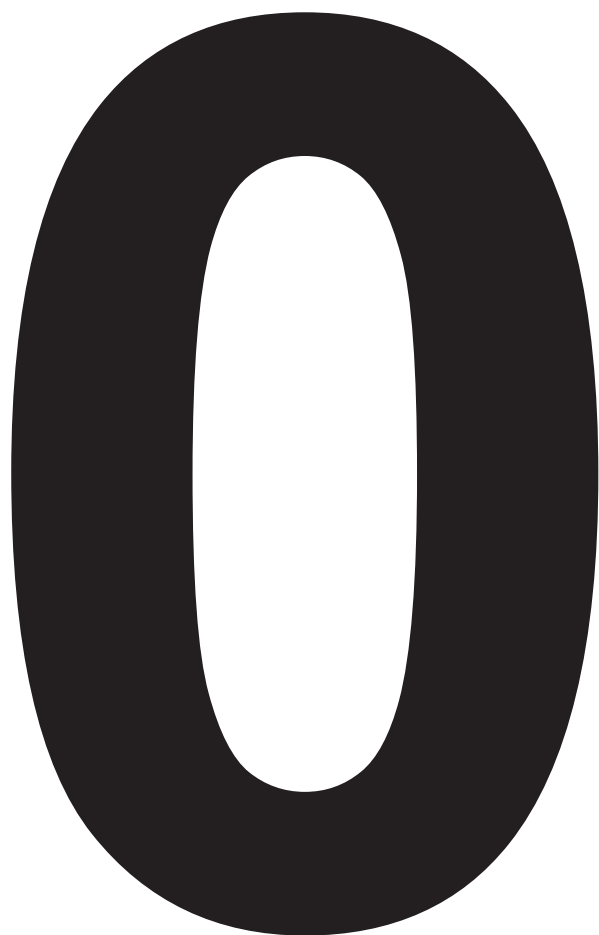
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**Appendix**  
Rotterdam.

10.1 The poem written by Dean Bowen about gentrification in



# 10.1 Exodus

Dean Bowen -

we vergaten dat we stadse wezens waren  
we vergaten jou, rotterdam  
we vergaten wie zich hier thuis noemt  
we vergaten dat thuis weinig meer is dan een plek  
waarvan je verdreven kan worden  
& als onwenselijk gebrandmerkt  
we vergaten hoe wij marketingtaal werden  
de aantrekkingskracht van de meerdere  
minderheid  
we vergaten dat Babel ook een plek was waar we  
verschilden van elkaar  
tot mindere goden ook deze veelvoud vreesden  
maar dat haar verhalen nog altijd zingen  
we vergaten wederopgebouwde gronden  
we vergaten dat we gronden nog steeds  
wederopbouwen  
we vergaten hoe cultuur een dynamisch organisme  
is  
en dat ook het onze ooit zal kantelen  
ik vergat mijn plek  
of misschien interesseerde het me geen fuck  
we vergaten dat sommige burens dromen  
van weinig meer dan wat vierkante meters  
in de stad, zonder dreigende exodus  
we vergaten de exodus, de rotterdamwet  
we vergaten hoe we zeiden dat er hier geen plek  
voor iedereen  
we vergaten drie opties, wooncarrières &  
beleidsambities  
ik vergat mijn schuld & het gewicht ervan op mijn  
hoofd  
ik vergat mijn hoofd & hoe ook deze de stad  
verkoopt  
als cultureel exportproduct  
ik vergat mijn pen & mijn poëzie  
ik vergat hoe ze een stem versterken  
als ze je stadsdichter noemen, vragen te reageren  
op dit alles  
& je achterlaten in het ongemak  
omgevormd tot mooie zinnen voor wat waardering  
je snapt het niet

je bent al vergeten met wie je was, vandaag in de  
stad  
je vergat alle mensen die zich daar bewogen  
wie er at, of lachte, zich haastte of uitrustte  
of whatever  
maar je herinnert je de overwaarde, toch?  
& hoe enthousiast je daarmee?  
je herinnert je hoe je op Kade alle producten kan  
vinden  
van mensen waar je verder niets mee te maken  
wilt hebben  
totdat je wilt tonen hoe divers we hier zijn  
weet je nog, hoe grootstedelijk dat voelde?  
ik vergat waarom ik dit schreef  
ik vergat of ik enkel wat te zeuren had  
of dat ook ik de mensen in de stad vergeten was  
die er aten of lachten, zich haastten of uitrustten of  
whatever  
maar ik herinner me hoe dit gaat  
herinner me hoe grootstedelijk dit voelt  
ik vergat dat ikzelf wederopgebouwde grond was  
je bent al vergeten dat ik mijn hoofd vergat, weet  
je nog?  
we vergaten dat sommige burens, elke dag  
bewegen  
langs vierkante meters van een ingerichte stad  
waarvan beleid bepaald heeft dat het nooit voor  
hen bedoeld was  
we vergaten dat sommige burens blijven vechten  
voor hun plekje in deze stad  
we vergaten dat sommigen enkel aandacht  
hebben  
voor drie opties, wooncarrières & beleidsambities  
of misschien interesseert het ze geen fuck, weet je  
soms vergeet ik hoe moeilijk het is  
om te onthouden

<https://rauwkost-collective.com/nl/exodus/>

## 10.2 Interviews

12 april 2022

**Jack Bil**

### **Persoonlijk**

E: Hoe oud bent u?

J: 66

E: Waar woont u?

J: Mathenesserweg 97 - woongroep in een kamer

E: Hoe lang woont u al op dit adres en hoe

J: lang woont u al in de wijk?  
25 jaar op hetzelfde adres

E: Wat ziet u als 'uw wijk'?

J: De straat

E: Werk je op dit moment?

J: Nee

E: Is dit werk in deze buurt? Zo niet, waar dan wel?

J: Vroeger in Dordrecht

E: Ga je met de auto, fiets of lopend?

J: Trein en fiets

### **Activiteiten in de buurt**

E: Wat zijn plekken in de wijk waar jij het liefst naar toe gaat?

J: Delfshaven en dan vooral cafe de Oude sluis. Het is een mooie plek daar. Daarnaast ga ik graag naar Maak, het koffietentje in de straat.

E: En waar denk je dat de rest van de bewoners graag komen?

J: Dat zou ik niet weten

E: Waar doe je de boodschappen?

J: Ik haal bijna alles op de Schiedamseweg.

E: Is er een plek dat je mist in je buurt en wat voor plek is dat?

J: Nee, het centrum van Rotterdam is niet ver weg.

E: En mis je een bepaalde functie (winkel, samenkomstplek, arts, etc.) en wat voor functie is dit?

J: Nee.

### **Mening leefbaarheid in de buurt**

E: Wat vind je van de buurt op dit moment?

J: Ik zou de wijk een 7 geven. Ik vind de leefbaarheid goed

E: Is dit veranderd, en daarmee ook verbeterd ten opzichte van de jaren daarvoor?

J: De wijk is positief veranderd. Toen de 'stadsmaker' jaren geleden een aantal zogenaamde stichtingen sloot. Deze waren vaak voornamelijk een dekmantel voor drugsdealers.

E: Wanneer begon je verandering te merken?

J: Dat was zo'n 5 a 7 jaar geleden.

E: Ergens gelezen dat er vroeger veel hangjongeren in de buurt waren. Waar lag deze verandering in het straatbeeld voornamelijk aan denk je?

J: Dat ging voornamelijk dus over deze drugshandel onder de dekmantel van

deze zogenaamde 'stichtingen'.

E: Wat voor functies hebben in jouw ogen

J: een betere invloed op de leefbaarheid en welke slechtere?

Vooraf slechte invloed hebben deze stichtingen en vage winkels gehad.

E: Hoe kan je de wijk verbeteren in jouw ogen? In termen van leefbaarheid.

J: Wat vooral verslechterd is zijn de woningen in Spangen die in '70 en '80 zijn gerenoveerd. Huidige architectuur is genegeerd en de eenheid die de straat uitstraalde is vergaan. Deze woningen trekken een ander slag, arme mensen.

### **Binding met de buurt**

E: Waarom ben je hier destijds komen wonen? (locatie, prijs, vrienden, kennissen, prettige plek, groene omgeving, dicht bij werk (van partner), dicht bij school kinderen ..?)

J: Hier was een optie voor het beginnen van een woongroep. Het idee was hier maar even te gaan wonen. Het was een mooi huis met tuin.

E: Waarom woon je hier nog steeds? Wat bindt je met de plaats?

J: Vooral wegens de woongroep. Maar ook een mooie straat. Daarnaast wonen er diverse mensen wat ik leuk vind, maar het moet niet te veel worden.

E: Wat zijn redenen voor u / jou om hier niet

meer te blijven wonen? Wat zou er voor zorgen dat je niet meer met de plaats gebonden bent?

J: Wanneer ik te oud word en geen binding meer heb met de jongeren.

E: Heb je veel vrienden en kennissen in deze buurt wonen?

J: Redelijk

### **Mening gentrificatie**

E: Heeft u het idee dat gentrificatie plaatsvindt in de wijk? Zo ja, welke straten of buurten voornamelijk?

J: Ja, voornamelijk op de Mathenesserweg en de Bellamy. Woonbron is schuldige.

E: Heb je het idee dat rijkere mensen de wijken gaan of al zijn aan het toetreden (ten koste van armere bevolkingsgroepen)?

J: Ja. De mensen die gaan hebben geen mogelijkheid meer terug te komen.

E: Heeft dit eerder een slecht of goed effect op de leefbaarheid van de wijk denkt u? Kunt u redenen voor allebei vinden?

J: Niet perse.

J: goed: kan ik nu niet noemen

J: Slecht: eerder was de wijk meer volks, meer gebonden. Nu ontstaan er steeds meer vluchtige relaties. Met studenten bijvoorbeeld die maar kort in de buurt wonen. Tegen de tijd dat je elkaar kent, zijn ze alweer weg. De nieuwe studenten die er wonen ken ik niet.

14 april 2022

**Aad de Vries**

### **Persoonlijk**

stedelijke vernieuwing

E: Hoe oud bent u?

A: 73

E: Wat verwacht u van de gemeente of ontwerper om de wijk 'beter' te maken? Wat vind je dat voor hun het belangrijkste doel zou moeten zijn?

E: Waar woont u?

A: Mathenesserweg 92, alleen.

J: Handhaven gebeurt slecht. De gemeenteraad is lastig aan te spreken.

E: Hoe lang woont u al op dit adres en hoe lang woont u al in de wijk?

A: Sinds 1976

### **Overige opmerkingen**

E: Wat ziet u als 'uw wijk'?

A: Ik voel me niet super gebonden.

J: Bewoners zijn veel sneller problemen in de wijk dan dat beleidsmakers dat doen.

E: Werk je op dit moment?

A: Ik heb een administratie kantoor aan huis.

Het water dat langs het trein talud in Spangen loopt is nog van vroeger. Het huidige ontwerp volgt daarom dan ook deze lijn. De groene route leidt tot aan het centraal station Rotterdam.

E: Is dit werk in deze buurt? Zo niet, waar dan wel?

A: In deze buurt dus.

Het groen dat voor Marconiplein ligt is al eerder een keer herontworpen. Deze heeft een opstaande rand van de originele bebouwing die daar stond.

E: Ga je met de auto, fiets of lopend?

A: Ik ga lopend.

### **Activiteiten in de buurt**

E: Wat zijn plekken in de wijk waar jij het liefst naar toe gaat?

A: Ik ga graag naar Oud Delfshaven en wekelijks naar de Markt.

E: Waar doe je de boodschappen?

A: De mark en de sligro. Heel soms naar de Albert Heijn.

E: En mis je een bepaalde functie (winkel,



samenkomstplek, arts, etc.) en wat voor functie is dit?

A: Dicht in de buurt zelfs zijn bijna geen cafés. Sociale ontmoetingen gebeuren dan ook zelden spontaan. Voor leuke cafes ga ik naar Oud Delfshaven, daar heb je wel nog originele oude bruine cafes.

### **Mening leefbaarheid in de buurt**

E: Wat vind je van de buurt op dit moment?

A: Prettig

E: Is dit veranderd, en daarmee ook verbeterd ten opzichte van de jaren daarvoor?

A: Enorm veranderd, niet te vergelijken

E: Wanneer begon je verandering te merken?

A: Nadat de woonkwaliteit steeds slechter werd. Die gebeurde na de verplichte renovatie. Hierin heeft de gemeente een foute rol gehad. Het werd deels gesubsidieerd maar men werkte zichzelf in grote schulden door slechte aannemers. Wanneer je het zelf had gedaan kostte het zo'n 40.000 maar met 'hulp' van de gemeente betaalde men zo'n 130.000. Dit gebeurde na 7 jaar van de oplevering.

E: Ergens gelezen dat er vroeger veel hangjongeren in de buurt waren. Waar lag deze verandering in het straatbeeld voornamelijk aan denk je?

A: Niet in optiek meegemaakt.

E: Wat voor functies hebben in jouw ogen

een betere invloed op de leefbaarheid en welke slechtere?

A: Misschien had de tram moeten blijven op de Mathenesserweg.

E: Hoe kan je de wijk verbeteren in jouw ogen? In termen van leefbaarheid.

A: Cafes! Om mensen te ontmoeten. Dit is sowieso een te kort in Rotterdam. Vroeger was er veel meer. Ik vind het wel een idee om hier subsidies voor aan te vragen en deze kroegen tot staatsgoed / cultureel erfgoed te maken.

Binding met de buurt

E: Waarom ben je hier destijds komen wonen? (locatie, prijs, vrienden, kennissen, prettige plek, groene omgeving, dicht bij werk (van partner), dicht bij school kinderen ..?)

A: Ik ben in deze buurt geboren, op de Mathenesserdijk.

E: Waarom woon je hier nog steeds? Wat bindt je met de plaats?

A: Te lui om weg te gaan.

E: Wat zijn redenen voor u / jou om hier niet meer te blijven wonen? Wat zou er voor zorgen dat je niet meer met de plaats gebonden bent?

A: Niet voor nu te overzien.

E: Wat is een plek waar je de meeste mensen ontmoet, die je nog niet kende?

A: Gebeurt niet vaak.

E: Heb je veel vrienden en kennissen in deze

buurt wonen?

A: Ja veel.

E: Zo ja, heb je deze hier leren kennen of kenden je die al van te voren?

A: Hier leren kennen.

### **Mening gentrificatie**

E: Heeft u het idee dat gentrificatie plaatsvindt in de wijk? Zo ja, welke straten of buurten voornamelijk?

A: Vooral de grotere huizen, zoals deze aan de Mathenesserweg. Het is te merken, mensen kunnen niet meer terug komen.

E: Heeft dit eerder een slecht of goed effect op de leefbaarheid van de wijk denkt u?

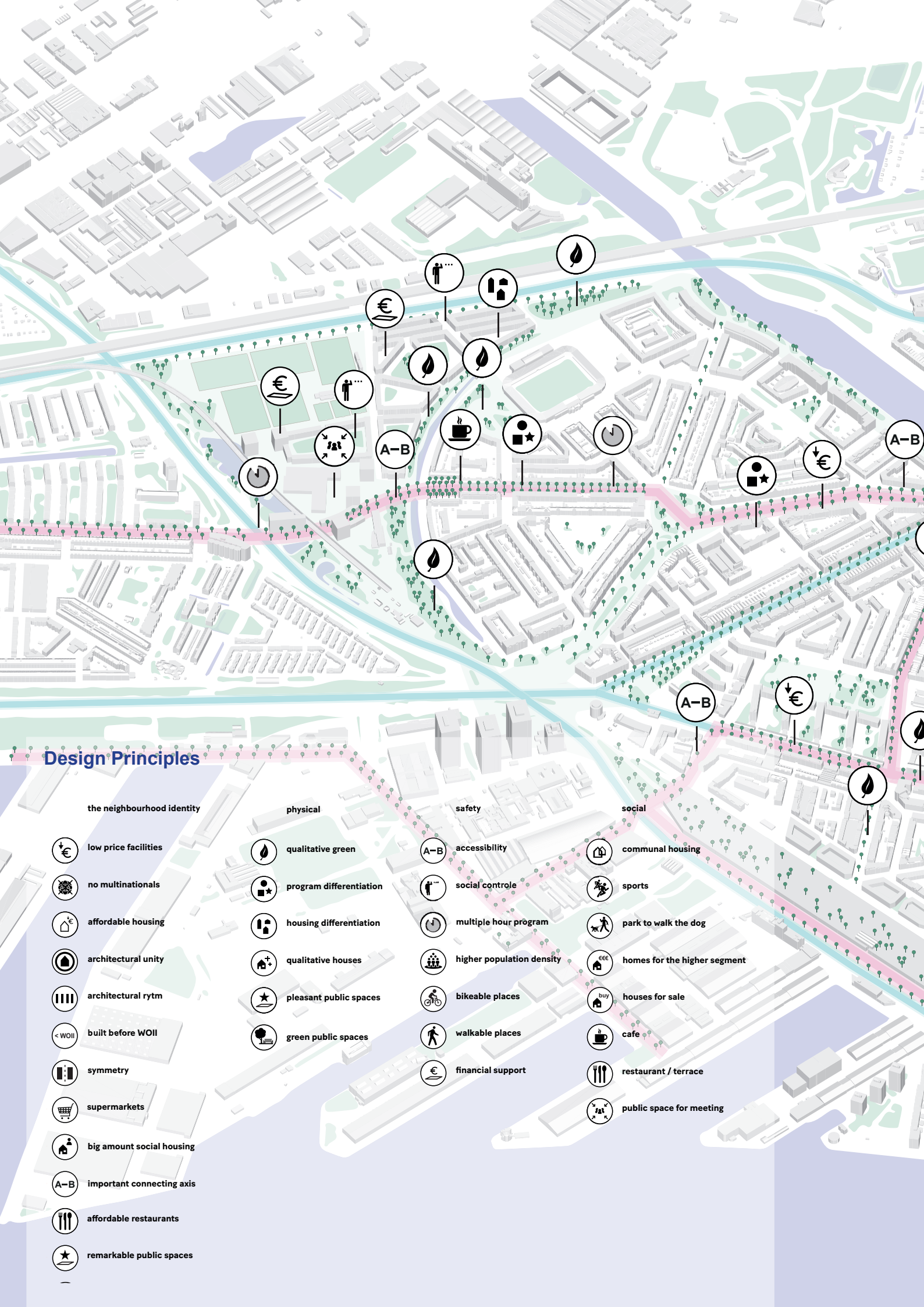
A: Kunt u redenen voor allebei vinden?  
Betere invloed op leefbaarheid.

### **Stedelijke vernieuwing**

E: Wat verwacht u van de gemeente of ontwerper om de wijk 'beter' te maken? Wat vind je dat voor hun het belangrijkste doel zou moeten zijn?

A: Openbare ruimte moet worden verbeterd voor het ontmoeten van mensen.





## Design Principles

### the neighbourhood identity

- low price facilities
- no multinationals
- affordable housing
- architectural unity
- architectural rytm
- built before WOII
- symmetry
- supermarkets
- big amount social housing
- important connecting axis
- affordable restaurants
- remarkable public spaces

### physical

- qualitative green
- program differentiation
- housing differentiation
- qualitative houses
- pleasant public spaces
- green public spaces

### safety

- accessibility
- social controle
- multiple hour program
- higher population density
- bikeable places
- walkable places
- financial support

### social

- communal housing
- sports
- park to walk the dog
- homes for the higher segment
- houses for sale
- cafe
- restaurant / terrace
- public space for meeting



# welkom

Hoşgeldiniz

أهلاً بك



## Legend

 Lively and liveable axis

 Main transportation axis







