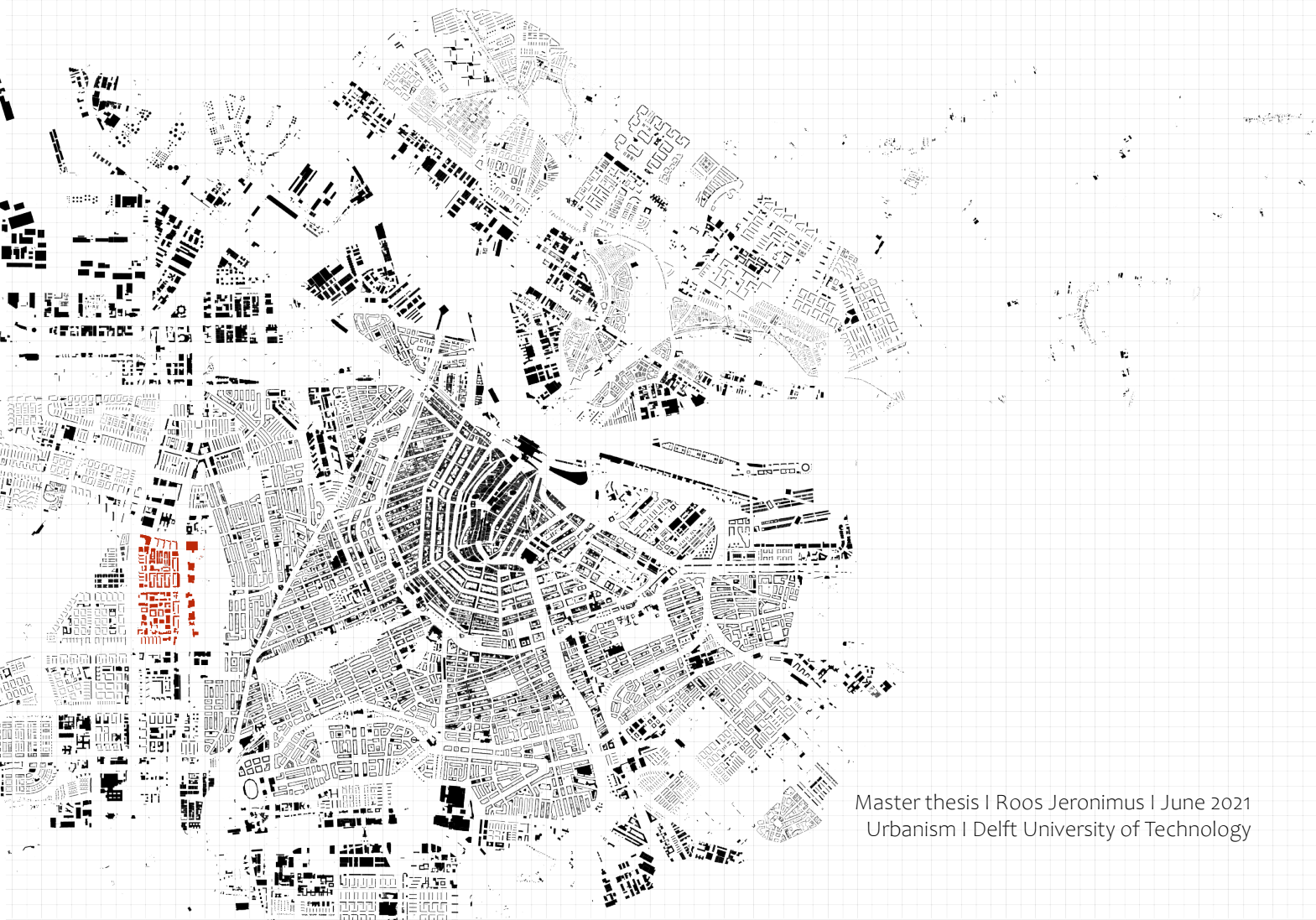


A SOCIALLY COHESIVE OVERTOOMSE VELD

A research project on how the monofunctional post-war neighborhood Overtoomse Veld can be transformed into a more socially cohesive mixed-use area



COLOPHON

Msc. Graduation thesis P5 report

Msc 4. Urbanism track

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Delft, The Netherlands



* All figures are made by the author unless indicated otherwise

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Marokkanen in West, vijf jaar na de explosie

August Allebépleinvrees [August Allebéplein fear]

Gentrificatie in Amsterdam heeft ook schaduwkanten [Gentrification in Amsterdam has downsides]

Amsterdam in 2019: een stad vol problemen en vol geluk

[A city full of problems and full of luck] **Voorpagina**

Prognose: recordaantal inwoners Amsterdam in 2019 [Record amount inhabitants Amsterdam]

Van hippiestad tot pretpark voor hoogopgeleiden [From hippie city to amusement park for the highly educated]

Op 1500 meter afstand van de wereldstad [1500m from the world city]

Van wie is de stad?

[Who owns the city?]

Sturen met stadsvernieuwing

[Steering urban renewal]

Onderzoek

De Amsterdamse binnenstad verandert in een eentonig consumptiegebied [The inner city is changing into a monotonous consumption area]

‘Diversiteit is een kracht’ [Diversity is a strength]

Raad voor de Leefomgeving: **Waarom het massatoerisme ons meer kost dan oplevert** [Why mass tourism costs us more than it bears]

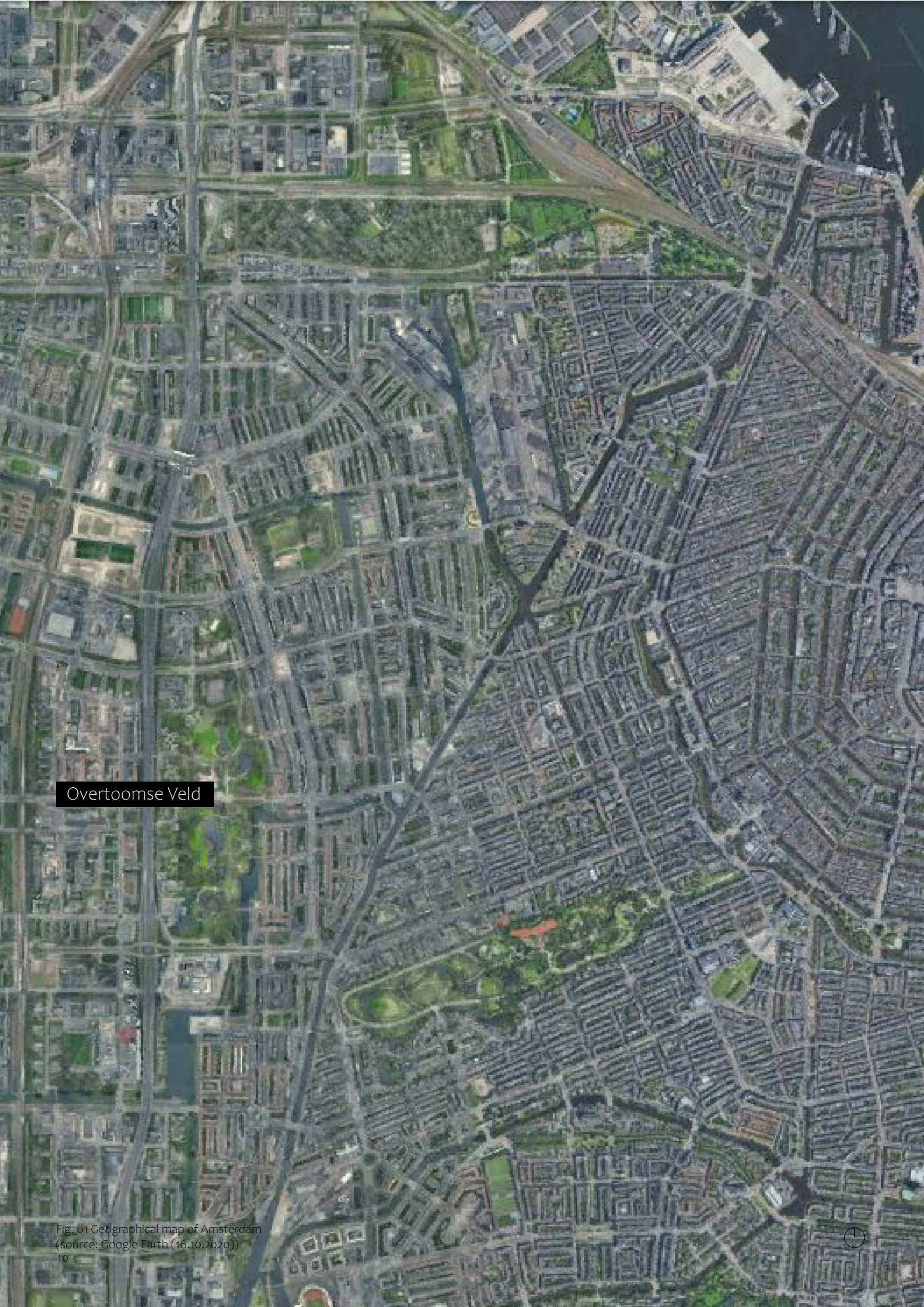
Amsterdam groeit uit tot enclave voor de rijken

[Amsterdam grows into an enclave for the rich]

MOTIVATION

Amsterdam is a rapidly growing city with a high demand for new homes. Research indicates different initiatives and processes over the last years to densify the city and enhance the liveability in its neighborhoods. However, time has shown the injustice accompanying these proposals and the situation in several neighborhoods worsened over the last years. Overtoomse Veld is one of these neighborhoods and will function as a precedent in this project for other post-war neighborhoods. The expansion of Amsterdam's centre, the development of more owner-occupied housing, and the attraction of high-income knowledge workers and according amenities, have amounted to an environment which lacks many opportunities for social cohesion in the neighborhood and segregation and gentrification occur more often in the city. This project aims to find possibilities and potentials for future program and densification of the city & its neighborhoods, which stimulates social cohesion between current and new residents.

This chapter will introduce the chosen location for this research project and will shortly elaborate on the origin of its design by explaining the idea of the *Garden Cities*, the *Wijkgedachte* and *Das Neue Bauen*. This is done in order to make a more in-depth analysis in the next chapter.



Overtoomse Veld

Fig. 01 Geographical map of Amsterdam
(source: Google Earth (16.10.2020))



Overtoomse veld, built between 1950 and 1970, is a post-war neighborhood located in Amsterdam Nieuw-West and is part of the *Western Garden Cities* of Amsterdam. These areas are part of the *Algemeen Uitbreidingsplan* [general expansion plan] designed by Van Eesteren and Van Lohuizen in 1935 (Domhardt, 2012).

The neighborhood houses approximately 14.145 inhabitants, whereas the city of Amsterdam houses 872.779 inhabitants (Alle Cijfers, 2021a) in total. An interesting aspect of the neighborhood is the ring road. This ring road of Amsterdam crosses the middle of the neighborhood separates buildings in the neighborhood on the West and the Rembrandtpark on the East.

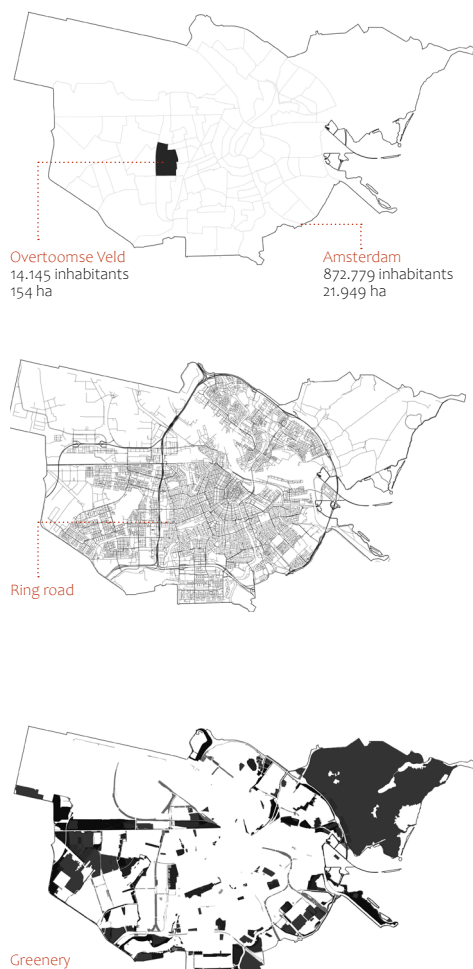


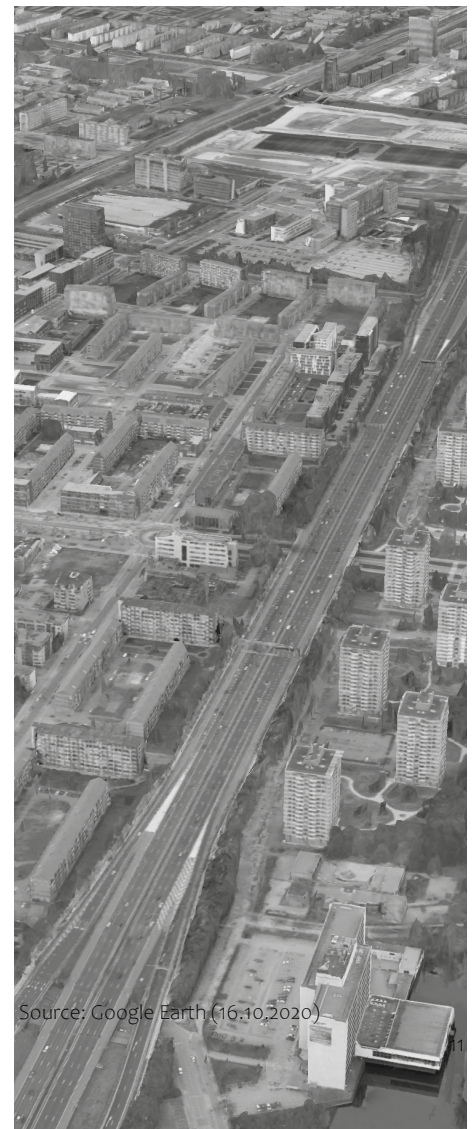
Fig. 02 Characteristics Overtoomse Veld (source: based on open GIS data)

Fig. 03 Overtoomse Veld 1973



Source: Aerophotostock (16.10.2020)

Fig. 04 Overtoomse Veld 2014



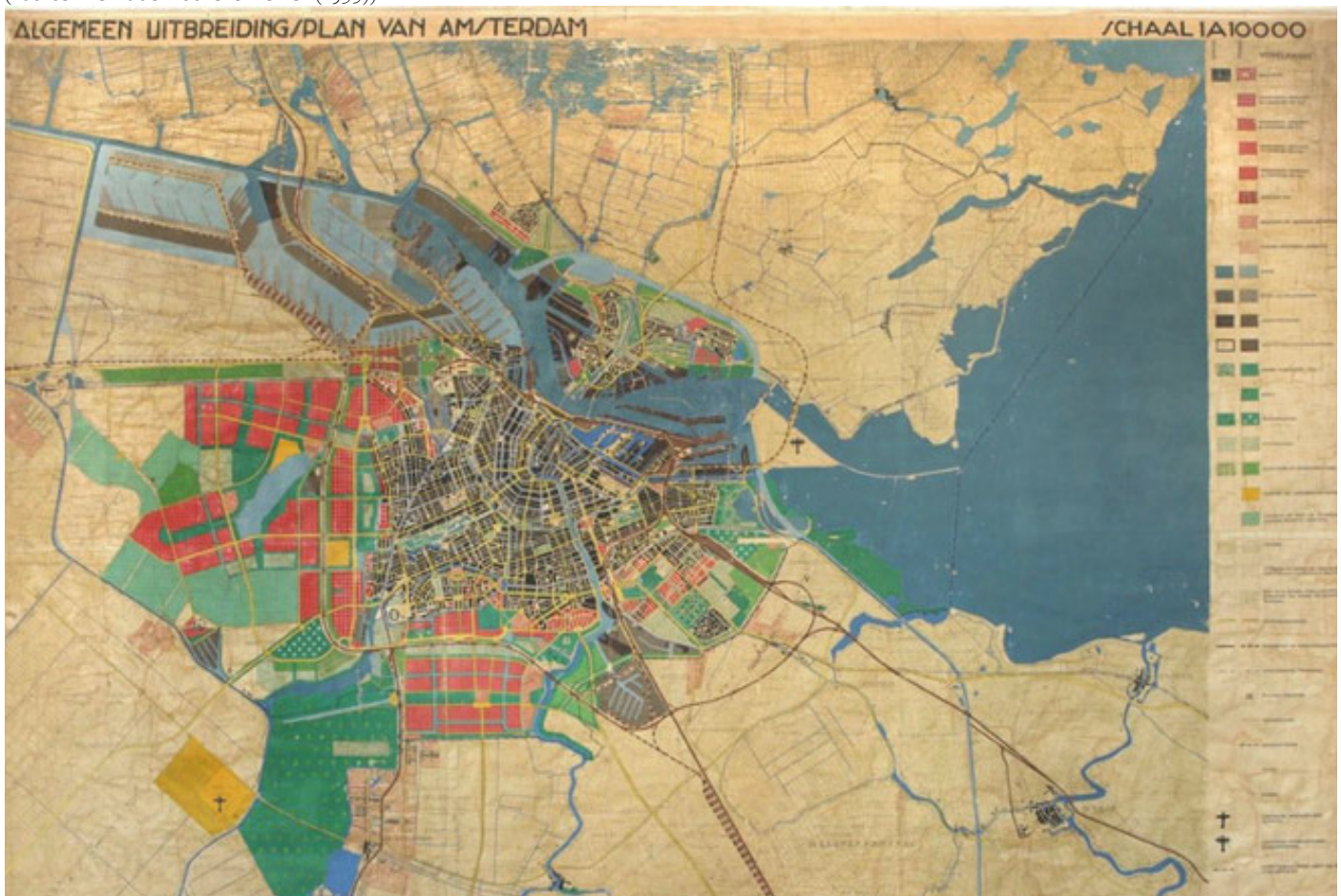
Source: Google Earth (16.10.2020)

During the end of the 18th and beginning of the 19th century, Amsterdam was in crisis. 1/3 of the inhabitants was unemployed during winter, hunger and bad hygiene resulted in a high death rate, and the construction of new homes was done by private investors. A change was needed which eventually resulted in the *Woningwet* [living law] of 1901. People had to apply for a building permit in order to build a house and the city council could declare homes uninhabitable.

In 1921, the municipality of Amsterdam annexed the surrounding agricultural land to expand the city. This required an urban design. HP Berlage designed the *Uitbreidingsplan Zuid* [expansion plan South] and *plan West* followed later. Typically in these expansion plans are the long street walls, closed building blocks and architectural style of the *Amsterdamse School*.

The post-war neighborhoods in the *Western Garden Cities* are part of the *Algemeen Uitbreidingsplan* [general expansion plan], designed by Van Eesteren and Van Lohuizen in 1935 for the municipality of Amsterdam, which needed to foresee in the housing need of Amsterdam till the year 2000 (fig. 05). During the 1920s and 1930s, urban conceptions changed. The *Garden Cities Idea* from England and the United States, the *Wijkgedachte* [neighborhood concept] and, to a lesser extent, the perception of *Das Neue Bauen* [new way of building] from Germany, played a role in this (Dienst der Publieke Werken, 1935) (Havinga et al., 2019).

Fig. 05 Algemeen Uitbreidingsplan
(source: Dienst der Publieke Werken (1935))



The Garden Cities

Ebenezer Howard introduced the *Garden Cities* as an instrument for creating complete, urban communities in a rural area and designed neighborhoods for working, shopping and recreating within walkable distances of each other. The idea was to include different groups of society within proximity of each other (Talen, 2008). In his vision, a maximum of 32.000 people is living together in independent areas, each with their own agriculture and industry. The large amount of public green spaces and the use of a main central park was meant for creating plenty of opportunities for recreation and social interaction (Domhardt, 2012). The functions in the neighborhood were separated and hierarchically organized. The *Garden City* combined the best of both worlds, according to Howard, with amenities and services from the city and the tranquility and rhythm of the rural area (Dienst der Publieke Werken, 1935).

Wijkgedachte

The concept of the *Wijkgedachte* is based on the sociological point of view which takes family as the cornerstone of society, as cities were densely populated and a lack of social cohesion was present in neighborhoods. This manifested itself in the separation of functions, as described above, which resulted in the concept of a residential area consisting of different independent neighborhoods, each having its own amenities, schools and religious buildings (Havinga et al., 2019).

Das Neue Bauen

The architects of *Das Neue Bauen* believed in improving people's life by improving their homes. *Das Neue Bauen* was therefore about creating a timeless, democratic architecture which met the needs of the citizen.

The designers of the neighborhoods wanted to contribute to the development of the individual, the family and the different communities. Elements of *Das Neue Bauen* were of lesser influence on the structure of the neighborhoods in the *Western Garden Cities*, but were decisive for the physical qualities of the residential building blocks (Hellinga et al., 1985). The old, chaotic city with its poor housing, closed building blocks and traditional long street walls (Nio et al., 2016) made room for light, air and space for a healthier individual and a community oriented towards development (Rijksdienst voor het Cultureel Erfgoed, n.d.). The open homogeneous structured building blocks are built in a green dominated environment with wide streets and a fading border between public and private space (Havinga et al., 2019) which often offered families with children enough space to play. Finally, a *hovenverkaveling* [court division] was introduced with two mirrored hooks, in low and medium high buildings (Nio et al., 2016).

Fig. 06 Ebenezer Howards idea about separating functions in the Garden City (source: Domhardt (2012))

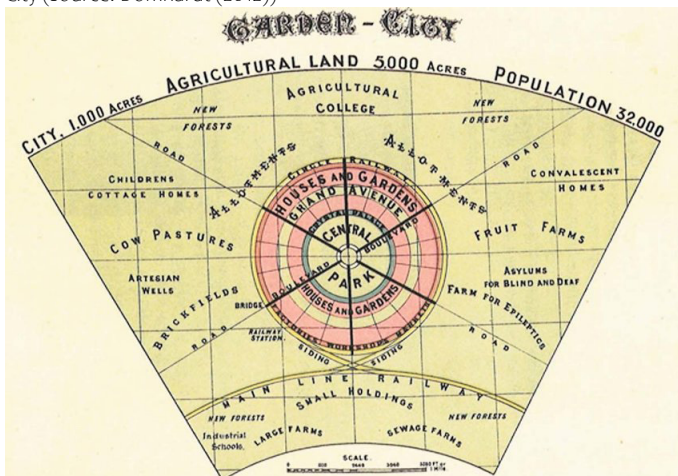


Fig. 07 Homogeneous structured building blocks around the Postjesweg & Jan Tooropstraat, Overtoomse Veld (source: Google Earth (09.10.2020))



This chapter introduces the problems and challenges which the neighborhood Overtoomse Veld and the city of Amsterdam are currently facing. The conclusion of the problem field will result in a problem statement and research aim, which will be further explained in the methodology chapter.

1940

1960

1980

2000

2020



Fig. o8 Urbanization Amsterdam (source: based on open GIS data)

2.1 urbanization processes

2.1.1 Growth & expansion AMA

Groot et al. (2015) explain a city's attraction in the 21st century is on the one hand determined by its production side of the economy. On the other hand, consumerism plays an important role: the offer of various shops, different cultures and, for example, a historic city centre. This attractive force is clearly visible in the annual growth of Amsterdam's inhabitants.

Figure 08 shows the rapid growth of Amsterdam over the last 80 years. Especially during the last decade, the growth of the city's inhabitants has been greater than ever and is expected to continue the coming years. In 2033 Amsterdam will count 1 million inhabitants and is expected to grow towards 1.112.000 inhabitants in 2050 (fig. 09). On top of that, this growth is also evident on the smaller neighborhood scale. When looking at the neighborhood of Overtoomse Veld, we can even see a population increase of 66% between 2020 and 2050 (Gemeente Amsterdam, 2020a).

Fig. 09 Expected population growth Amsterdam
(source: based on Gemeente Amsterdam (2020a))

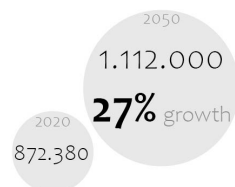


Fig. 10 Expected population growth Overtoomse Veld
(source: based on Gemeente Amsterdam (2020a))

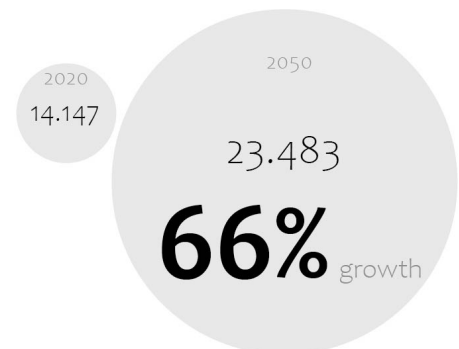


Fig. 11 Infrastructure bundle in Amsterdam
(source: based on open GIS data)

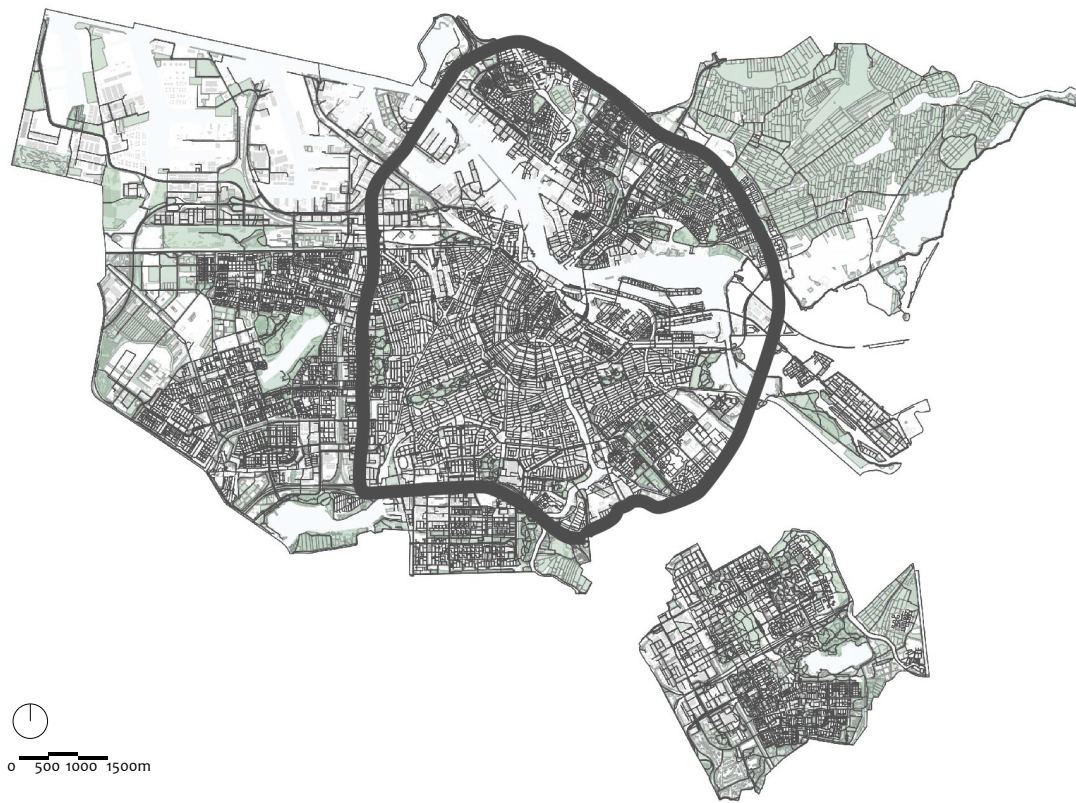
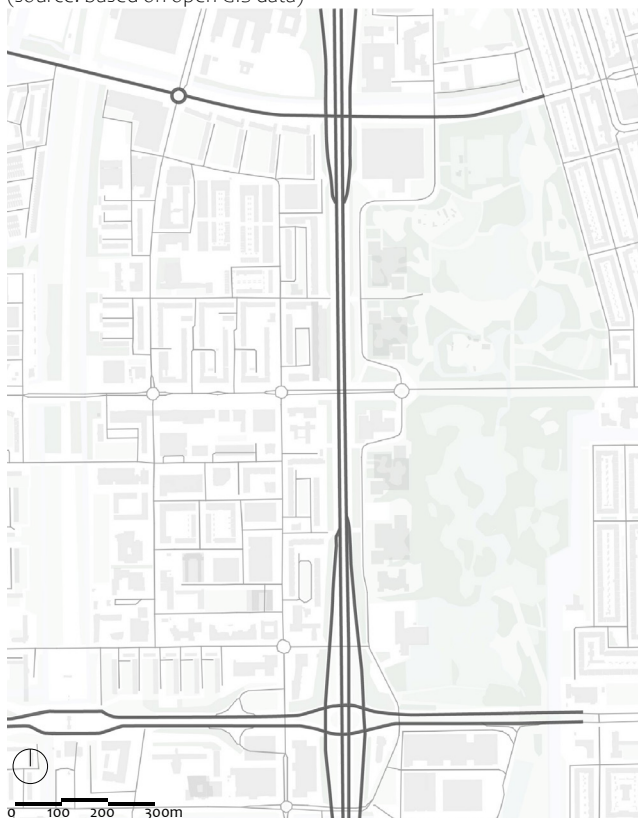


Fig. 12 Current roads surrounding Overtoomse Veld
(source: based on open GIS data)



2.1.2 Connection & accessibility Overtoomse Veld

The current processes for densification in Amsterdam, described in the *Structuurvisie* (Gemeente Amsterdam, 2011) and *Koers 2025* (Gemeente Amsterdam, 2016) are mainly geared towards the economic growth and sustainability of the city. The social aspect is not catered enough. This is clearly visible in the municipality's plan for the expansion of the city centre (fig. 13).

A high-rise zone will be created around the existing infrastructure bundle in the city. This can affect the accessibility and connectivity of Overtoomse Veld. Currently, the neighborhood is surrounded by traintracks, the highway, and busy car roads (fig. 12). By adding high-rise to these borders, there is a risk of exacerbating the feeling of being inside and outside the neighborhood.

Therefore, densifying the city means more than adding homes. Research is required on how the city of Amsterdam, and the neighborhood Overtoomse Veld can be densified, while the current situation and its residents are taken into account.

Fig. 13 Rolling out city centre
(source: based on *Structuurvisie Amsterdam 2040* (2011))



Fig. 14 Average income per neighborhood per year is lower outside the ring
(source: based on CBS (2020a))



2.2 segregation & exclusion

2.2.1 Focus on high-incomes & the knowledge economy

Cities around the world are trying to attract as many talented, high educated workers as possible. One can say they are at the root of today's economy. Businesses and entrepreneurs settle where these creative knowledge workers are based (Milikowsky, 2018). The municipality of Amsterdam therefore strives for creating an environment in which this economy thrives (Rath, in Milikowsky, 2018). Neighborhoods are transformed and regenerated, and popular shops are settling in the city.

2.2.2 Segregation & exclusion

The focus of the municipality on attracting high-income knowledge workers, results in a slow adaptation of the urban environment to foresee in the needs and demands of these high-skilled workers. Rath (in Milikowsky, 2018) explains, by making space for this new ruling class, space for other groups is slowly reducing. This is also the case in Overtoomse Veld. Local shops are moving out of the area (Parkstad Overtoomse Veld et al., 2004), residents do not feel at home anymore and rising rent in the city centre becomes unaffordable. This leads to processes of gentrification, segregation and social exclusion.

Fig. 15 New popular shops are settling in the city



Source: Pompét (17.10.2020)

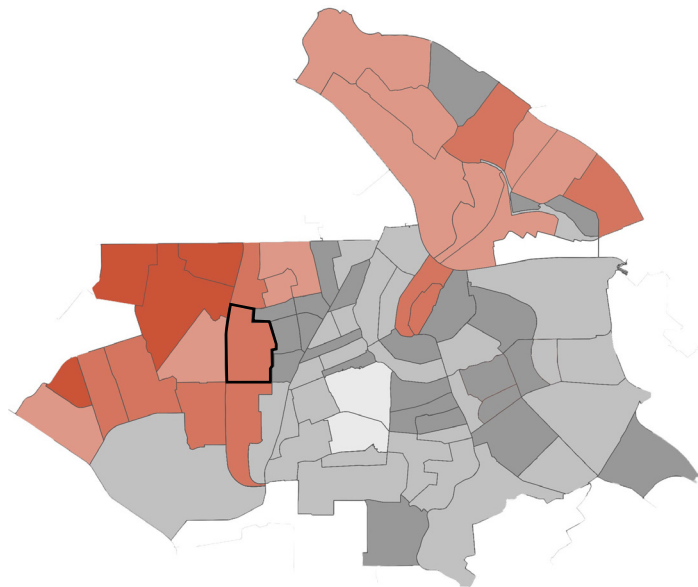


Source: Oceanshark (17.10.2020)

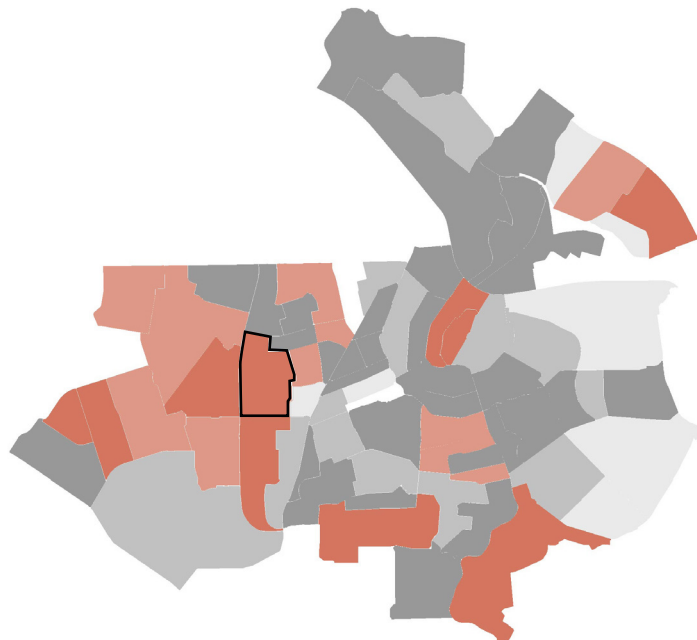


Source: Dazed Digital (17.10.2020)

Neighborhood satisfaction 2019



Social cohesion 2019



Nuisance of criminality 2019

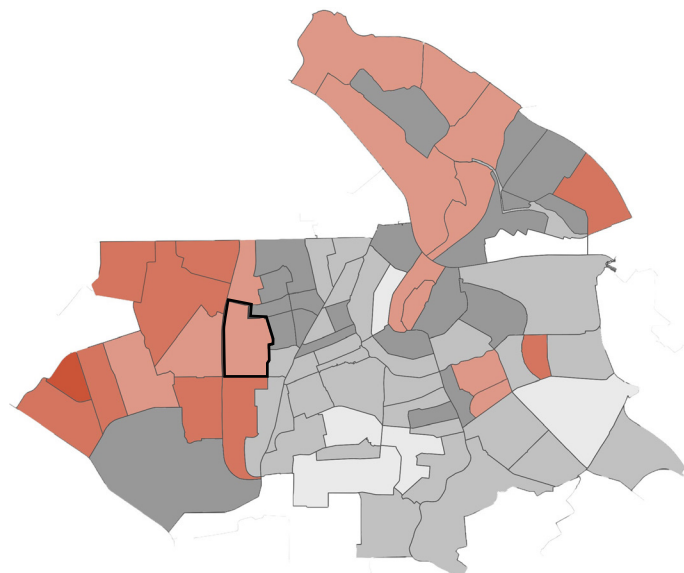


Fig. 16 Neighborhood characteristics rated worse towards outer skirts of the city (source: based on Gemeente Amsterdam (2020b))



2.2.3 Inside & outside the ring of Amsterdam

An important factor in this development is the rising gap between rich and poor. Due to the increase of jobs in the knowledge economy, many highly educated have benefited. Because the amount of jobs for lower-skilled workers increased less rapidly, the gap between rich and poor widened (Milkowsky, 2018).

This increase of inequality takes place in specific areas. The difference is clearly visible inside and outside the ring of Amsterdam. Within the ring, a large concentration of high educated, high-income, native Dutch people is present, while the focus outside the ring is on lower educated immigrants with an overall higher unemployment percentage. The differences of (un)available amenities inside and outside the ring contributes to the already increasing gap between Amsterdam's inhabitants.

The differences inside and outside the ring are also visible when looking at the neighborhood characteristics. Neighborhood satisfaction, as well as social cohesion in neighborhoods, turned out to be lower towards the outer skirts of the city. Nuisance of criminality is rated higher towards the West end of Amsterdam (fig. 16).

Investigation is needed on how the local residents and new knowledge workers can live in a socially cohesive area, but still create an economically attractive environment, in order to reduce the segregation and exclusion inside and outside the ring of Amsterdam.

Fig. 17 Higher percentage of native dutch people inside the ring
(source: based on Gemeente Amsterdam (2020c))

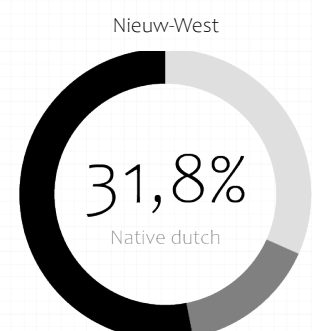
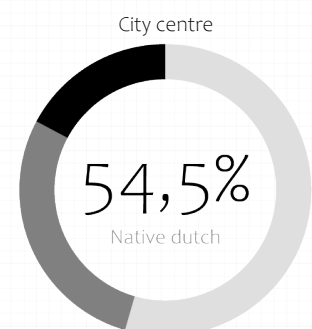
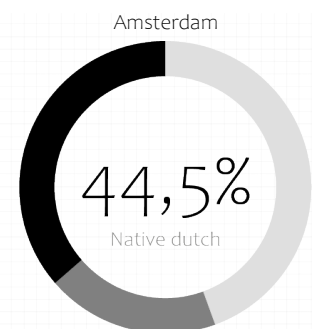
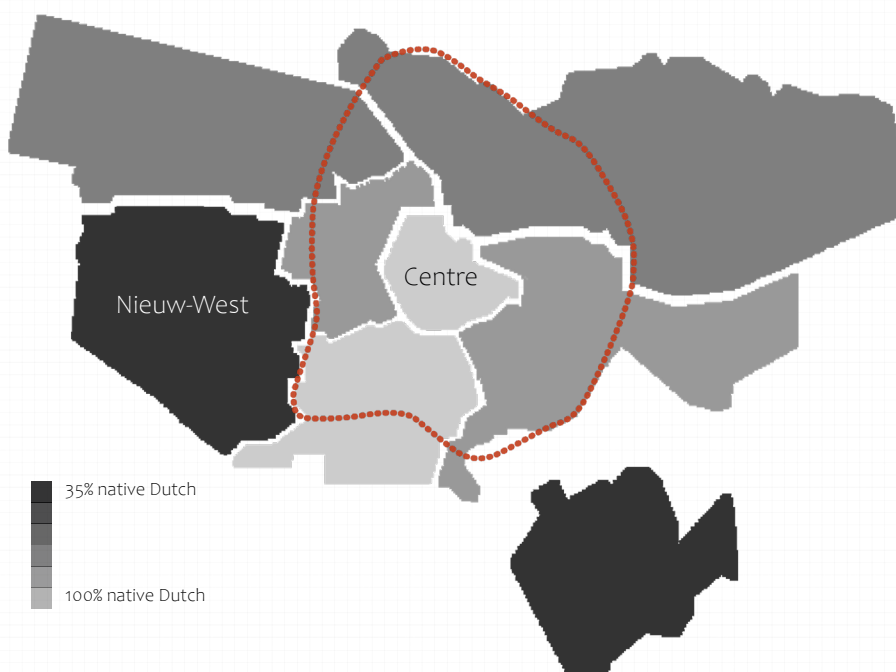


Fig. 18 Different housing types throughout the city
(source: based on Gemeente Amsterdam (2020c))

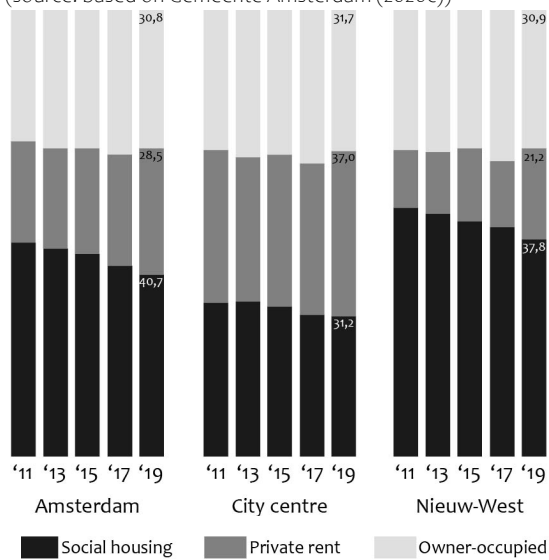


Fig. 19 A lot of social housing outside the ring
(source: based on CBS (2018))



2.3 transformation

2.3.1 Future housing

The municipality of Amsterdam strives for a future mix of housing consisting of 40% regulated rent, 40% middle-high rent & owner-occupied housing, and 20% high rent & owner-occupied housing (Gemeente Amsterdam, 2017a).

Currently, a great amount of regulated rent can be found in post-war neighborhoods (fig. 19), this is also the case in Overtoomse Veld. In many cases, the socio-economic position of these post-war neighborhoods is weak. Residents receive, more often than in other neighborhoods, social assistance or other benefits and the social minimum is below the Dutch average (CBS, 2018). This is also the case in Overtoomse Veld. The one-sided supply of social housing on the one hand leads to the attraction of mainly low-incomes and underprivileged people. As a result, social climbers, residents that move away once their economic position improves, are replaced by underprivileged groups (Parkstad Overtoomse Veld et al., 2004). This results in the neighborhood being labelled as deprived and lagging society.

On top of that, the urban fabric of these post-war neighborhoods does not contribute to the quality of life in the area. The use of homogeneous building blocks and the many green areas, which have an ambiguous public or private function (Hausleitner, 2012), create ghost areas and a lack of social control. These neighborhoods are therefore in need of transformation (fig. 20 & 21).

The development of privatization and liberalization of living on the other hand, plays a major role in the development of gentrification and segregation in the city. There is already a decrease of social housing of almost 10% in the last 10 years in Amsterdam. Research shows owner-occupied homes contribute to social cohesion in the neighborhood (Dekker et al., 2006). However, this is out of reach for a great amount of residents in Amsterdam, due to their income (fig. 14), and there is a clear need for social housing in the city.

Fig. 20 Ambiguous public/private space



Fig. 21 Repetition of monofunctional building blocks



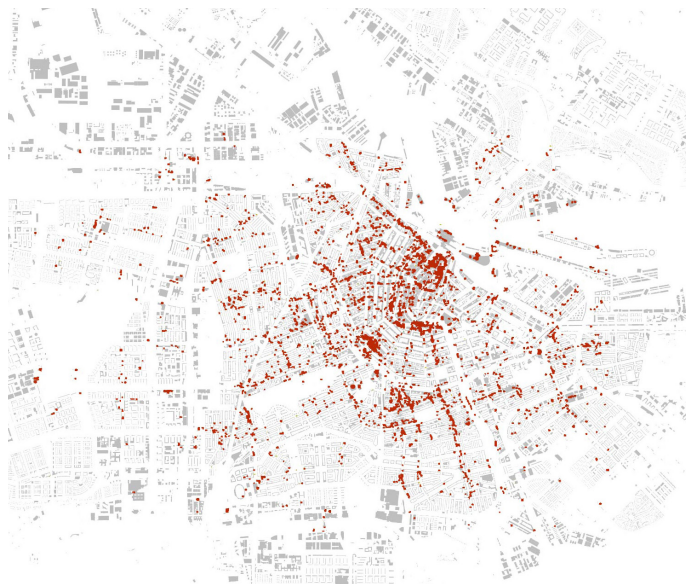
Fig. 22 Much social housing in Overtoomse Veld (red)



Retail



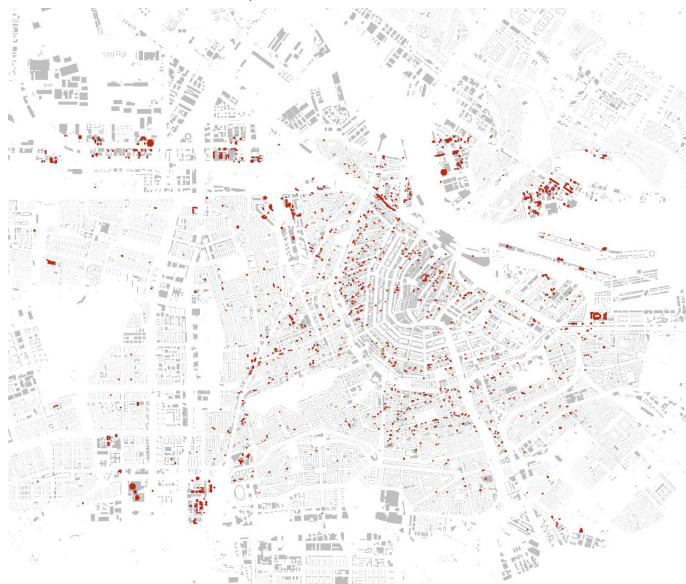
Culture, bars & restaurants



Offices



Businesses, studios & workplaces



Education



Religion & community centers



Fig 23 Functions mainly located inside historic centre
(source: based on Gemeente Amsterdam (n.d.))



2.3.2 Suitable mix of program

Currently, different programs are located mainly inside the historic centre (fig. 23). Other areas might therefore be disadvantaged of these services and amenities, which can contribute to the increasing gap between the inner and outer city ring area. Densifying and expanding the city is therefore not only about finding the right mix and amount of housing and adding these homes, but also about an increase and relocation of the right functions. These functions need a place in the city. It is therefore necessary to consider what functions are needed where and how these (new) functions can be integrated in the city to match with current and new residents and contribute to a socially cohesive area.

Fig. 24 Amenities within 3km in city districts
(source: based on Gemeente Amsterdam (2019a))

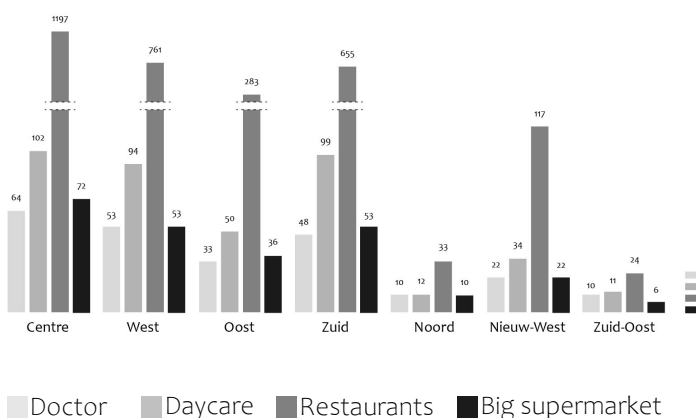


Fig. 25 Nieuw-West houses most inhabitants
(source: based on Gemeente Amsterdam (2020c))

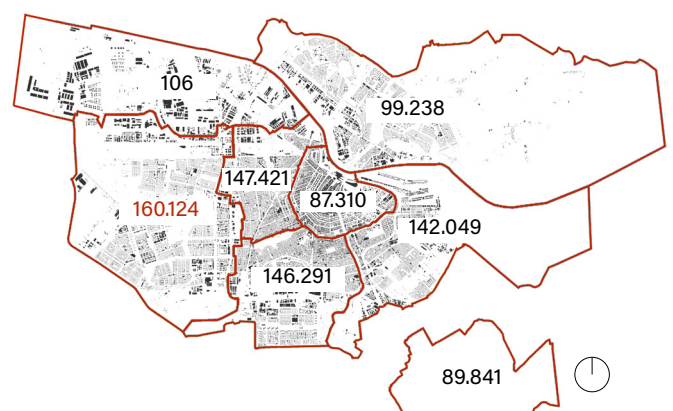
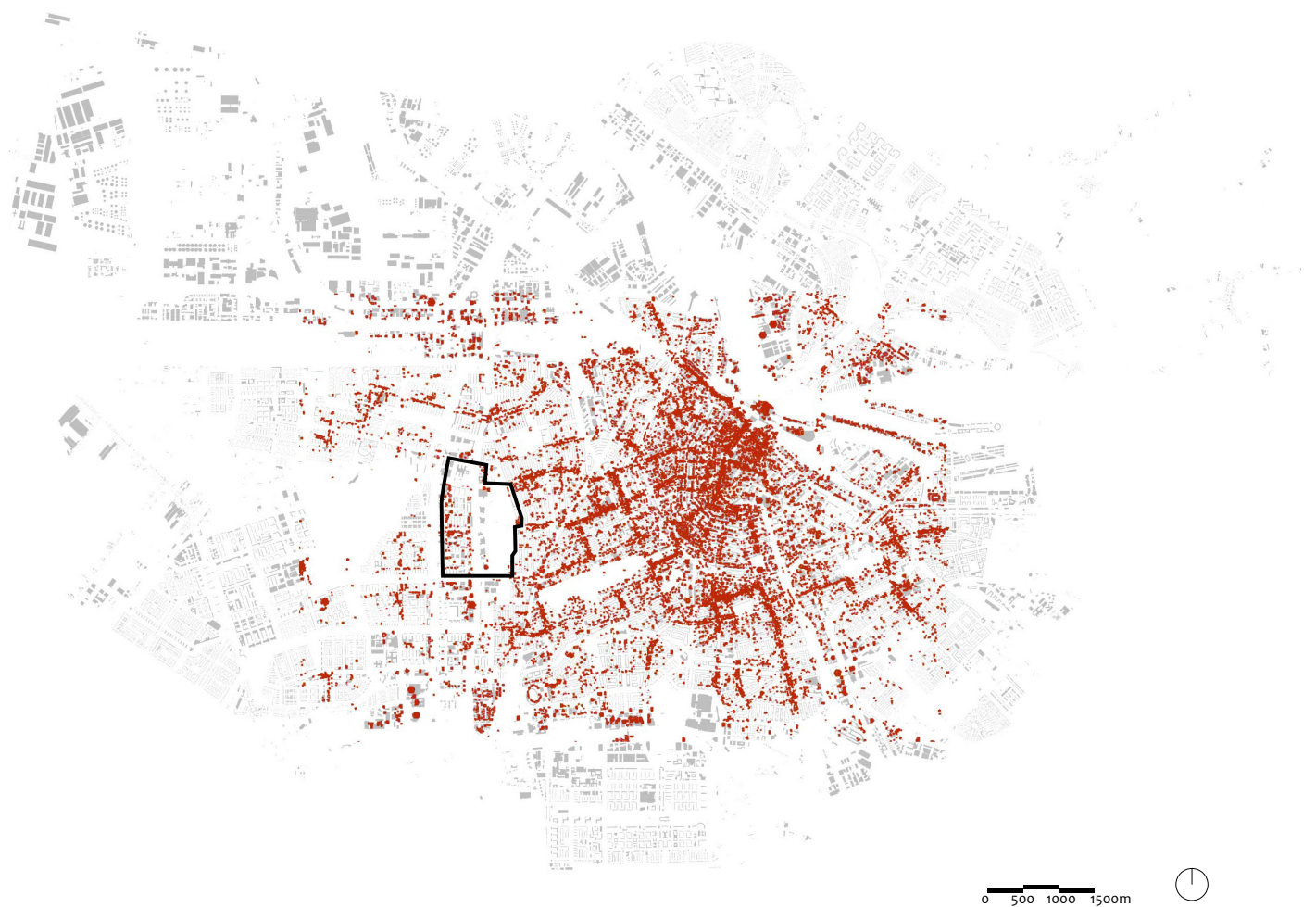


Fig. 26 Amenities unevenly distributed
(source: based on Gemeente Amsterdam (n.d.))



2.3.3 Nieuw-West & Overtoomse Veld

When looking at the map (fig. 26) and statistics (fig. 24) of the distribution of amenities in Amsterdam, it is visible the district of Nieuw-West is disadvantaged concerning the available amenities. This is especially striking when looking at the number of inhabitants which are living in this part of the city (fig. 25).

However, zooming in more to the neighborhood of Overtoomse Veld, gives some interesting results. As is visible on the map (fig. 28), Overtoomse Veld offers space to different shops, restaurants and other services. Also the distance to reach most of these function is rather close (fig. 27).

Fig. 27 Close distance to amenities in Overtoomse Veld (source: based on CBS (2020b))

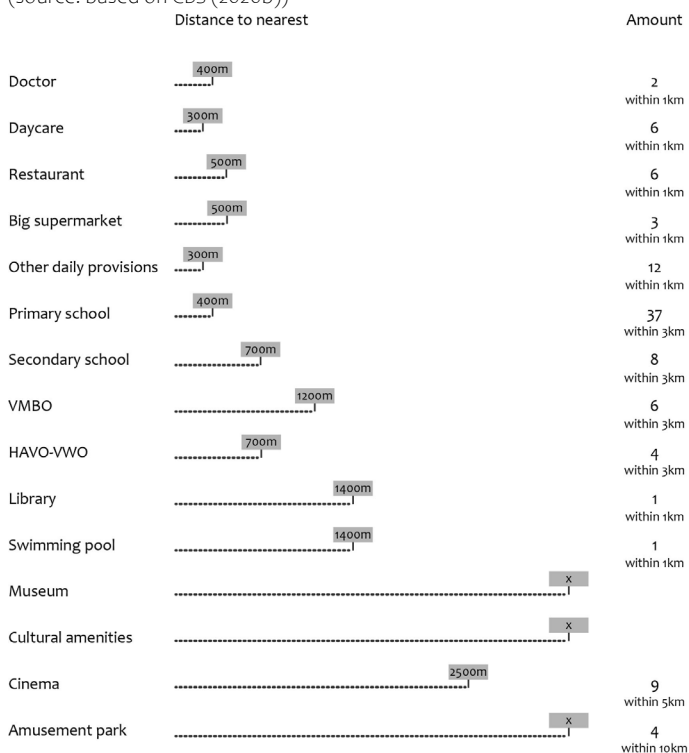


Fig. 28 Different amenities Overtoomse Veld (source: based on Gemeente Amsterdam (n.d.))



2.4 conclusions

2.4.1 The 3 aspects

A solid conclusion can be drawn from the analysis of the previous pages. Three main processes, the urbanization, segregation & exclusion, and transformation, are challenging the future of the city of Amsterdam and the neighborhood of Overtoomse Veld. The maps on the right show the concluding problematization map of each of these processes on the two different scales.

However, as all of these developments are interrelated and multi-scalar, two concluding maps have been drawn on the following pages which explain the problematization as an integral process.

Urbanization processes

The expansion of the city centre, by creating high-rise on the infrastructure bundle, increases the segregation between areas inside and outside city ring.



Fig. 29 Conclusion urbanization processes Amsterdam

There is a lack of connectivity and accessibility in the current situation of Overtoomse Veld. This will be increased by placing high-rise on the neighborhood borders.



Fig. 30 Conclusion urbanization processes Overtoomse Veld

Segregation & exclusion

There is social segregation between the inner and outer city ring area due to the differences in income, education, attraction of knowledge workers, and transformation of the urban environment for these new residents.

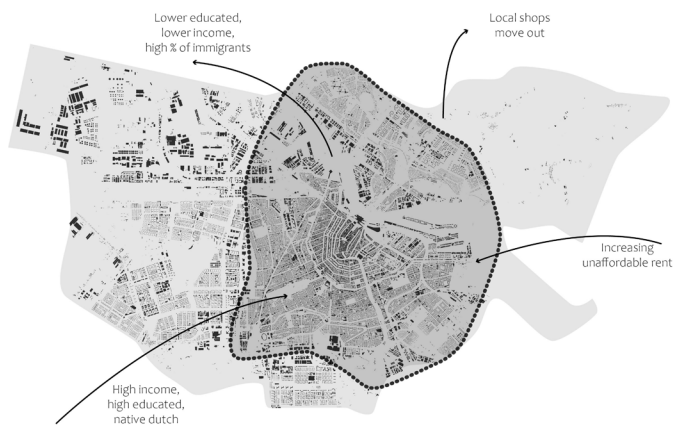


Fig. 31 Conclusion segregation & exclusion Amsterdam

Transformation

Nieuw-West houses much social housing and most inhabitants of all city districts. And this area will probably also house most people in the future. It is therefore striking that the amount of amenities and services decreases incredibly when crossing the city ring.

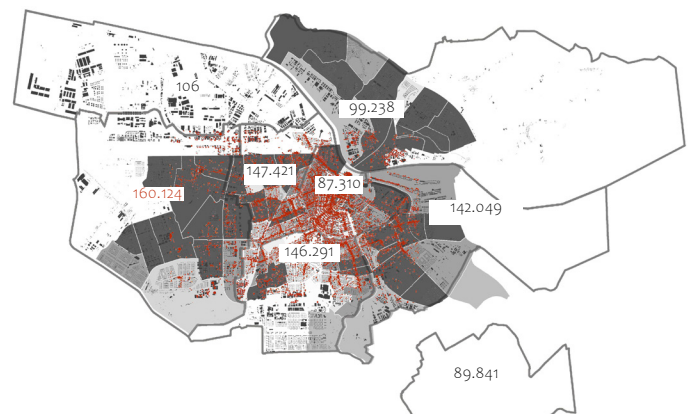


Fig. 33 Conclusion transformation Amsterdam

Overtoomse Veld has a lack of social cohesion. A challenge appears as there are differences between current low educated, low income residents and new high educated, high-income residents.



Fig. 32 Conclusion segregation & exclusion Overtoomse Veld

The 1-sided supply of social housing and the homogeneous building blocks in Overtoomse Veld are in need of transformation regarding the future housing stock and amenities which are needed.



Fig. 34 Conclusion transformation Overtoomse Veld

2.4.2 City scale

The analysis in the problem field showed the social division in the city due to differences in income, education, amenities and housing. The influx of high educated, high-income knowledge workers and the transformation of the urban environment to foresee in the needs and demands of these workers is going hand in hand with this segregation.

Also the plans of the plans of the municipality for the expansion of the city centre can increase the segregation in the city. By placing high-rise on the infrastructure bundle, the segregation can be increased between the inner and outer city ring area.

Therefore, a multi-scalar approach is needed to not only densify the city and provide a suitable mix of program, but also to cater the social aspect in these developments.

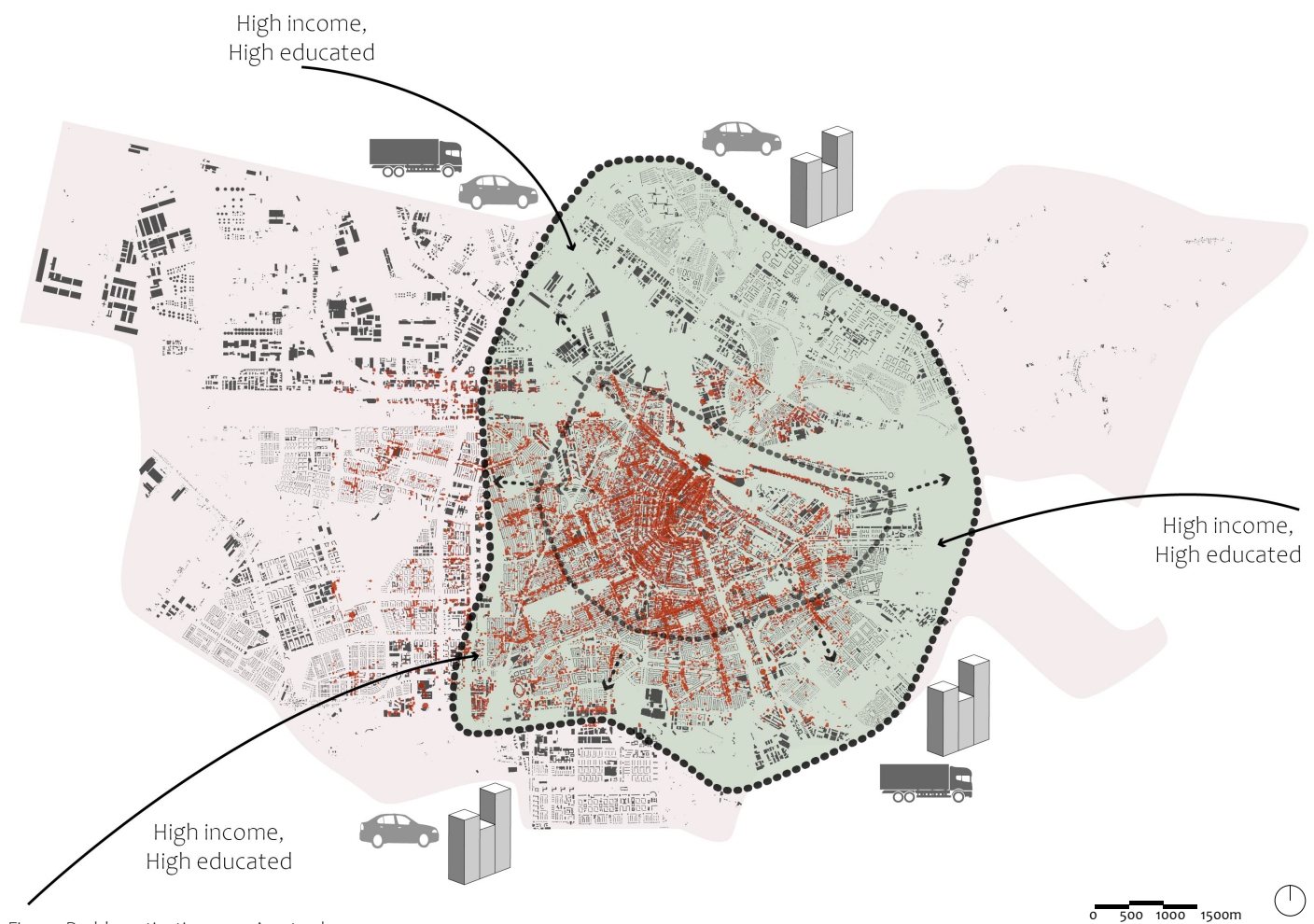


Fig. 35 Problematization map Amsterdam

2.4.3 Neighborhood scale

In the current situation, the neighborhood is framed by infrastructure. The highway on the Eastern side is part of the infrastructure bundle for the expansion of the city centre. By placing high-rise on this border, there is the risk of exacerbating the feeling of being inside and outside the neighborhood which increases the inaccessibility of Overtoomse Veld.

Also striking is the availability of amenities in the neighborhood. Research showed plenty of different shops are available in Overtoomse Veld. However, still a lack of satisfaction and social cohesion is present in the neighborhood. It is therefore important for this project to analyze what creates this discontent and how it can be enhanced. The urban fabric, existing housing stock and the influx of high educated, high-income workers, which are contradictory to the current lower incomes, lower educated in the neighborhood, play an important role in this.

It should therefore be investigated how the urban fabric, amenities, connectivity and accessibility in the neighborhood of Overtoomse Veld can be transformed to connect the neighborhood to the rest of Amsterdam, but also to foresee in the densification needs of the city, and the demands of new and current residents in order to enhance social cohesion in the neighborhood.

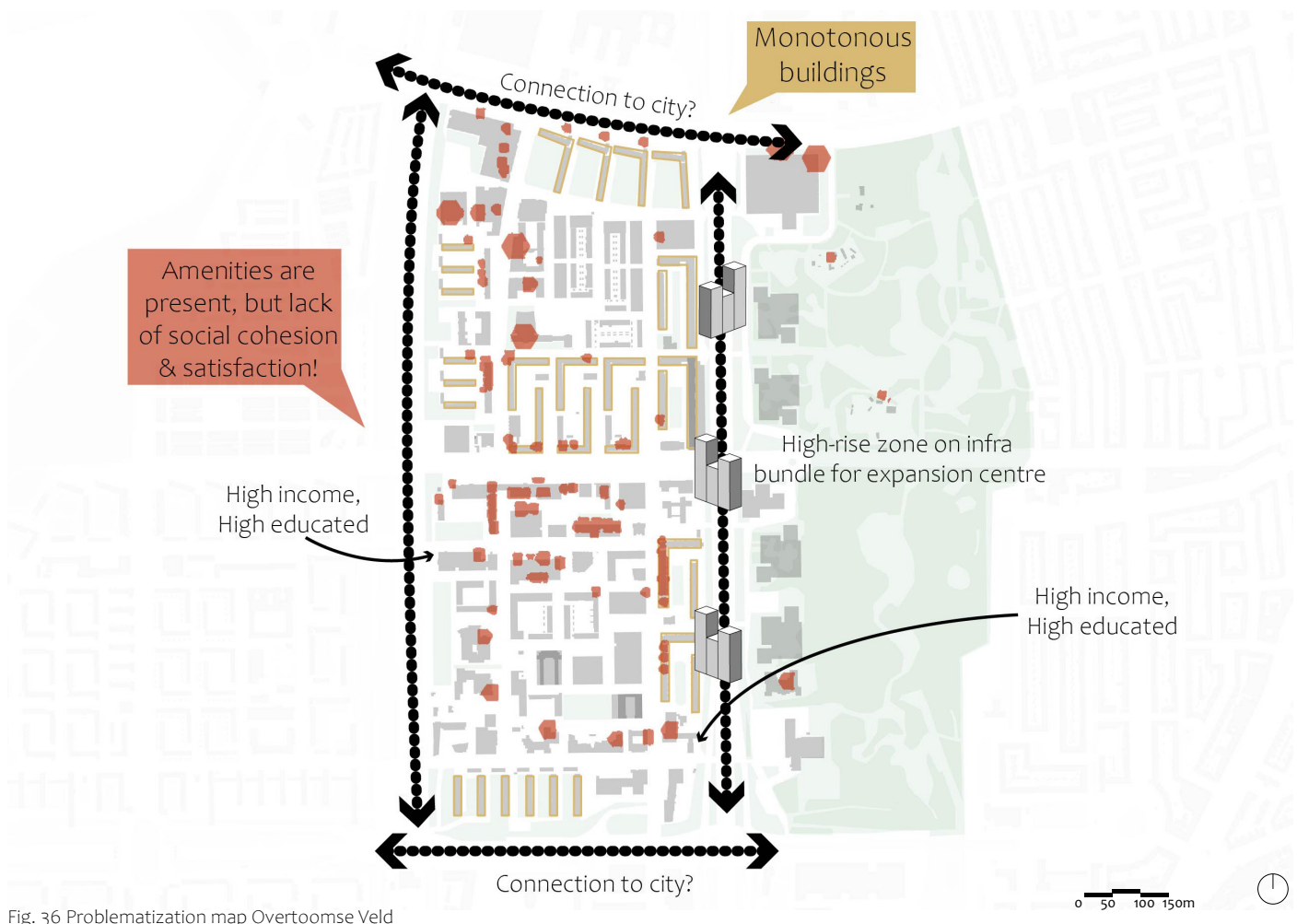


Fig. 36 Problematization map Overtoomse Veld

03 METHODOLOGY

- 3.1 Integrated approach
- 3.2 Problem statement
- 3.3 Research aim
- 3.4 Research questions
- 3.5 Methods & outcomes scheme
- 3.6 Research methods
- 3.7 Research structure
- 3.8 Project timeline

The methodology chapter needs to establish a clear relationship between the studies which have been conducted so far in the identified problem field, the research questions and the means to come to a solid conclusion. The line of reasoning and argumentation behind the methodological choices will be discussed, using theories to support it.

3.1 integrated approach

Elaboration on social cohesion

In order to find possibilities and potentials for creating a socially cohesive neighborhood it is important to take a look at the concept of social cohesion in the contemporary urban environment. Lloyd et al. (2016) explain the physical and social environment for creating a socially cohesive population has gradually changed by the emergence of a more flexible, individualized way of life. The focus in this research is on social cohesion in neighborhoods, instead of social cohesion in general. Social cohesion in general focuses mainly on the social aspect of the term, while for this project it is important to include the spatial aspect as well, in order to make the link with urban design.

In this project, social cohesion in neighborhoods is viewed as a characteristic of society which deals with the interrelationship of societal units and territorial units (McCracken in Berger-Schmitt, 2002). A socially cohesive neighborhood enhances activity, interaction and safety on the streets and between persons of different socio-economic and ethnic backgrounds, different ages or households types.

As the physical and social environment are both aspects which are of influence for social cohesion in a neighborhood, it is emphasized again, that it is important to create an integrated approach for future program and densification of the city and its neighborhoods which not only includes the ambition of the city to densify, but also caters the notion of segregation and exclusion in order to cater the social aspect in these challenges.

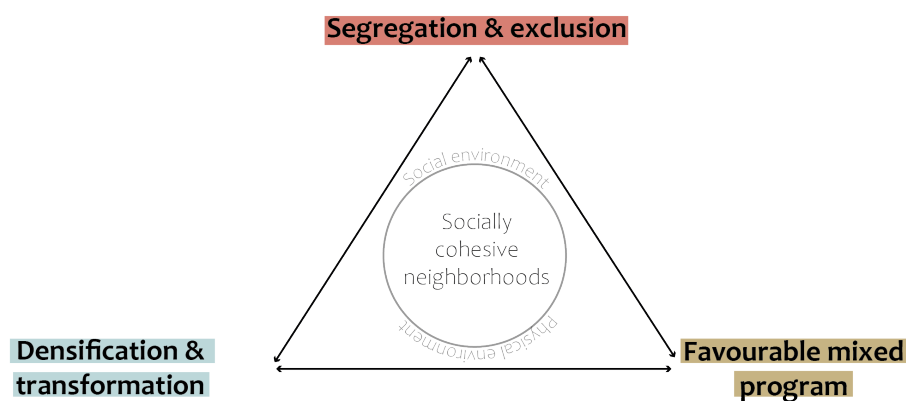


Fig. 37 Need for an integrated approach

3.2 problem statement

Overtoomse Veld is a rapidly growing neighborhood in Amsterdam Nieuw-West with an expected population growth of **66%** between 2020 and 2050. This population growth is also visible on the larger scale. In order to foresee in the influx of the population and therefore the demand for more homes, expanding and densifying the city of Amsterdam is important. But not only adding **homes**, also adding and relocating **amenities** is necessary when looking at the city and its neighborhoods. It is therefore important to investigate the needs and demands of not only **new**, but also **current residents**.

However, the proposed densification strategies are mostly aiming towards adding homes, stimulating economic growth by attracting high-incomes, and improving the sustainability of the city. These densification processes, in combination with the socio-economic changes in the city, lead to **injustice** for local residents in suburban post-war neighborhoods like Overtoomse Veld. The **social aspect** is therefore not catered enough in these proposals.

A **change** is required which includes design interventions and involvement of stakeholders in order to create a **multi-scalar** approach to **densify** the city and provide a suitable **mix of program** which contributes to **social cohesion** in neighborhoods.

3.3 research aim

To explore how to densify the city, but simultaneously achieve social cohesion in neighborhoods. This research therefore aims for two main interventions which are multi-scalar and interrelated.

Design interventions

Interventions are not only needed in terms of catering the housing need, but also to prevent segregation & exclusion and to provide a suitable mix of program which can stimulate social cohesion in post-war neighborhoods. New amenities need a place in the city and current and new residents will need to live together with according functions. The purpose of this research therefore includes interventions on different scales, from city to building level. A crucial aspect in these interventions is the relation to surrounding areas and the relation between the built environment and public spaces.

Involvement of stakeholders

Subsequently, this project aims to discover how stakeholders can be included more in the process of development in order to create approaches which are more location specific and consider different social groups, places and times instead of implementing standardized programs to different neighborhoods which are mainly geared towards economic growth and sustainability. Overtoomse Veld will function as a precedent in this project and will therefore represent other post-war neighborhoods in the city. In this way, the approach will be transferable to other different post-war neighborhoods in the city, which are dealing with similar challenges and potentials as Overtoomse Veld.

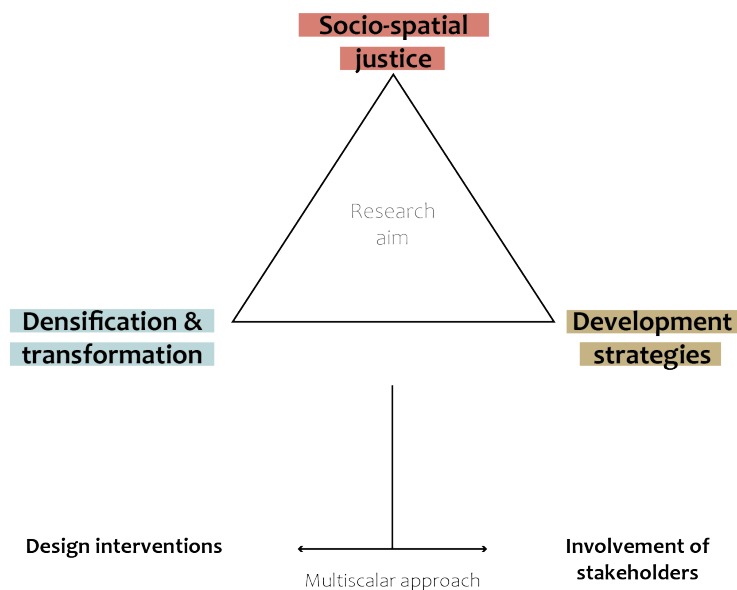


Fig. 38 Scheme research aim

3.4 research questions

“How can the **monofunctional post-war** neighborhood Overtoomse Veld be **transformed** into a more **socially cohesive mixed-use** area?”

- 01 What are the spatial aspects of a socially cohesive neighborhood? ■
- 02 How is mixed-use development related to social cohesion between residents and how does it create opportunities in Overtoomse Veld? ■ ■
- 03 In what way is the spatial configuration challenging the quality of social life in Overtoomse Veld? ■ ■
- 04 What are the possibilities for densification in the city and its neighborhoods? ■ ■
- 05 What spatial measures can be applied in order to transform Overtoomse Veld into a more socially cohesive neighborhood? ■ ■
- 06 What institutional change is required in order to allow and strengthen the positive effects of the interventions? ■ ■
- 07 To what extent are the interventions in Overtoomse Veld transferable to other post-war neighborhoods? ■ ■

3.5 methods & outcomes scheme

Main research question

“How can the **monofunctional post-war** neighborhood Overtoomse Veld be **transformed** into a more **socially cohesive mixed-use** area?”

Sub questions

Conceptual background

01 What are the spatial aspects of a socially cohesive neighborhood?

02 How is mixed-use development related to social cohesion between residents and how does it create opportunities in Overtoomse Veld?

Analysis

03 In what way is the spatial configuration challenging the quality of social life in Overtoomse Veld?

04 What are the possibilities for densification in the city and its neighborhoods?

Explorative

05 What spatial measures can be applied in order to transform Overtoomse Veld into a more socially cohesive neighborhood?

06 What institutional change is required in order to allow and strengthen the positive effects of the interventions?

Reflection

07 To what extent are the interventions in Overtoomse Veld transferable to other post-war neighborhoods in the city?

Methods

Intended outcomes

Literature review of the quantitative and empirical indicators of social cohesion to determine which factors contribute to social cohesion in a neighborhood.

Literature review of the interrelationship between mixed-use and social cohesion in neighborhoods.

Spatial analysis of investigating whether the mentioned spatial aspects in the literature review apply to Overtoomse Veld.

Quantitative and empirical indicators to determine the factors that contribute to social cohesion in order to use these for design interventions.

A set of design principles that facilitate a socially cohesive neighborhood.

Defining potentials and challenges of how to implement mixed-use in order to enhance social cohesion between residents in Overtoomse Veld.

Mapping & spatial analysis of the current densities, spatial organization and evolution of the neighborhood through time to link social & spatial processes.

Fieldwork & questionnaire with residents in the neighborhood on local needs and perceptions.

Literature review on the origin of the neighborhood and the relation between the physical environment and social cohesion.

A catalogue which shows the spatial and social challenges and potentials in the area, which can function as a base for testing and evaluating design proposals.

Identifying scenarios in order to use these for design testing
Research by design in the framework of scenario testing in order to test the impact of quantifying density on different aspects, especially the relation to social life.

Proposals and design strategies of densification including possibilities and challenges on different scales and locations.

Scenario testing of alternatives of the urban fabric through design by application of the design principles & evaluating the necessity and suitability of altering the urban configuration in order to achieve social cohesion.

Design interventions considering alterations of the urban environment.

Stakeholder analysis about visions, intentions, opinions and requirements. And the relation between current strategies and the urban environment of the city and the neighborhood.

Strategic framework including design guidelines.
Critical position towards the current strategies.

Establishing transferability of key patterns applied in Overtoomse Veld.

A conclusion to what extent each of the interventions done in Overtoomse Veld are transferable to other post-war neighborhoods in Amsterdam.

3.6 research methods

Literature review

The literature review aims to explain and identify key theories and their approaches which are related to this research in order to explore what is investigated before and to gather different findings, opinions and information. Books, articles and reports will be used, which can therefore inform the problem, purpose, significance and research questions about the key topics of social cohesion, densification and mixed-use. Some aspects will not only be investigated in the theoretical analysis, but there will be empirical studies on it as well. Patterns will also be established based on this investigation.

Stakeholder analysis

The stakeholder analysis investigates the current stakeholders, spatial planning instruments, and strategies on neighborhood and city scale which are related to urban renewal and densification and which are involved in creating socially cohesive, mixed-use areas. By analyzing the current situation, challenges, conflicts and possibilities will come to light which will aid in determining what institutional change is required in order to allow and strengthen the positive effects of the applied interventions in Overtoomse Veld and in Amsterdam.

Spatial analysis & mapping

Spatial analysis and mapping are applied in order to investigate the current densities, spatial organization and evolution of the neighborhood through time. Mapping plays a crucial role in visualizing and investigating space. It is therefore used to more reshape the world in which people live, and less to mirror reality (Corner, 1999). Corner (1999) emphasizes, mappings can visualize relations between past and present. An important step is to reformulate what already exists. This needs to be done by not only looking at physical attributes of topography, roads and buildings, but also to include the more natural processes, historical events, local stories, and economic characteristics. In this way, not only possibilities will become visible in the complexity of what already exists, but potentials can also be realized. This is a crucial step in this research as the investigated neighborhood is built according to certain historic beliefs which are clearly visible in the spatial organization, but are not all functioning well in contemporary society. Therefore, by using spatial analysis and mapping as research methods, greater efficacy in intervening in spatial and social processes can be achieved.

Fieldwork, questionnaire & interviews

Fieldwork will be done in the neighborhood of Overtoomse Veld in Amsterdam. These site visits will not only allow to experience the atmosphere, scale and vitality more intuitively, but will also allow to double check whether the gathered information is corresponding to the existing situation of the neighborhood. Photos will be taken, sketches will be drawn, and maps will be created in order to capture the challenges, potentials, experiences and characteristics of the area, to move from the gathered statistical data to getting more a feeling of the place.

Interviews will be done during site visits. These interviews are intended for residents of Overtoomse Veld. Important is that it creates a link between the social and spatial characteristics, which need to follow out of the questions of the interviews. This is necessary in order to make the step from the social aspects to the urban design of the project. Even though a questionnaire is also sent out online, it has been decided to also include interviews during fieldwork. After all, there is a limitation to an online questionnaire as often only a certain group of residents can be reached and therefore no solid conclusion can be drawn from the results. By conducting the online questionnaire in combination with doing the interviews during fieldwork, more solid conclusions can be made. Patterns are established based on these results.

Research by design

Roggema (2016) emphasizes two arguments, which are highly related to this research, of why research by design is a crucial method to use for complex challenges, in order to make plans for future scenarios. Firstly, it is emphasized the certainty of programs and conditions can be no longer the base for creating future proposals. Nowadays, conditions and programs are always changing. It is therefore important to have iterative processes which reflect on the results of certain interventions. Secondly, many problems are complex in current times, and do not have one final solution, as is also readable in the theoretical underpinning of this research. Therefore, counterintuitive thinking is necessary. As it is possible to make creative jumps in thinking and solving problems, research by design is an applicable method for the problems addressed in this research. In this way, plans do not only seek to investigate possible future outcomes, but also create a spatial strategy for the city and its neighborhoods by linking them with different activities and interventions.

Scenario testing

Different methods of research by design are included in this project. Research by design in the framework of scenario testing is done in order to test alternatives of the urban fabric through design by application of different patterns, and evaluating the necessity and suitability of altering the urban configuration in order to achieve social cohesion. Scenario testing is therefore used to explore potential design outcomes. As developments need to be flexible and adapt to changing circumstances, it is part of research by design.

Pattern language

The pattern language is introduced in 1977 by Alexander et al. (1977) and is described as:

“The elements of this language are entities called patterns. Each pattern describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way you can use this solution a million times over, without ever doing it the same way twice” [p.x].

By applying this approach in every scenario, an overview can be created of patterns which are relevant in all scenarios and therefore needed in order to achieve a socially cohesive mixed-use neighborhood. As is visible in the research structure, patterns come in different times of the process.

3.7 research structure

The research structure is shown in figure 39. The project started with research in the identified problem field. Three main challenges came to light in the current developments of the city and its neighborhoods: the urbanization processes, segregation and exclusion, and transformation. The research showed that these challenges are interrelated and multi-scalar as the densification and transformation processes relate to the ongoing social and spatial division on city and neighborhood scale. The phenomenon of the injustice concerning the social aspect accompanying these processes therefore showed the relationship between the social and physical environment.

This project therefore puts forward the importance of design interventions and involvement of stakeholders in order to create a multi-scalar approach to densify the city and provide a suitable mix of program which contributes to social cohesion in neighborhoods.

In order to do this, the research questions are divided into four main phases: the conceptual background, the analysis phase, the explorative phase and the reflection.

The conceptual background first focuses on needed literature in order to investigate the spatial aspects of a socially cohesive neighborhood and to investigate whether these mentioned spatial aspects can be applied in Overtoomse Veld. Thereafter, the relationship between mixed-use and social cohesion is investigated. Quantitative and empirical indicators can then be determined in order to use these for design interventions in the explorative phase.

The analysis phase focuses on the relation between the social and physical environment on multiple scales by investigating how the spatial configuration is challenging the quality of (social) life in Overtoomse Veld and what the possibilities are for densification in the city and its neighborhoods. The analysis phase is divided into three main categories: segregation and connectiveness, centralities, and the ambition of the city to densify. On top of this, the questionnaire and fieldwork play an important role in order to create a catalogue which shows the social and spatial challenges and potentials in the area, which can function as a base for testing and evaluating design proposals.

The outcomes of the explorative phase are expected to be both spatial and organizational which will be conveyed through multiple scales. Research by design in the framework of scenario testing is an important method in this phase in order to test alternatives of the urban fabric through design by application of different patterns, and evaluating the necessity and suitability of altering the urban configuration in order to achieve social cohesion. At the same time, it will be investigated what stakeholders are involved and how they are related to each other. This is important in order to strengthen the positive effects of the interventions.

Finally, the reflection phase will make a feedback loop from the previous three phases in order to investigate to what extent the interventions in Overtoomse Veld are transferable to other post-war neighborhoods in the city.

Concluding, this research promotes a strategy which will aid in the development of social cohesion in neighborhoods, but also creates possibilities for densification and transformation of the city.

- (L) Literature review
- (SA) Spatial analysis
- (M) Mapping
- (Q) Questionnaire & interviews
- (FW) Fieldwork
- (ST) Scenario testing
- (P) Pattern language
- (S) Stakeholder analysis

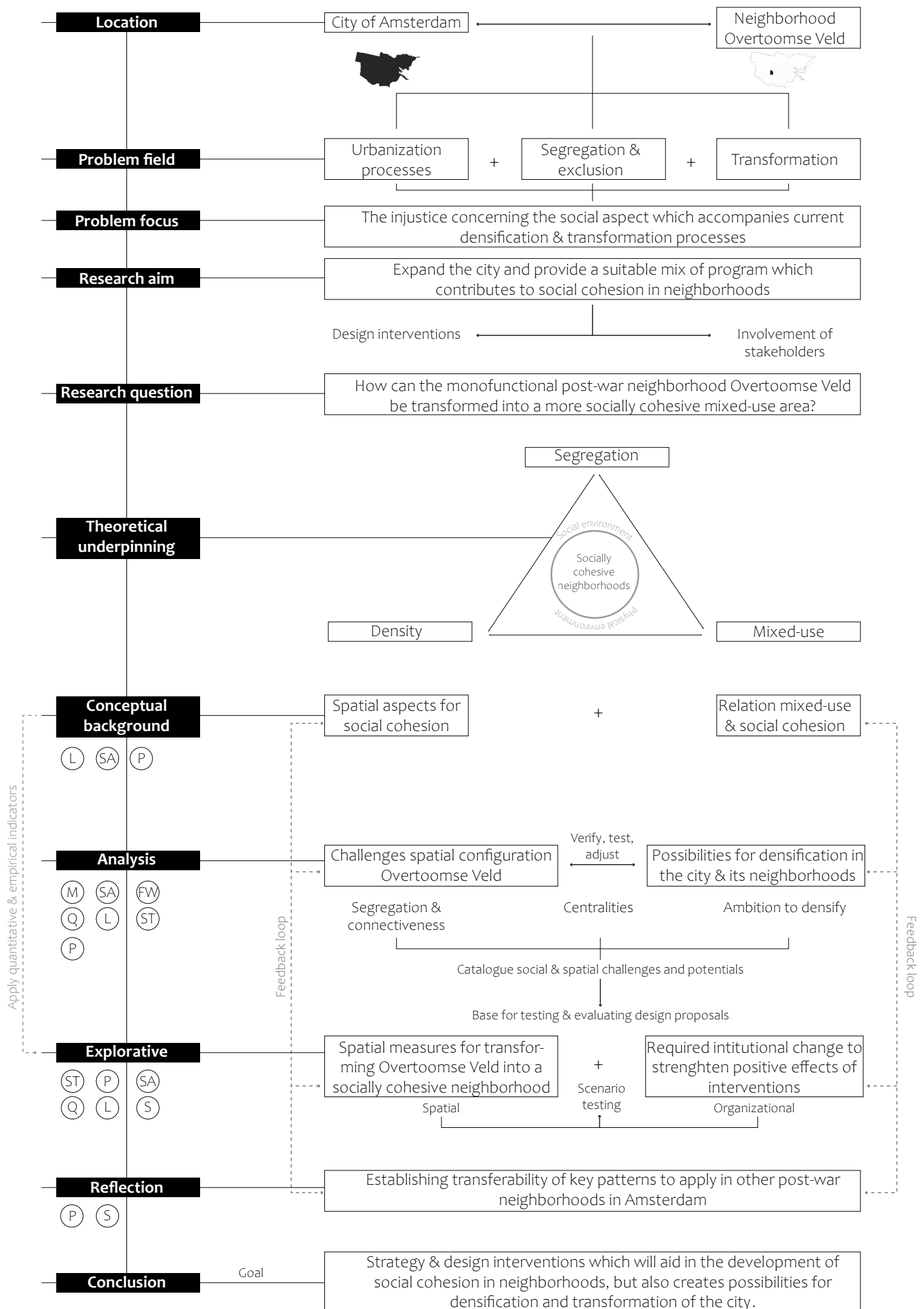


Fig. 39 Research structure

3.8 project timeline

Figure 40 shows the timeline of this research project. The timeline is based on the research process, design, evaluation and constant reflection in the project.

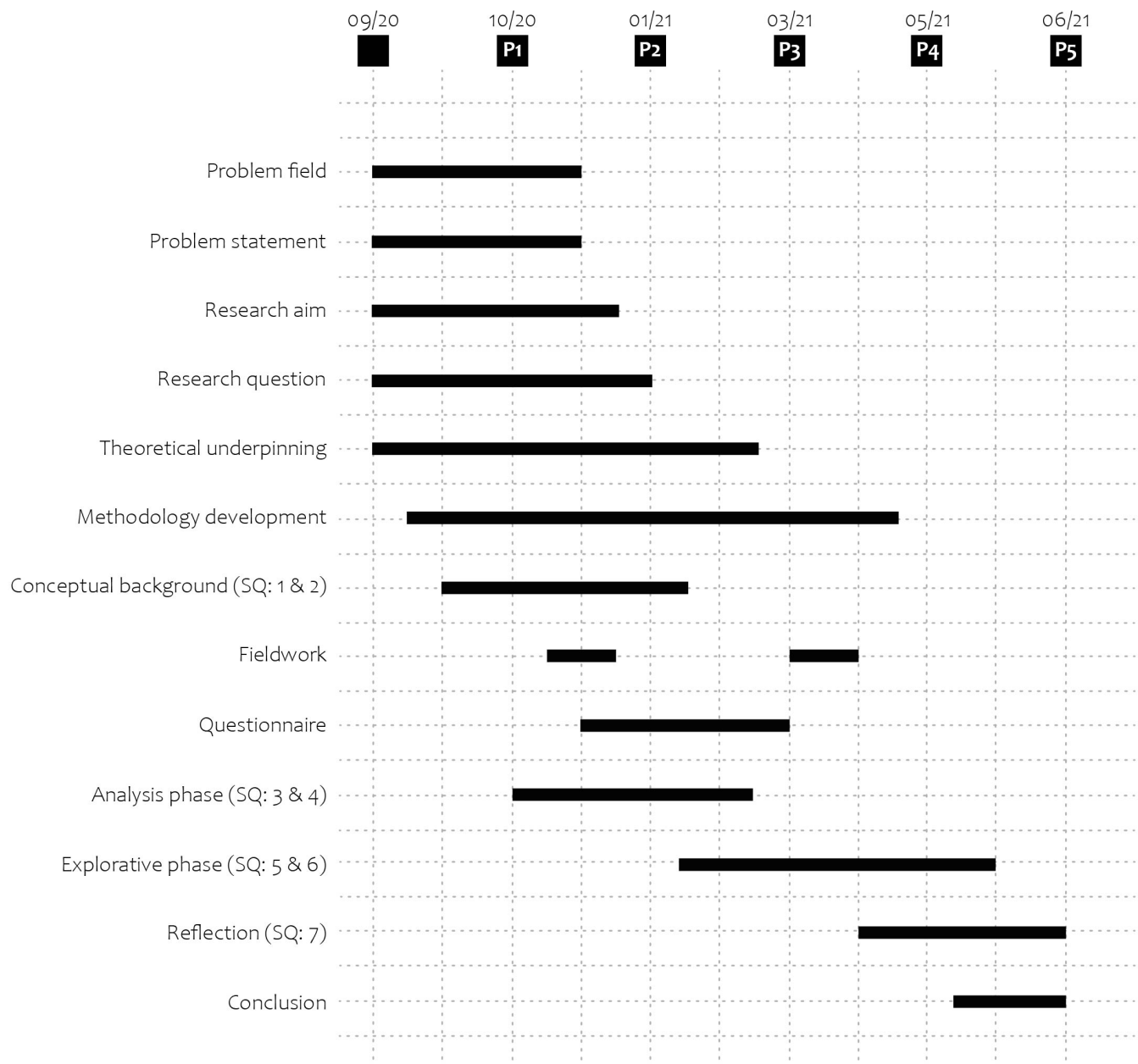


Fig. 40 Project timeline

The theoretical underpinning aims to include theoretical notions and issues which are considered relevant with the topic. The chapter therefore elaborates on different theories which will aid in the development of the research project.

4.1 introduction

This theoretical underpinning analyses the problems related to social cohesion in neighborhoods in contemporary society. The Worldwatch institute (2016) emphasizes contemporary cities are not only growing in population, they are also becoming more and more diverse. This twofold process poses major challenges. Besides managing the multi-faceted integration of new residents into the city and into society, there is also the challenge of ensuring continued social cohesion in neighborhoods. On top of this, a common perception is noticed that the quality of public and social life is deteriorating all over the world (The Worldwatch Institute, 2016). Economic inequality increased since the 70s which have resulted in socio-economic inequalities and spatial segregation. This development is especially visible in urban areas and has a major impact on the quality of life and social cohesion between residents (The Worldwatch Institute, 2016).

The theoretical bodies chosen for this project are therefore divided into different topics. These topics put forward challenges, but also potentials which are accompanying developing cities due to an influx of population. This chapter will zoom in to theories of each of these concepts and investigate their relationship to social cohesion in neighborhoods, and to each other, in order to tackle the challenges concerning the contemporary situation.

First, the chapter will start by elaborating more on the concept of social cohesion in neighborhoods and will cover the relation to liveability, the physical and social environment, and social diversity. The segregation paragraph links to this physical and social environment by covering theories of physical borders, social control and privacy zoning in neighborhoods, as well as the aspect of segregation as a spatial concept in order to clarify the link to density. The topic of densification will cover the spatial organization in cities and neighborhoods over time and the often-mentioned link with the application of mixed-use. In order to evaluate the impact of high or low densities on social cohesion in neighborhoods, it is important to acknowledge the different aspects of density. Therefore, a tool will be introduced which can be utilized to calculate density and find a suitable balance between built and unbuilt space, in order to cater the social aspect in the densification processes. The topic of mixed-use acts as a supportive and complimentary layer to the chapters of segregation and density and can be seen as a tool to strengthen the different implications. The different theories play a crucial role on city and neighborhood scale.

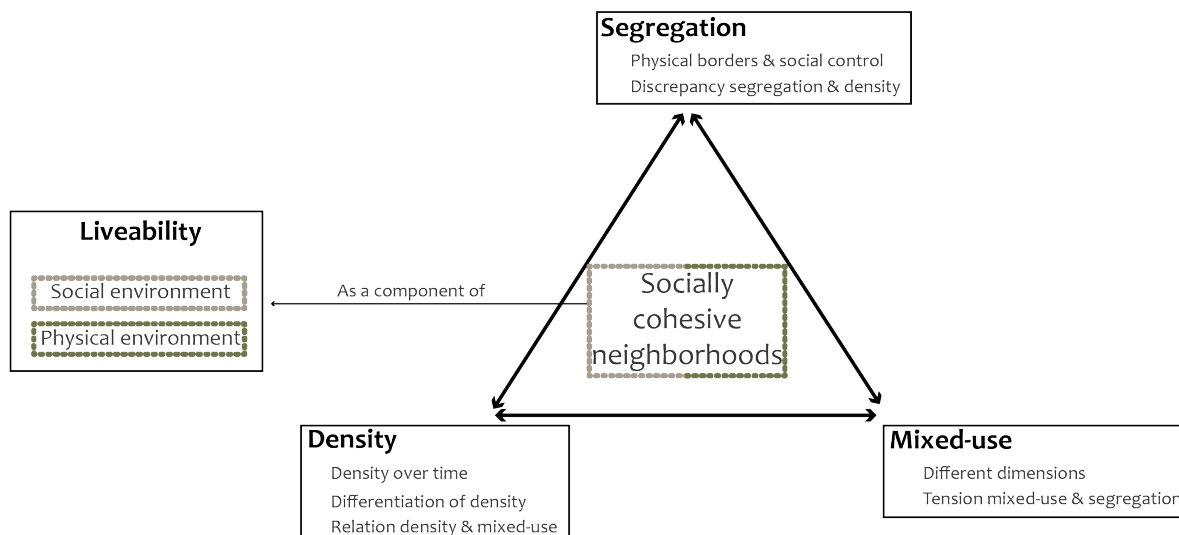


Fig. 41 Theoretical framework

4.2 socially cohesive neighborhoods

Social cohesion in the concept of liveability

This chapter elaborates on the introduction of social cohesion in neighborhoods, explained in the beginning of the methodology chapter. Social cohesion is often linked with the concept of liveability. Musterd (in Van Dorst, 2005) explains liveability is the appreciation of an individual for his or her surroundings. Thus, liveability concerns the interaction between people and the environment. This interaction, and the appreciation for it, is different for each individual. Liveability is, in practice, the sum of judgement of different components and social cohesion can be seen as one of these.

Van Dorst (2012) emphasizes the quality of liveability are basic needs, which consist partly of spatial elements which is related to the design of a liveable neighborhood. The social environment, compared to the physical environment, plays an important role looking at the well-being of people, but the two environments are certainly related to one another.

As liveability concerns the interaction or relationship between an individual and its environment, Van Dorst (2012) emphasizes three ways in which this relationship can be approached (fig. 42).

The perceived liveability

The perceived liveability concerns the appreciation of an individual for the environment. Measuring the perceived liveability can be done via a quite simple and direct method, for example, let people value statements as: 'If you live in this neighborhood, you are well of'. The appreciation of a person for the environment is therefore based on the interaction with the physical and social environment. Namely, daily interactions with this environment and social interaction with other individuals.

The apparent liveability

The apparent liveability concerns the relation between an individual and the environment, which can be measured in terms of the number of happy years of life (Veenhoven in Van Dorst, 2012). As the perceived liveability was quite easy to determine, the apparent liveability is much harder to regulate. As people can learn, remember and adjust to changing circumstances, it is not possible to create certain characteristics for the environment people live in. This would therefore mean the apparent liveability can only be measured at the end of a person's life.

The presumed liveability

The presumed liveability is "the degree to which the living environment meets the presumed conditions for liveability" [p. 226]. The physical environment can therefore contribute to well-being of people by facilitating different forms of people's behaviour.

This research project will mainly focus on the perceived liveability as this tackles the physical and social environment and as the interaction between an individual and the environment can be most clearly measured by conducting a questionnaire and interviews in the determined area.

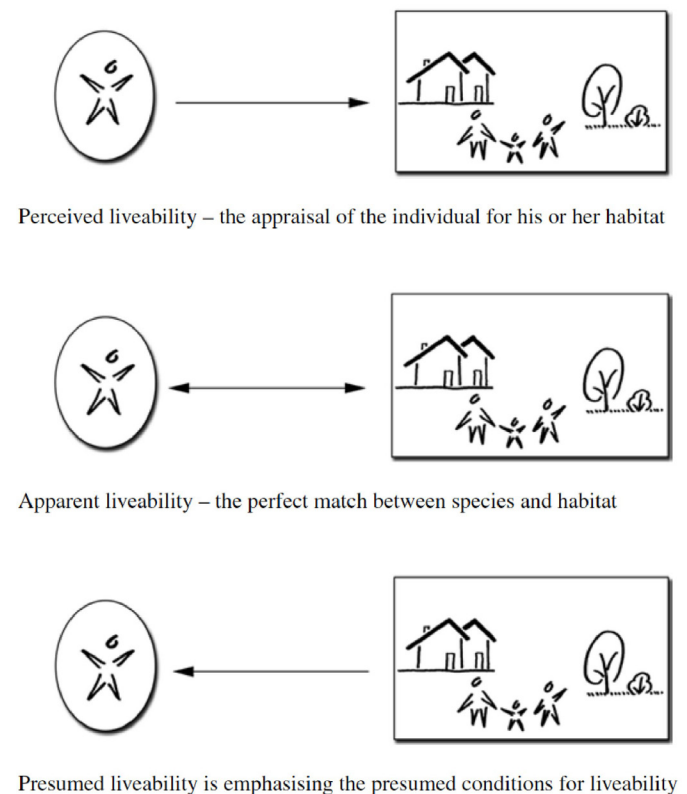


Fig. 42 Various forms of liveability (Van Dorst (2012: 226))

Physical & social environment in relation to social cohesion

The previous paragraph emphasized the relationship of the social and physical environment in order to determine the liveability in an area. As social cohesion turned out to be an integral component of liveability, it is investigated to what extent the physical and social environment influence social cohesion in a neighborhood.

Ziller (2004) emphasizes “an undoubtedly unsubstantiated leap implied in planning and design policy discourse from face-to-face contact (...) to community engagement and participation” [p. 471]. According to Ziller (2004), trying to create elements of social cohesion by focusing on the built environment is a problem in the first place. The assumption that urban form can create interaction and engagement between residents does not only assume that territory forms important connections between people, but also that the design of these areas can, in a way, influence the interaction and participation between different people, which is an “unrealistic and mechanistic approach to social outcomes” [p. 471] according to Ziller (2004).

Therefore, Dempsey (2008) and Van Dorst (2005) emphasize physical form *can* contribute to social cohesion, but social cohesion cannot be achieved solely through physical interventions. Outcomes of Dempsey’s (2008) research suggested that social cohesion between residents can be supported by planning and design which is focusing on the physical characteristics of a place e.g., the design and physical form of a neighborhood, in order to promote its distinctiveness and charac-

ter. However, she adds to this that a diversity of aspects, which relate to people’s perceptions of the built environment, is necessary to affect social cohesion as a whole.

Therefore, she explains the physical and non-physical characteristics are influencing the liveability in a neighborhood, and therefore social cohesion between residents. Van Dorst (2005) emphasizes on this interrelationship between the social and physical environment by explaining e.g., feelings of unsafety will not only be caused due to loitering youth on the neighborhood square, but also by a dark, polluted area. However, there is a complexity to this topic as no single root cause has been found of the relationship between the physical interventions and the functioning of the social environment, or the other way around (Lang in Van Dorst, 2005). Van Dorst (2005) and The Worldwatch Institute (2016) therefore state the focus is on the physical interventions, which support the social environment. Van Dorst (2005) gives an example of this, namely improving facilities related to social and cultural aspects and to design more attractive spaces which influence people to stay and interact with each other, in order to create a more socially cohesive neighborhood.

Social diversity & social cohesion

Until the 19th century, areas were socially mixed due to the fact that people lived where they worked. High and low incomes were only separated through vertical zoning in buildings, but shared the public realm. However, class consciousness accentuated due to industrialization and a diversity of residents in one area became scarcer (Talen, 2008). This paragraph elaborates on the question whether a diversity of residents contributes to achieving social cohesion in neighborhoods. A diversity of residents is not only focused on ethnicity or income level, but also on diversity in age and household type.

Supporters of homogeneity in neighborhoods may believe this uniformity is necessary in order to sustain group identity, ethnic heritage or preserving cultural affiliation (Glazer et al. in Talen, 2008). Alesina et al. (in Talen, 2008) contribute to this by arguing that a similarity of residents results in a similarity in demands for public goods and that a diversity of residents can result in lower levels of public goods provision. Finally, they question whether the type and location of amenities in a wealthy area meets the different needs and demands of a variety of residents. Placing low incomes in a wealthy area, not necessarily contributes to a better life, but may even isolate them in a social and functional way.

Kearns et al. (2014) also studied the relationship between social cohesion and a homogeneity of residents in an area, but came to different conclusions. They emphasized having a diverse group of residents in a neighborhood can overcome social boundaries of inequality, alter attitudes to some extent by interacting with individual characteristics and values, and increase the chances of creating more integrated, resilient and sustainable communities, which can positively influence social cohesion. They elaborate on this by stating this is especially interesting for contemporary society which faces

bigger problems of individualization, inequality and diversity. Gleeson (2013) elaborates on this by explaining that creating neighborhoods for a homogeneity of residents can result in exclusive communities where the location of a neighborhood can function as a symbol for social status. These neighborhoods have to face problems of “isolationism, exclusivity and uneven access to resources” [p.47] (Talen, 2008). Having a city which then consists of socially cohesive neighborhoods in itself, but which are increasingly divided, can lead to even more inequality and less social cohesion between neighborhoods as the stronger the bonds that bind these areas, the larger the social, racial or religious conflicts can be (Forrest et al., 2001). Ziller (2004) therefore emphasizes that nowadays sameness is sometimes mistaken for social cohesion. An additional aspect which should be taken into consideration is the lifestyle of different people. People can be mixed physically, but in order to create social cohesion, the social-cultural aspects should also be taken into consideration. To conclude, the exact impact of a diversity of residents on social cohesion is, not yet, clearly determined, however there is the hypothesis that social diversity is the base for social interactions in a neighborhood (Talen, 2008).

Building up on these results, one of the following chapters will investigate whether a homogeneity of functions, instead of a homogeneity of residents, will influence social cohesion in neighborhoods or if a mixed-use area contributes to the possibility of having a socially cohesive neighborhood.

4.3 segregation

Physical borders & social control

To investigate the relationship between social cohesion and liveability, it is important to define the type and scale of the environment. As this research project is focusing on social cohesion in neighborhoods, instead of social cohesion in general, the neighborhood will be the context for the operationalization of liveability, and therefore social cohesion. However, this brings challenges related to the topic of segregation. As explained before, both the physical and social environment are of influence for social cohesion between people and there is a common perception that the quality of public and social life is deteriorating worldwide which have resulted in inequalities and segregation (The Worldwatch Institute, 2016). People express their behavior in their living environment. A clear example of this is the way in which people personalize their house to make it a home. However, for the scale of a house, borders are recognizable, and people are officially owners of the house. Van Dorst (2012) emphasizes it becomes more complex for the scale of the neighborhood as:

- No clear boundaries can be established. Often mobility is emphasized in the city fabric as most neighborhoods are part of a bigger network.
- The social and physical environment are not one-to-one related. People can have social networks outside their neighborhood which relate to smaller or bigger scales.

This complexity creates the need for establishing the neighborhood as a context for creating social cohesion. Van Dorst (2005) explains a neighborhood is not a community, but a minimum level can be established: an anonymous living environment is not desirable. An anonymous group can be a conscious choice, but an environment with no social interaction is an anonymous living environment. An anonymous living environment can only function in the presence of formal management. Formal management is often only guaranteed for a short period of time and, as the involvement of residents is not a requirement, an anonymous living environment can be seen as a vulnerable one. This is socially undesirable as there are no longer any restrictions or obstacles concerning anti-social behavior. Therefore, an individual should be able to be anonymous from time to time, but an environment may never be anonymous. Therefore, social cohesion requires certain control over the social environment, which the physical environment can support. Maximum social cohesion results in living in a community. Anonymity, and therefore a minimum of social cohesion, can be differentiated into situations where people do not know others by name, or objectifying, where passers-by no longer answer each other's gaze.

Regulating social interactions is an important characteristic of a well-functioning living environment. Van Dorst (2005) explains these aspects are motivated by personal needs, but also affect the quality of the social environment and the design of the physical environment. The priority must therefore lie in the control and the social relationships, in other words, the fight against anonymity.

The application of privacy zoning

The model of zones, introduced by Van Dorst (2005), with different meanings for privacy and social interaction is called privacy zoning. He explains this zoning is physically legible and socially accepted in order to create clarity for all. Privacy zoning can be described as the materialization of control over the social environment and social interactions. The concept of territoriality relates to privacy zoning. Recognizable territories clearly compartmentalize the space and make the built environment legible. The lack of clarity results in an anonymous environment. Therefore, the physical environment can play a role in regulating social interactions. On the one hand, users must have control over the amount of social interaction. On the other hand, the physical environment must be legible and create clarity for accessibility and users. Therefore, the environment must be readable and create areas where a variety of social interactions are possible (or impossible). Figure 43 shows an example of Van Dorst (2005) of housing where seven different zones are established. Using the system of privacy zoning, and therefore creating transition spaces from public to private areas, allows users of the space to control the amount of privacy they desire. To conclude, the environment must not only offer the opportunities to make contact, but also to seek privacy.

The application of control in the physical environment relates to the theory of Habraken (1998) where he emphasizes using the environment as a possibility for exercising control by residents. In this way, control means the ability and possibility to transform the environment, which is necessary, according to changing needs of inhabitants.

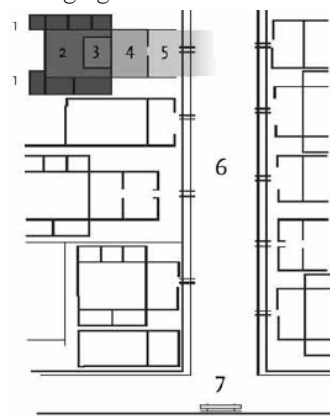
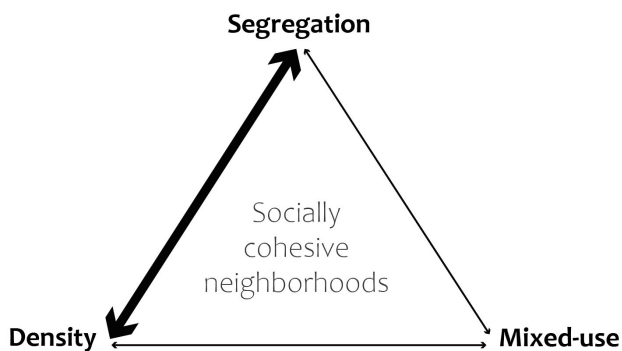


Fig. 43 Example application of privacy zoning (Van Dorst (2005: 125))

Relating to the anonymity in public spaces is the theory of Alexander et al. (1977) where he investigated the relation of public life and spaces. Alexander et al. (1977) emphasized the importance of the building in order to create well-functioning cities and public spaces. He thereby referred to the knowledge of Gehl et al. (2013), who talked about the role of building edges. Alexander et al. (1977) emphasized his statements by explaining two different edges. The first edge has no details or stimulations to stay. The second edge is described as a more lively edge with a variety in facades and stimulates to stay. The first building is separated from the environment and is a more isolated island. In contrast to this, the lively edge building is more a part of the environment interacts with people who live and move around it. Building edges therefore influence the way in which the built environment invites individuals to live and interact in space. Alexander et al. (1977) finishes his argument with stating when the edge fails, space never has the opportunity to become lively.

Discrepancy between segregation & density



Legeby (2009) explains urban design and spatial planning are often unaddressed in proposals which try to tackle segregation. This is actually striking as segregation is an inherently spatial concept. Social distance and exclusion are often mentioned as negative consequences of segregation which is partly depending on configurational relations. Initiatives to decrease segregation in neighborhoods have often limited information about the built environment which is mainly related to characteristics of the housing stock as built year, house types, and number of stories. The spatial layout and configuration are most of the time neither described nor discussed. In this way, interventions which are implemented in order to decrease segregation in neighborhoods are mainly related to housing policies, if they are addressed at all.

Post-war neighborhoods are characterized by segregation of land-uses and public spaces and many neighborhoods are spatially isolated from each other and the city as a whole (Havenga et al., 2019). As approaches for tackling segregation in the urban environment have been giving weak guidance for urban design so far, it is necessary to generate new ideas within this field. Therefore, possibilities need to be investigated on how to overcome negative consequences of social segregation in a more spatially relevant way (Legeby, 2009). The relation to the densification needs in the city and neighborhoods plays a crucial role in this.

From an urban design perspective, the current shortcomings in approaches which try to tackle segregation, have mainly to do with three topics (Legeby, 2009):

- First, there are difficulties to find a suitable definition of the area. Choosing a specific area will define the detail of precision and influence data collection.
- Secondly, the lack of context is problematic. Often locations are investigated without taken into consideration surrounding areas.
- Finally, outcomes often explain very little about characteristics of the built environment as areas are divided by looking at their residents.

It is therefore difficult to make conclusions from such descriptions regarding spatial qualities and density in cities and neighborhoods. The relationship with density is therefore of crucial importance, and can be seen as a knowledge gap in contemporary strategies. Therefore it is important to investigate the spatial impact of segregation in the city and its neighborhoods in order to create and enhance social cohesion between residents.

4.4 density

Density over time

The concept of density is often mentioned related to the appearance, or lack of, social cohesion in neighborhoods. How people have used, and are using, space, are often mentioned topics related to the application of density in cities.

Problems which occurred during the second half of the 19th century, related to fires, diseases and social disorder, were often mentioned related to high density in cities. Counter movements, as the *Garden City*, used density to show the advantages of decentralized and self-sufficient smaller cities (Berghauser Pont & Haupt, 2010), as is also explained in the introduction of this report. However, Jacobs (1961) warned low-density, dull areas on the fringes were issues faced in inner cities. A minimum of 100 dwellings per net acre was needed according to Jacobs (1961) in order to achieve vitality and participation in the city.

Differentiation of density

In order to evaluate the impact of high or low densities on social cohesion in neighborhoods, it is important to acknowledge the differentiation between the different aspects of density. On the one hand, density can, for example, refer to the number of inhabitants or dwellings per area. Even though it is a relevant aspect, there are limitations connected to this as a certain density can create different spatial configurations with varying spatial qualities (fig. 44). It therefore “poorly reflects the spatial properties of an urban area” [p. 16] (Berghauser Pont & Haupt, 2010). In order to offer more information about the quality of the urban form, ratios need to be included which refer to the ground coverage, floor area ratio et cetera. However, a combination of both of the previously mentioned aspects can be relevant when trying to evaluate the impact of high or low densities on social cohesion in neighborhoods.

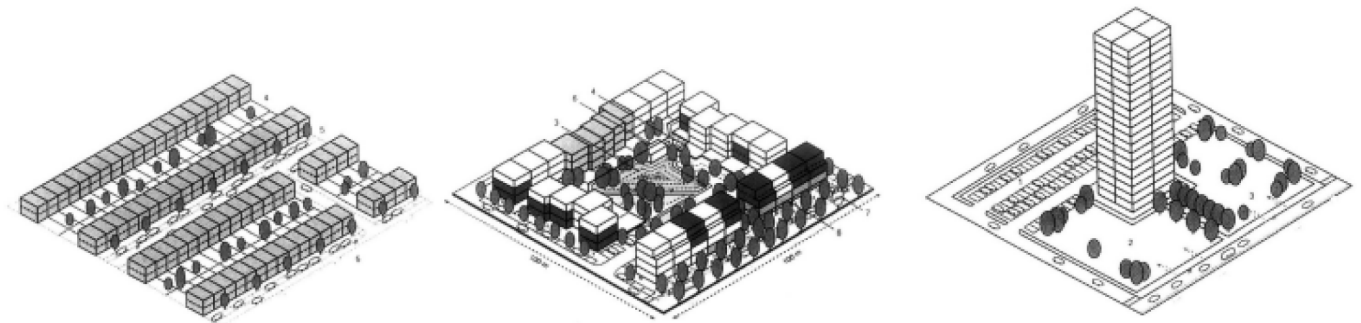
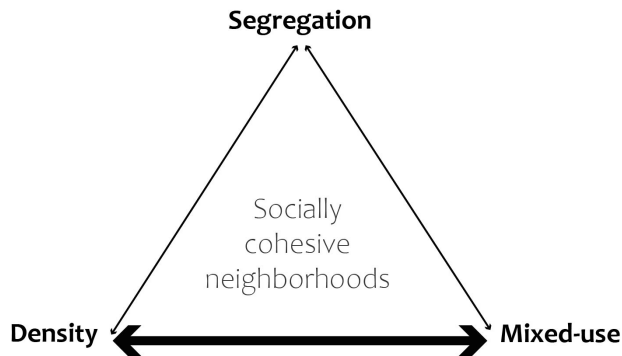


Fig. 44 Three areas with 75 dwellings per hectare
(Fernandez Per & Mozas in Berghauser Pont & Haupt (2010: 17))

Relation between density & mixed-use



A high-density built environment is often related to the application of mixed-use. Burton (2000) therefore investigated the claim of high-density urban forms, also described as the *Compact City*, promoting social equity between residents. An important characteristic of the *Compact City* is the application of mixed land-uses and high density buildings in combination with efficient public transport systems, high accessibility and other aspects that encourage walking or cycling. This is contradictory to the car-oriented approach of post-war neighborhoods which are characterized by separated land-uses and low densities (Havinga et al., 2019). High-density areas are widely considered to contribute to better public transport, less social segregation, and improved access to amenities. On the other hand, problems as reduced living space and not enough affordable housing are often mentioned (Burton, 2000).

It is therefore important for the next chapter to also link the theories of segregation to mixed-use in order to find and apply a suitable approach for densifying the city of Amsterdam and the neighborhood of Overtoomse Veld in order to create a balanced transformation and densification process which is in favor of all residents and can stimulate the social cohesion between them.

4.5 mixed-use

Dimensions of mixed-use

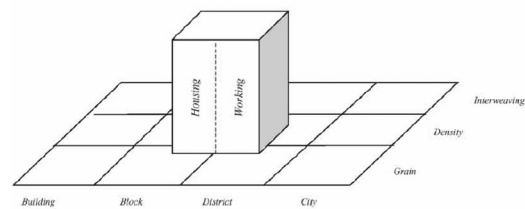
Since the 1960s, different intellectuals advocated strategies in urban renewal which were in favor of physical and social diversity (Fainstein, 2005). This is contradictory to the strategy of separated land-uses, as applied in the *Western Garden Cities*, and is nowadays geared towards mixed-use development. This is currently the planning norm rather than the exception and is seen a way to create a community (feeling) and improve social cohesion in neighborhoods. But despite the widespread support of mixed-use policies, its actual influence on social cohesion in neighborhoods is difficult to determine (Foord, 2010). It is therefore important to first define the definition of mixed-use.

In the United States, mixed-use is often seen as part of the *New Urbanism* approach (Hoppenbrouwer et al., 2005), which is, as Passell (2017) explains, dialectically related to post-war developments, as the *Western Garden Cities*. The conditions which defined the conventional suburban development, led to conditions out of which the *New Urbanism* emerged. According to Lloyd et al. (2016) the *New Urbanism* approach is defined by two main ideas. Firstly, containing urban sprawl by the development of compact urban form. Williams et al. (2003) state that, where possible, mixed-use development should be applied. Not only by introducing different types of buildings, but also by stimulating a variety of functions and a high degree of diversity within these functions. Secondly, improving the community by increasing social interaction. Supporters of the *New Urbanism* approach therefore believe in an interrelationship between the physical space and creating a sense of community through increased social interaction (Dixon et al., in Lloyd et al., 2016). In their eyes, mixed-use can be applied to solve problems in the contemporary urban environment which are related to a lack of social cohesion.

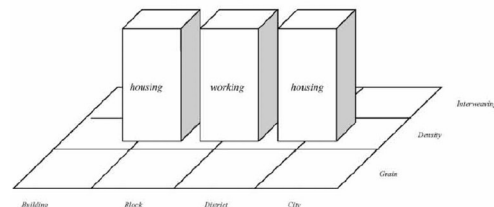
Hoppenbrouwer et al. (2005) elaborate functions can be mixed at different scales, spatial levels and multiple uses of space in time e.g., buildings, blocks, districts and city scales. They therefore explain four dimensions of mixed-use, starting with the shared premises dimension. This refers to the multifunctional use of e.g., premises in a building, but also the situation where people work at home. The horizontal dimension focuses on the mix of uses between buildings located next to each other. The vertical dimension considers building underground and multi-level building. This type of mix is commonly used by building housing on top of shops. Finally, the dimension of time considers the application of diverse functions within a certain time. More time, means more different functions.

Hoppenbrouwer et al. (2005) focus on two primary land-uses, which are housing and employment. According to them, this can easily be extended with other functions. However, the definition of a function also depends on its context and is therefore also crucial for the type of mixed-use environment. In this project not only a variety of functions is important, but also a high degree of diversity within these functions.

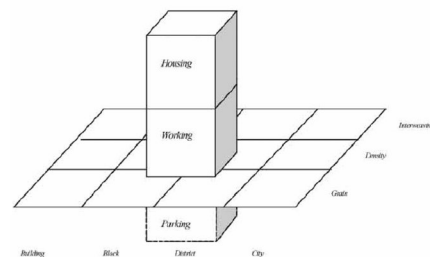
I. Shared premises dimension (point)



II. Horizontal dimension



III. Vertical dimension



IV. Time dimension

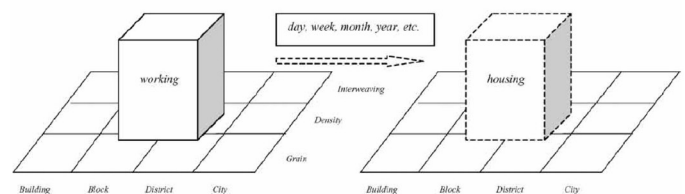
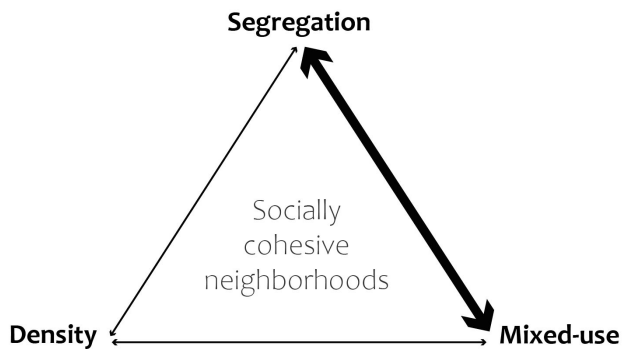


Fig. 45 Dimensions of mixed-use (Hoppenbrouwer et al. (2005: 973))

The tension between mixed-use & segregation



Mixed-use is often positively related to achieving social cohesion between residents. However, Foord (2010) emphasizes on the tension between mixed land-uses and segregation of residents in a neighborhood by elaborating on her research of a neighborhood close to central London. She explains, mixed-use functions are added in the area in order to attract a diversity of residents to stimulate social cohesion. However, the replacement of local shops, and the influx of high incomes to the area, resulted in limited resources, unaffordability of the new functions and potentially a reduced quality of life for the current local residents. It turned out new residents mainly liked the area due to the benefit of the geographic location and permeability of the neighborhood, but these are characteristics which are not necessarily related to the mixed-use character of the area. This resulted in residents who still chose to go elsewhere when socializing or eating out, which was possible due to the permeability and location of the neighborhood, which was close to central London. This enabled residents to take advantage of not only the neighborhood, but also of the functions in areas close by. For those residents who were unable to travel, or for whom the central location was of no influence on their daily (quality of) life, the permeability of the neighborhood turned out to be a must. Therefore, by trying to create a diverse neighborhood with mixed functions, in order to enhance social cohesion, it unconsciously led to the opposite which turned into segregation between residents. There is again the risk of transforming neighborhoods into exclusive communities as Gleeson (2013) emphasized before. Foord (2010) thus concludes her research by stating that “The dynamic processes that generate diversity and mixed-use neighborhoods, can also destabilize them.” [p. 60]. Therefore, there might be the risk of changing mixed-use neighborhoods from potential areas for social cohesion, into areas which are actually undermining it.

It is therefore important to realize that probably not every mix of function will work. Jacobs (1961) emphasizes functions should complement each other and be active during different parts of a day. She stands at the root of promoting cities which house multiple uses in order to make a city more attractive, promote economic productivity and stimulate social diversity. Jacobs (1961) relies on the need of a “close-grained diversity of uses” [p. 14] in a city where the different functions are constantly interrelated and supportive to each other. She elaborates on this by claiming non-useful places in a city are places where this interrelated support between uses is not taking place. Diversity is therefore seen as the main factor of urban vitality as it stimulates the interrelationship between urban components. Mumford (in Talen, 2008) emphasizes this by stating the separation of land-uses leads to the so called “anti-city” [p. 35].

Before implementing mixed functions, Talen (2008) emphasizes the need of an initial assessment which investigates what functions the neighborhood already has and what mix of functions can meet the needs and demands of the residents. This can prevent situations where implementation of new mixed-use functions lead to segregation between current and new residents. Thereafter, Talen (2008) emphasizes to investigate where areas are located which have a high diversity of residents and implement commercial functions, other types of non-residential functions and well-served public spaces in order to support social cohesion between a diversity of residents. The Worldwatch Institute (2016) elaborates on this by explaining well-functioning public spaces can increase the interaction, connectivity and mixture of different people, which are all important factors of a cohesive area. They go deeper into this by explaining the integration of mixed-use areas with these vibrant public spaces, good accessibility to public transport, and a diversity of housing can increase the possibility of social cohesion in a neighborhood.

The problem field in the beginning of this report highlighted three main challenges for the neighborhood of Overtoomse Veld and the city of Amsterdam. To find potential solutions to these challenges, a multi-scalar approach need to be applied as these challenges are interrelated. This chapter therefore aims to find answers to the following subquestions:

- “In what way is the spatial configuration challenging the quality of social life in Overtoomse Veld?”
- “What are the possibilities for densification in the city and its neighborhoods?”

The analysis on the next pages is divided into four topics which are linked to the topics addressed in the problem field. These four topics will result in challenges and potentials for the city and the neighborhood, which will finally bridge to the vision and strategy of the next chapter.

The analysis in the problem field already addressed the challenges of the city concerning the connectivity when rolling out the centre of Amsterdam. Segregation is an important topic which is associated with these developments. As the segregation between the rich and poor, higher and lower educated and the inner and outer city ring area is increasing, it is important to investigate the current connectivity of the city and the issues related to this topic.

This chapter therefore starts by investigating the angular integration of roads in Amsterdam. This research shows how integrated a network is and therefore how easy a space can be reached. These results will be used as a base for investigating the accessibility of the neighborhood by different modes of transport and consequences of this on social life in the neighborhood.

5.1.1 Angular integration

The connectiveness of the city and neighborhood are investigated by first looking at the angular integration. This analysis calculates how easy a street is to reach and therefore how integrated the network is. Two datasets are used for this analysis. A motorised network is used for car traffic and a non-motorised network is used for pedestrians and bikes. A 5km walking distance is used for the car analysis, whereas a 3km distance is used for the bike analysis and an 800m distance for pedestrians. This multi-scalar approach allows for solid conclusions on not only larger city scales, but also smaller neighborhood scales.

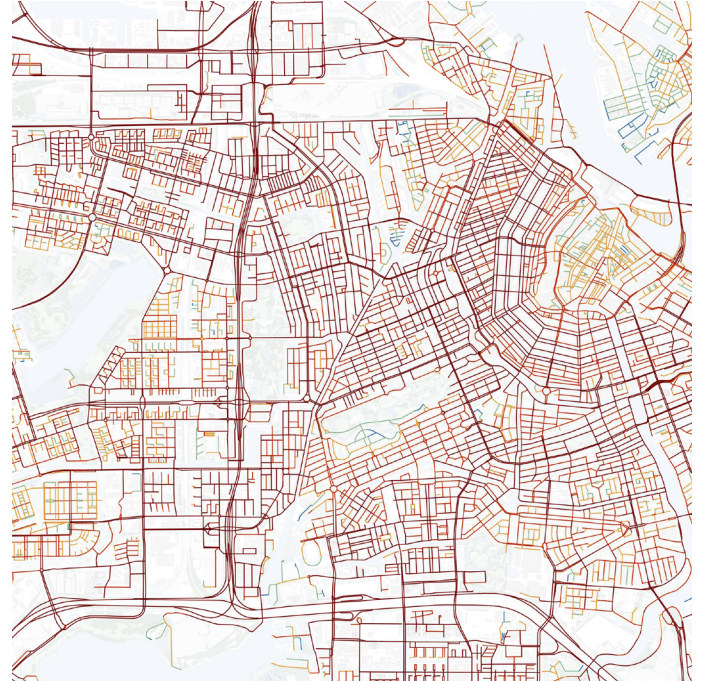
The analysis shows striking results of the relation between Overtoomse Veld and the rest of the city. The A10 highway creates a clear separation between the Western part and the rest of the city. It also creates a border on the Eastern side of Overtoomse Veld. But not only East, other sides of the neighborhood are also difficult accessible by car. The Western side is almost completely inaccessible from the surrounding neighborhoods, while on the Northern and Southern side only the corners of the neighborhood give access to Overtoomse Veld by car.

Striking to see is that, besides the scarcity of roads to the neighborhood, also the motorised roads inside Overtoomse veld are not easy to reach. The streets go from green to light red, while in the surrounding neighborhoods and in the city centre streets are mainly coloured light red or dark red. The dead-end streets on the Western and Southern edge play an important role in this.

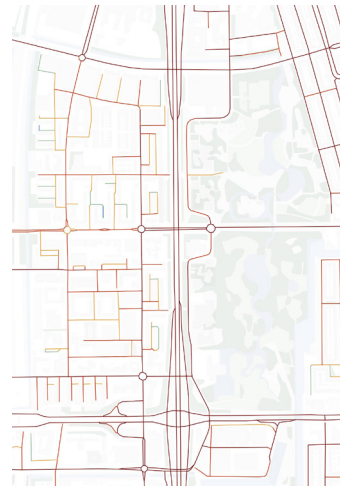
Looking at the non-motorised roads, and therefore the bike and pedestrian analysis, it is visible the neighborhood offers more possibilities to enter the neighborhood. However, these roads are mainly coloured blue to orange, which means these streets are not easy to reach.

In general, three roads can be clearly distinguished in the neighborhood itself, which are easy to reach in all three analyses: the Jan Tooropstraat, the Postjesweg and the Derkinderenstraat. These streets will be further investigated later on to see if these streets are also highly used.

City scale



Overtoomse Veld

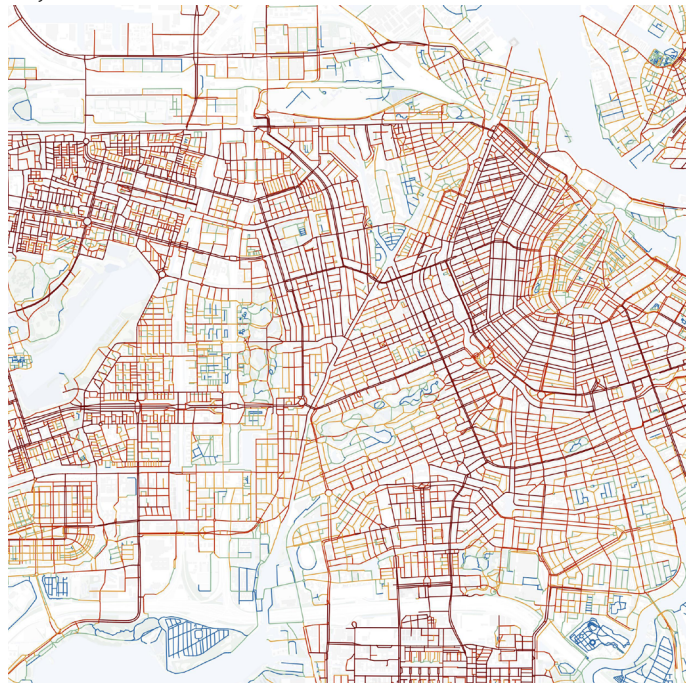


City centre

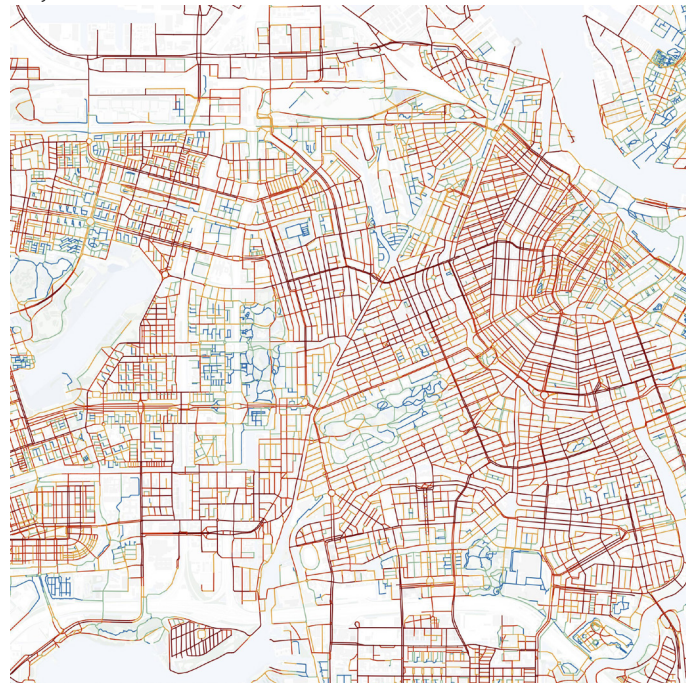


Fig. 46 5 km analysis (car)
(source: Berghauser Pont et al. (2019))

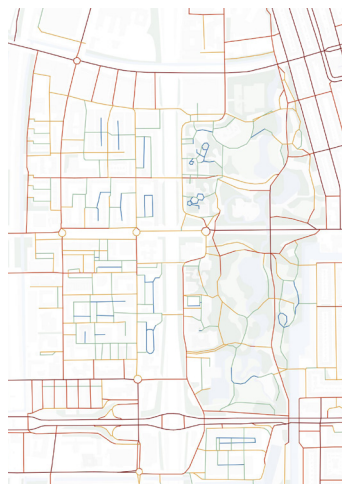
City scale



City scale



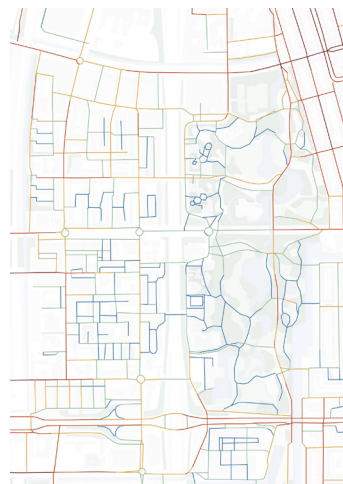
Overtoomse Veld



City centre



Overtoomse Veld



City centre

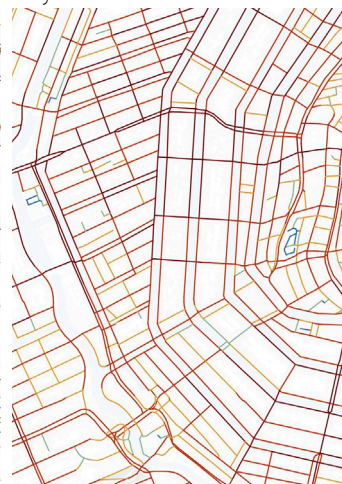


Fig. 47 3 km analysis (bike)
(source: Berghauser Pont et al. (2019))

Fig. 48 800 m analysis (pedestrian)
(source: Berghauser Pont et al. (2019))

Easy to reach
Difficult to reach

5.1.2 Edges & entrances

The angular integration analysis clearly showed the roads surrounding the neighborhood are easy to reach, but that there are only a few roads which give access to the neighborhood itself. Figure 49 shows what creates this inaccessibility.

It is visible the neighborhood is surrounded by 4 borders. The Northern side is framed due to the water, 2-way tram tracks and a 2-way car road. Therefore the car can only access the neighborhood on the corners of the North/East and North/West side. This side is however better accessible for bikes and pedestrians by the small roads in between the building blocks. The Eastern side is almost completely inaccessible for cars, but 6 small tunnels give access for bikes and pedestrians into the neighborhood. There are only 2 entrances for cars, bikes and pedestrians on the corners of the South side of the neighborhood. The Western side is as framed as the Eastern side due to the metro and train tracks. However, on this side only 3 roads give access to the area.

Fig. 49 Neighborhood edges & entrances

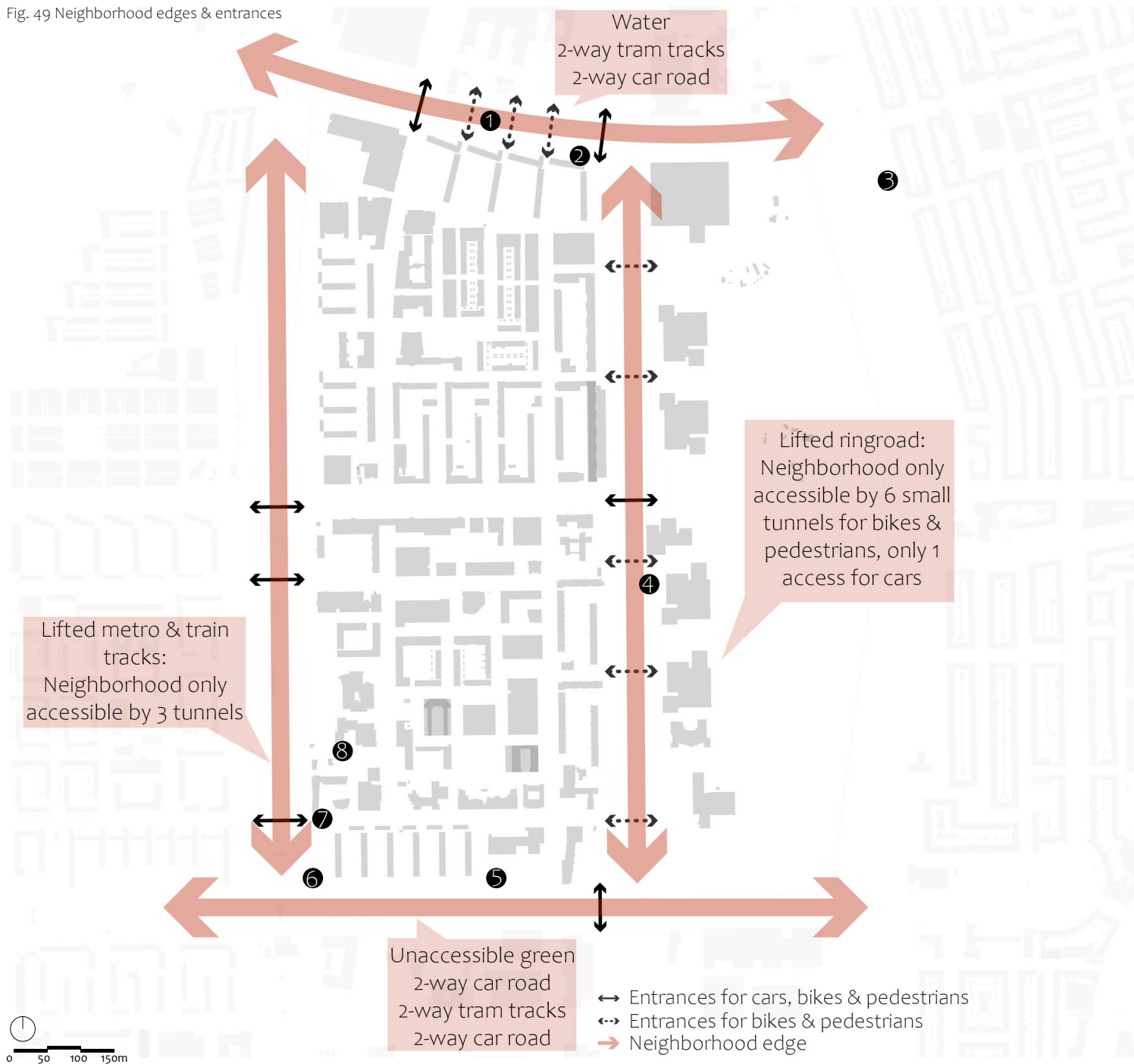


Fig. 50 Problematic entrances & borders



“The parking lots at the **edges** of the neighborhood always feel **unsafe** to me. The buildings look **old** and in **decay**, there is a lot of waste on the street and the area feels quite **isolated**”

- Respondent questionnaire



“I really **hate** crossing the **tunnels** from the Derkinderstraat to the Nachtwachtlaan. It always **dark**, there is **rubbish** and **litter** on the street, and **youngsters** are playing loud music and selling drugs”

- Respondent questionnaire



5.1.3 The urban structure

Besides that the neighborhood is hard accessible in general, respondents of the questionnaire and interviewees during the fieldwork also mentioned the morphology and quality of buildings at the edges of the neighborhood as an important factor which influences social life when accessing the neighborhood (p. 69).

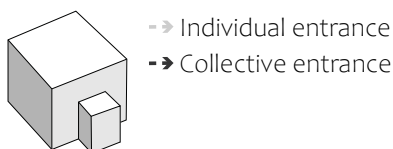
Therefore, investigation is done on the builtform, facades, entrances and heights of buildings which are located close to the edges of the neighborhood in order to investigate how these factors influence the accessibility and social life in the neighborhood.

Morphology, entrances & facades

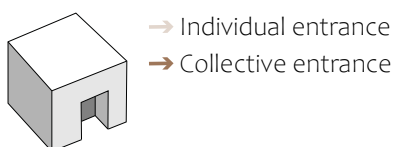
The building blocks can be divided into three different types: blocks, strips and individual buildings. Generally, the closed blocks can be found mostly in the traditional city. However, in Overtoomse Veld they are also applied for the newly renovated buildings. In the traditional city the closed blocks housed fully private courtyards, as the newly renovated closed blocks in Overtoomse Veld house private gardens next to each other in the inner block area.

The *Algemeen Uitbreidingsplan* introduced more permeable blocks, which resulted in the semi or fully public courtyards (Domhardt, 2012). A lot of these blocks can be found at the edges of the neighborhood. These strips have long, monotonous, inaccessible facades and the entrances are facing inwards the neighborhood. These long buildings and lack of building entrances at the edges, give therefore only a few accesses towards the neighborhood.

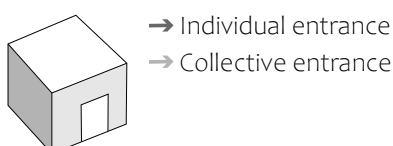
Entrance away from facade



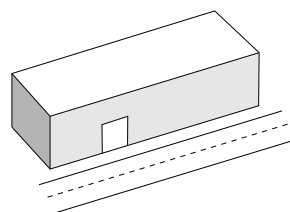
Entrance inside facade



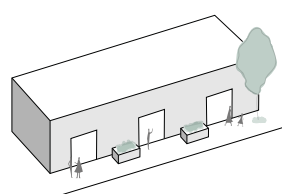
Entrance on facade



..... Inactive facades



--- Active facades



— Blind or inaccessible facades

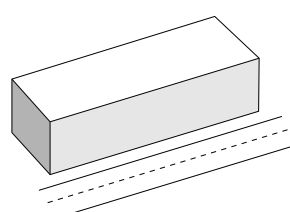


Fig. 51 Influence of morphology, entrances & facades on accessibility



Building heights

Besides the outcomes of the previous pages, also the building heights are taken into consideration. Figure 52 shows the diversity of building levels in the neighborhood. As is visible, a great diversity of floors is present in the current situation. However, the higher buildings in the neighborhood are mainly located towards the edges.

The next two pages show more in detail how the aforementioned aspects influence the life on the street.

“I don’t like to coming in the area between the **high flats**. Some young people enter these buildings **unsolicited**”

- Interviewee fieldwork



Fig. 52 Building blocks tend to be higher towards the edges
(based on open GIS data)





Fig. 53 Blind facades on the ground floor



Fig. 54 Wide streets with different modes of transport

Fig. 55 Section A-A'



* The gradient shows the difference between parts of the street

Zoom in Jan Evertsenstraat

The Jan Evertsenstraat is located on the Northern side of the neighborhood. There are potentials for this area, using the wide pavement and public courtyard which is surrounded by traditional L-shaped building blocks. However, in the current situation, the blind walls, inactive facades, high building blocks, and scarcity of roads for cars entering the neighborhood, can lead to a lack of social interaction and a monotonous street view. The strict border with the park on the Eastern side of the street is therefore also not helping in achieving social interaction.

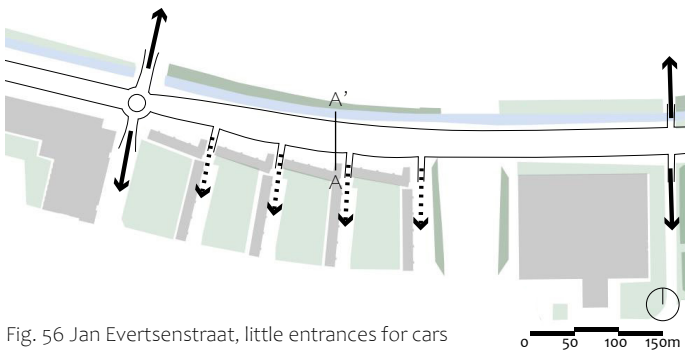


Fig. 56 Jan Evertsenstraat, little entrances for cars



Fig. 57 Entrances are located inside the facade



Fig. 58 Inaccessible green and blind facades on the ground floor

Zoom in Cornelis Lelylaan

The Cornelis Lelylaan is located at the Southern edge of the neighborhood. It is a very wide car street which is framed by large parts of inaccessible green at both sides. This inaccessible green results in only 2 roads at the corners of the neighborhood which function as entrances to Overtoomse Veld. This section focusses on the road inside the neighborhood which is located next to the Cornelis Lelylaan, in between the inaccessible green and residential building blocks. The scarcity of roads, inaccessible green, and blind walls give the area an unsafe character. As the entrances are situated a step back from the facade, youngsters can gather here and create an unpleasant feeling of the space. This probably also influences the use of public space in-between the building blocks.

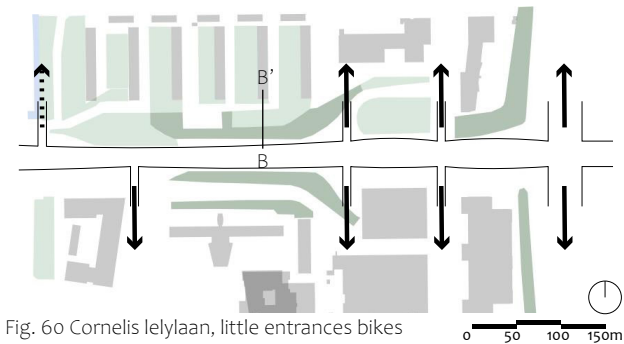
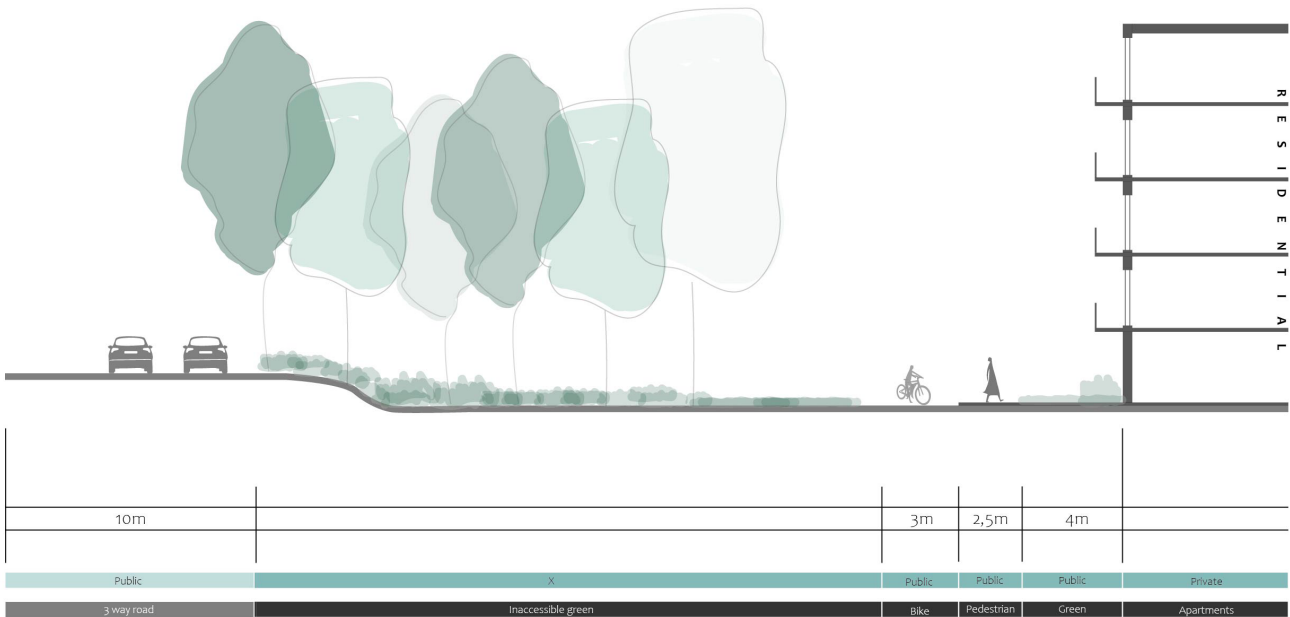


Fig. 60 Cornelis lelylaan, little entrances bikes & pedestrians

Fig. 59 Section B-B'



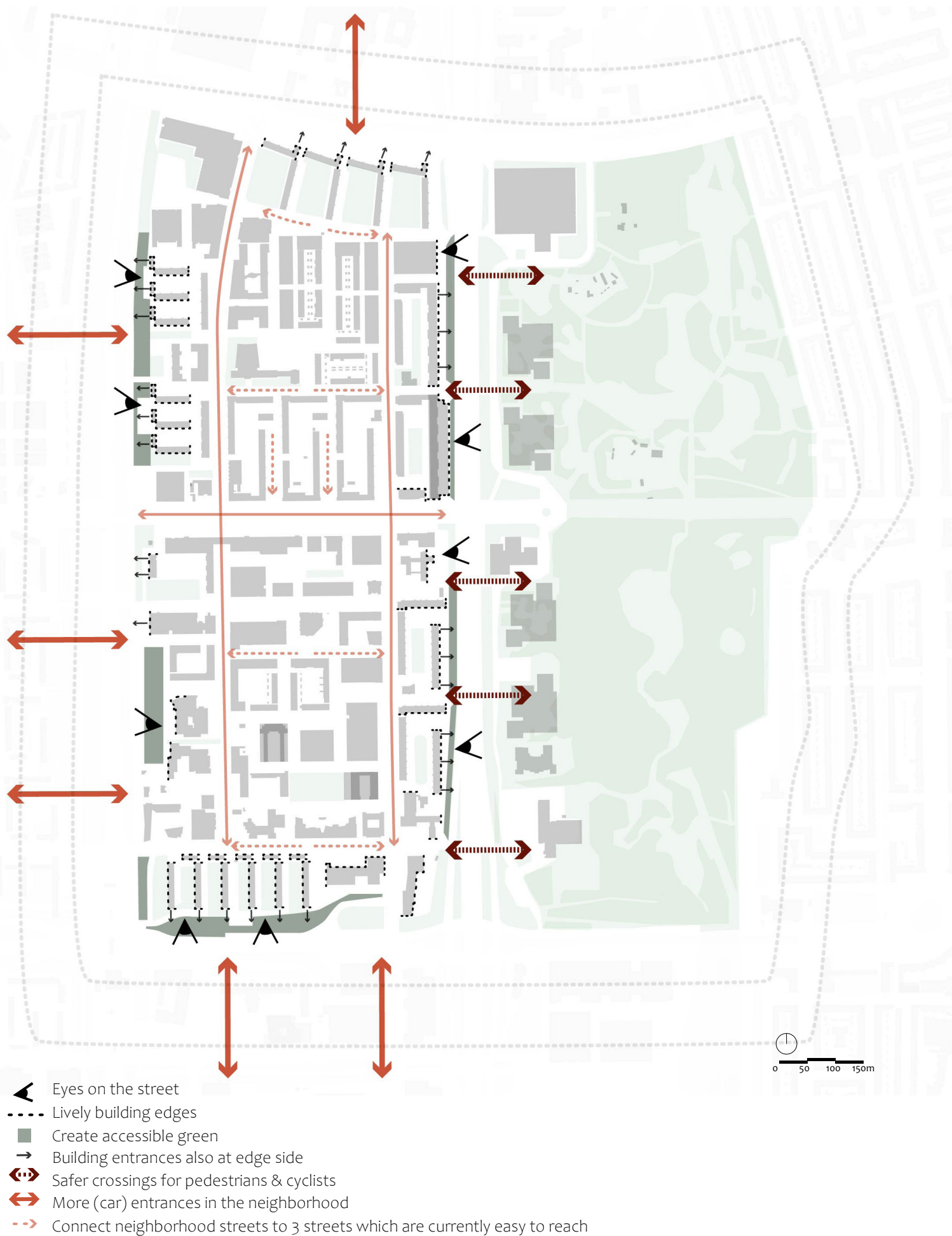
5.1.4 Challenges and potentials

A combination of the factors discussed on the previous pages can strengthen the feeling of a secluded, isolated place which can therefore again affect social life in the neighborhood. This results in un-useful or unsafe spaces next to these buildings, against the edges of the neighborhood.

It is therefore important to take this current situation into consideration in order to design a more accessible, integrated area in the city where social cohesion can take place.

The neighborhood has potential for a better connection to the historic centre and the rest of the city. However, a few challenges need to be tackled in order to achieve this. In general, more possibilities and entrances to the neighborhood need to be created in order to increase the accessibility of Overtoomse Veld. The small, dark tunnels on the Eastern side need to be transformed in order to create safer crossings for pedestrians and cyclists and roads in the neighborhood need to be linked to the Jan Tooropstraat, the Postjesweg and the Derkinderstraat as these are the 3 streets which are most easy to reach from outside the neighborhood. As the buildings and public spaces on the edges of the neighborhood play an important role in the accessibility and social life in Overtoomse Veld, it is important to create more accessible green, more eyes on the street (Jacobs, 1961) and improve the edges of buildings (Alexander et al., 1997).

Fig. 61 Challenges & potentials concerning the segregation & connectiveness



As the city is expanding and densifying, housing, amenities and public functions are changing or in need of change. It is therefore important to investigate the centralities in the neighborhood and the publicness of streets in order to make a solid conclusion about the needed changes for enhancing social cohesion.

This chapter therefore begins by showing the angular choice analysis of the streets. The angular choice analysis calculates the probability that a street is used. A higher probability of a street to be chosen, will likely result in publicness in the public realm. In order to investigate this, the angular choice research will be combined with the analysis of different functions and public spaces in the neighborhood. It is investigated what amenities are present and which are missing, when these spaces can be used, and how accessible these functions and spaces are. Based on these results, conclusions can be made about a possible increase or relocation of the right amenities or interventions on different scales in order to foresee in the different demands of current and new residents and improve social cohesion in the neighborhood.

5.2.1 Angular choice

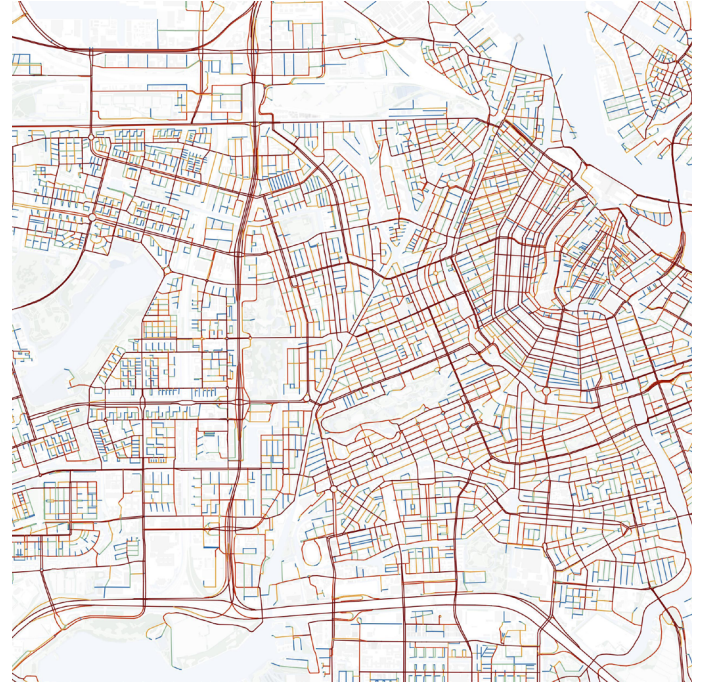
The publicness of streets in the neighborhood and the relation to the larger city scale is investigated by doing an angular choice research. The angular choice calculates the probability that a street is used. A higher probability of a street to be chosen, will likely result in publicness. Again two networks are used in order to make a solid conclusion for motorised (car) and non-motorised (bike and pedestrian) modes of transport.

When looking at the motorised ways, we can see the A10 pops out again on city scale, just as in the angular integration analysis. However, this time the analysis shows the street has a high possibility of using it instead of how easy the street is reached.

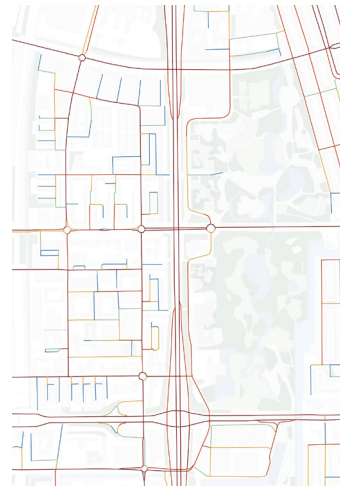
The angular integration analysis showed us the roads inside the neighborhood are hard accessible on a larger scale. However, once we zoom in to the neighborhood scale and look at the angular choice analysis, we can see a clear difference between streets with a high probability of being used (red/orange) and streets with a lower probability of being used (blue/green). Again three roads can be distinguished by their dark red colour, the Jan Tooropstraat, the Postjesweg and the Derkinderenstraat. These streets are marked (dark) red in all three analyses.

The bike and pedestrian analysis show very similar results. Deep inside the neighborhood the green and blue lines are visible, which means the possibility of the street being used is quite low. Comparing this to the city centre of Amsterdam we can see a higher percentage of darker red lines. It should therefore be investigated what the reason is of this low publicness in the neighborhood and how this can be improved. On the other hand, the roads in the Rembrandtpark on the Eastern side of the neighborhood give some striking results. A lot of these roads are, especially in the pedestrian analysis, coloured dark red which means there is a high possibility of people using it. As the park is quite large and seemed to serve as a border from earlier analyses, it is important to further investigate these roads.

City scale



Overtoomse Veld

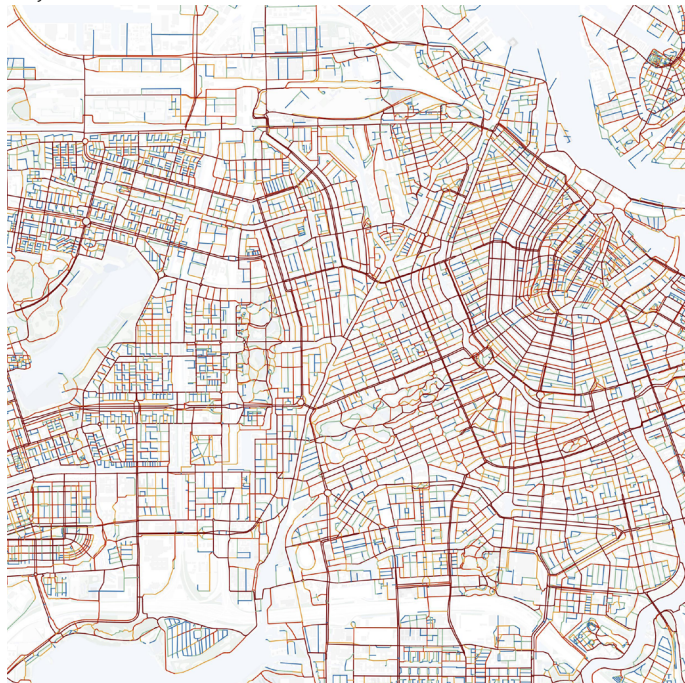


City centre

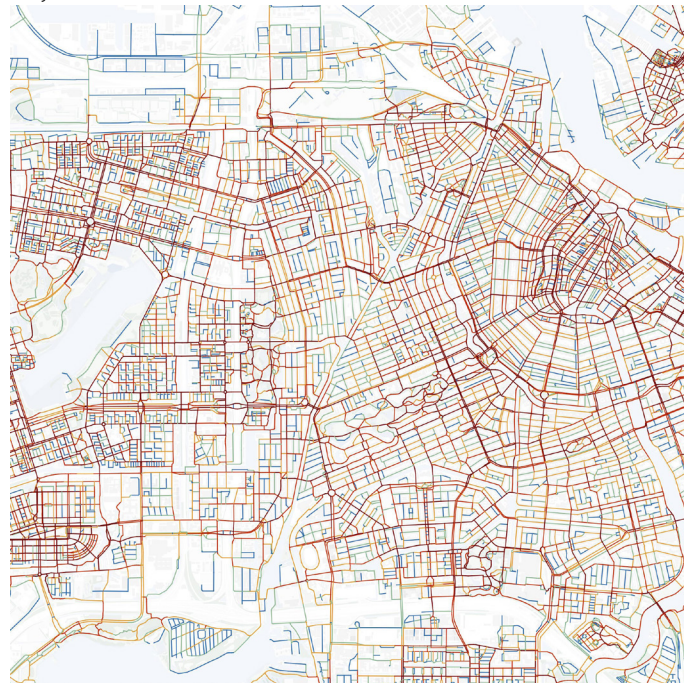


Fig. 62 5 km analysis (car)
(source: Berghauser Pont et al. (2019))

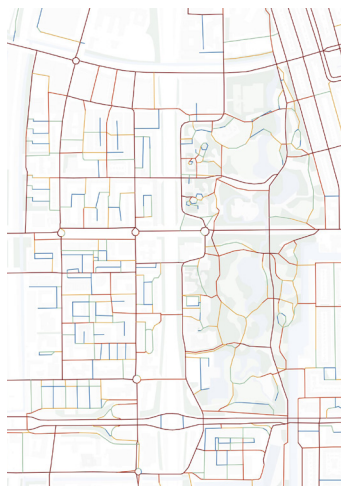
City scale



City scale



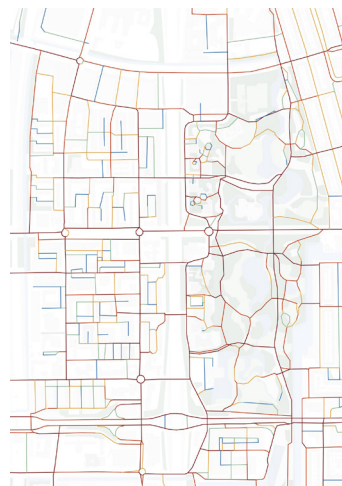
Overtoomse Veld



City centre



Overtoomse Veld



City centre

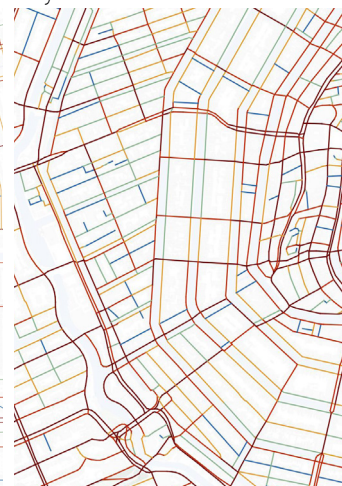


Fig. 63 3 km analysis (bike)
(source: Berghauser Pont et al. (2019))

Fig. 64 800m analysis (pedestrian)
(source: Berghauser Pont et al. (2019))

High probability of being used

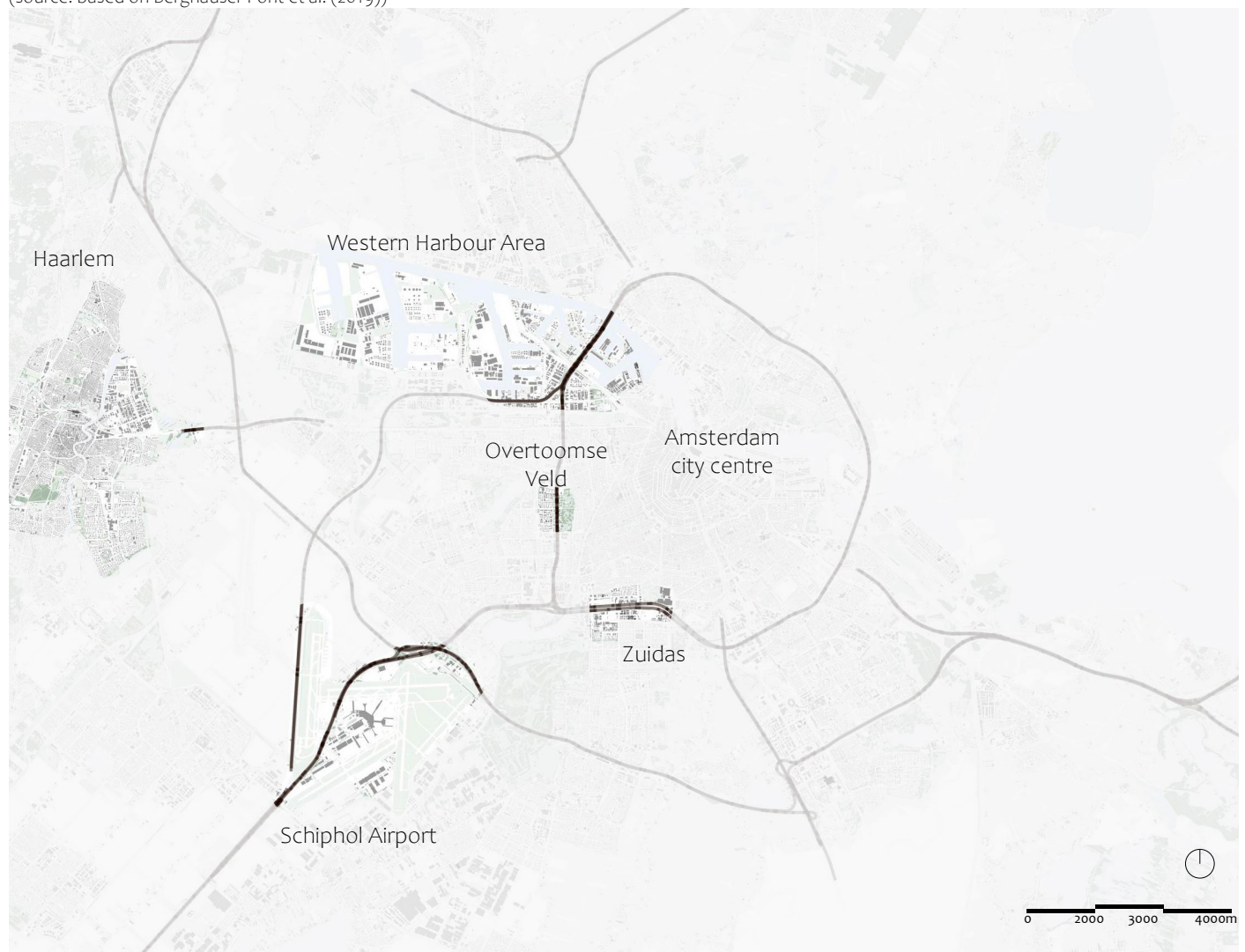
Low probability of being used

City scale car-use

When looking at the angular choice analysis map on the larger scale of the area around the city of Amsterdam, it clearly shows the accessibility of the highways towards the surrounding area. It is therefore no surprise these streets have a high probability of being used.

Besides the frequently used locations in the city as Schiphol, the Zuidas and the Western Harbour Area, also locations on the bigger scale are easily reached using this infrastructure network. As is clearly visible, Overtroomse Veld is separated by the A10, which crosses the middle of the neighborhood.

Fig. 65 Areas easy accessible by using the highway
(source: based on Berghauser Pont et al. (2019))



Relation roads & functions city centre

The angular choice analysis of non-motorised ways for the 3km analysis on the previous pages showed interesting results between different areas in the city. In Overtroomse Veld, a lot of green and blue lines are visible inside the neighborhood, while the city centre shows a higher percentage of darker red lines. This means the streets in the city centre have higher probability of being used, compared to the streets in Overtroomse Veld.

Comparing these results to the amenities and public spaces which are available in and around the centre, can explain the presence of (darker) red lines. This will be further investigated on the next pages.

Fig. 66 (Dark)red means a higher possibility a street is used
(source: Berghauser Pont et al. (2019))



Fig. 67 Available amenities in the city centre
(based on open GIS data)



5.2.2 Publicness on streets

As the angular choice research showed a clear distinction between the blue/green and orange/red lines inside the neighborhood of Overtoomse Veld, it is important to further investigate this in order to understand the reason these streets have a difference in probability of being used.

Availability of functions & public transport

In general, there is a diversity of functions present in the neighborhood. These functions are mainly situated on the three streets, which did pop up in the angular choice research as streets with a high probability for publicness. These are the Jan Tooropstraat, the Postjesweg and the Derkinderenstraat. Also many public transport stops of the neighborhood are located on these streets.

Many green spaces and courtyards are also visible on the map. This is one of the features which was important in the design of the *Western Garden Cities*. The large amount of public green was meant for creating plenty of opportunities for recreation and social interaction (Domhardt, 2012). According to Howard, the *Garden City* combined the best of both worlds, with amenities and services from the city and the tranquility and rhythm of the rural area (Dienst der Publieke Werken, 1935).

Despite the fact that the angular choice map shows the probability of a street being used, no solid conclusion can be drawn yet about the interaction or activity that actually takes place on these streets. The location and spatial lay-out of the functions and public spaces will therefore be further investigated on the following pages in order to make a solid conclusion about the relationship between these amenities and the possibilities of creating social cohesion in the neighborhood.

Fig. 68 Jan Tooropstraat, Postjesweg & Derkinderenstraat

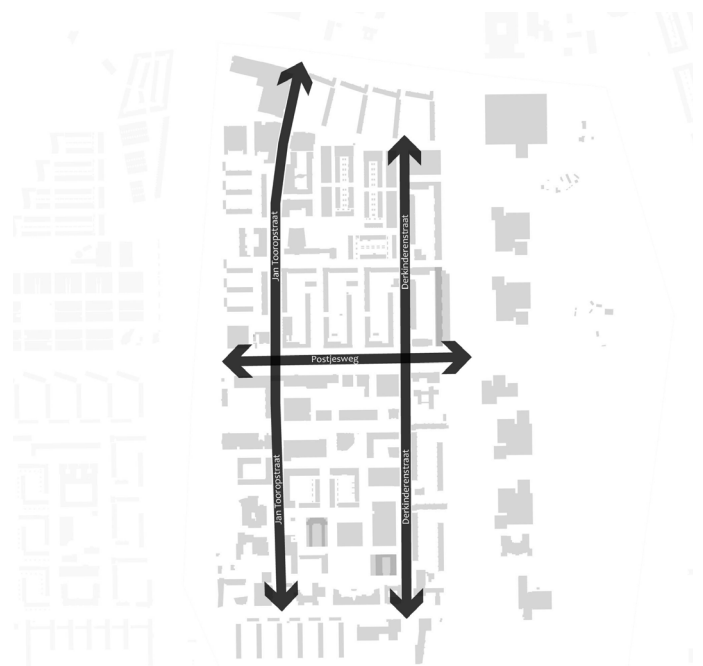
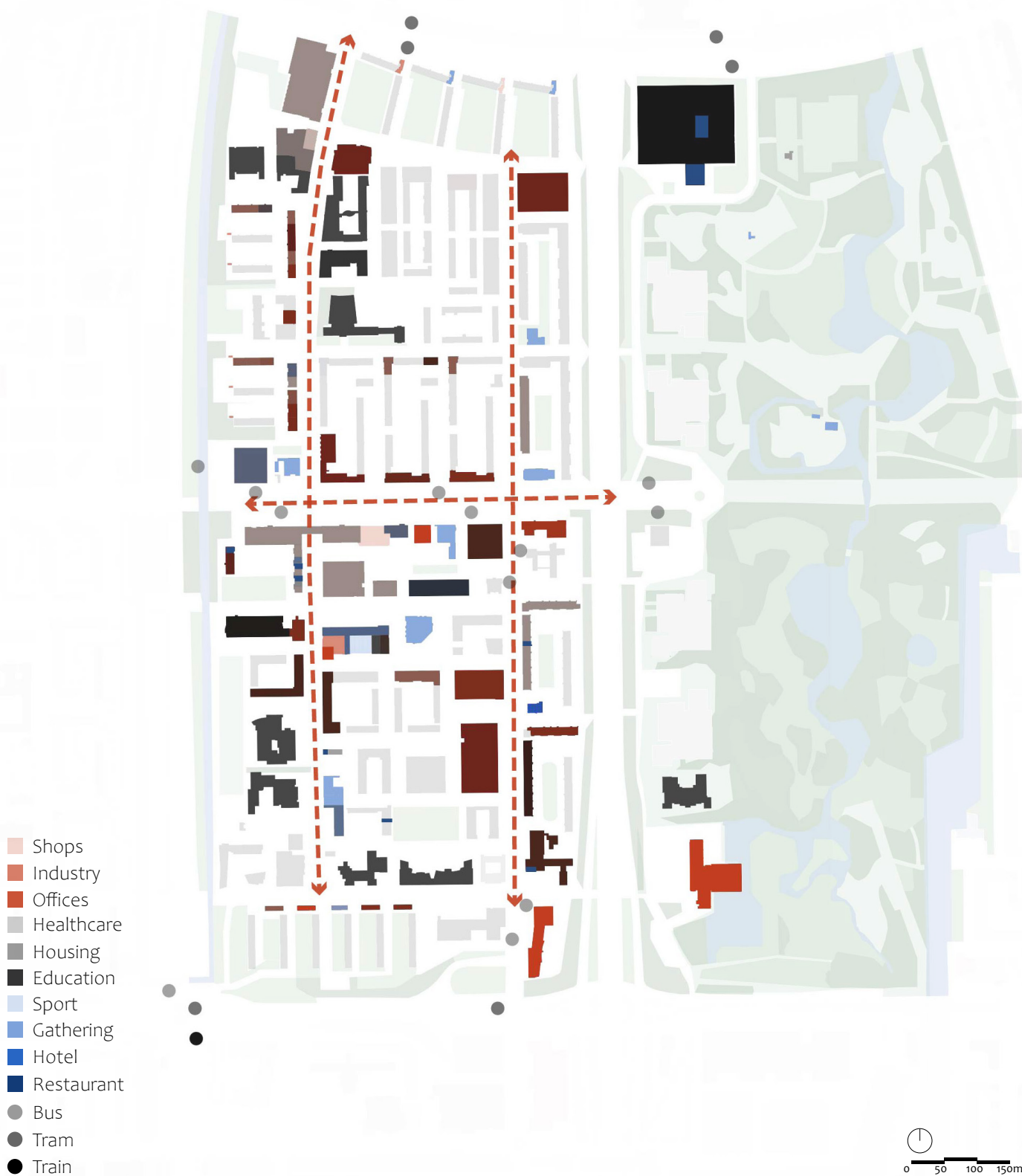


Fig. 69 3 streets, which have most functions in Overtoomse Veld, have the highest probability of being used



Usage of functions

Jane Jacobs (1961) stressed the importance of a “close-grained diversity of uses” [p.14] in a city. Functions should complement each other, be interrelated and be active during different parts of a day.

The maps on the right shows the different functions in the neighborhood categorized by time and days of use. It is clearly visible a large amount of the available functions can only be used during daytime and that there is a lack of available amenities and functions during the evening and night.

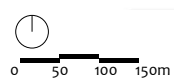
To avoid non-useful places, as described by Jacobs (1961), it is important the interrelated support between functions takes place. Diversity can therefore be seen as the main factor of urban vitality as it stimulates the interrelationship between urban components. This interrelated support is not taking place in Overtoomse Veld at the moment, which therefore possibly also influences the chances of social cohesion in the neighborhood.

“**Basic needs** are available in the neighborhood. But most of the time I go to the city **centre** to have **more choice**. Tram 13 and you are there in no time!”

- Interviewee fieldwork



Fig. 70 Functions available during the evening



- Residential
- Functions active morning & afternoon (9-18)
- Functions active afternoon & evening (14-23)

Fig. 71 Functions available during weekdays & weekends



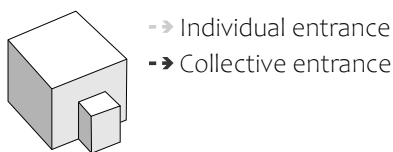
- Residential
- Functions active during weekdays
- Functions active during weekdays & weekends

5.2.3 The urban structure

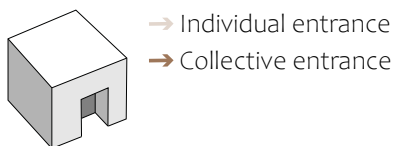
As a lot of green courtyards, playgrounds and other public spaces can be found in the neighborhood, it is investigated how public these places really feel and are, and if there are possibilities for enhancing the social cohesion between residents in these areas. This is done by investigating the facades, entrances and functions which are surrounding these places.

Figure 72 shows the different types of public spaces, the building entrances, and facades. No clear relationship can be established looking at these results. Some areas have active facades in the courtyard, but feel very private (2), others have non-active facades, but feel again very public (1). Therefore I zoomed in to two specific locations in the neighborhood and included the available functions in order to investigate the details of the current situation.

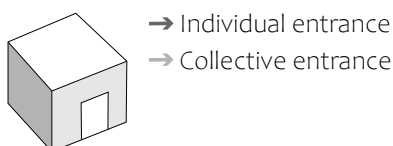
Entrance away from facade



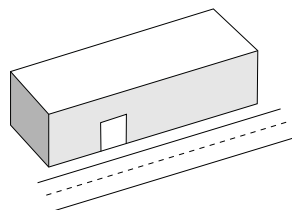
Entrance inside facade



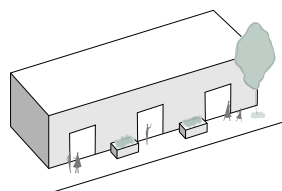
Entrance on facade



..... Inactive facades



- - - Active facades



— Blind or inaccessible facades

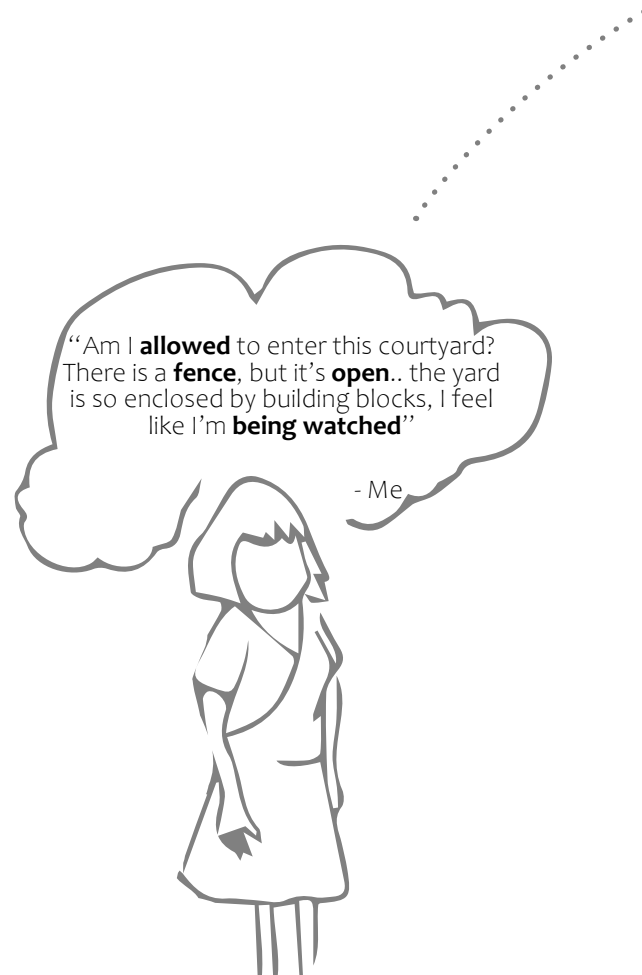
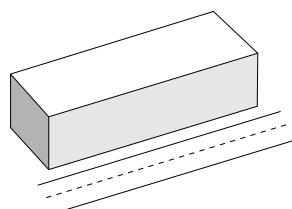
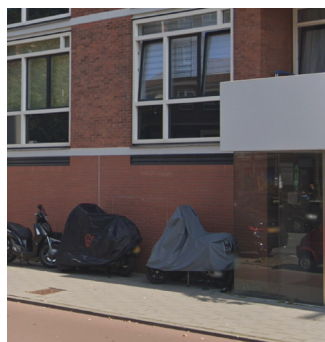




Fig. 72 Public spaces with different functions, facades & entrances





Zoom in Jan Tooropstraat

The Jan Tooropstraat is located in the Western part of the neighborhood. It is one of the streets which houses many functions in Overtoomse Veld, including shops and educational amenities. Both sides of the street offer plenty of possibilities inside the neighborhood. However, roads on the West are mainly dead-end streets, which therefore have a low probability of being used in the angular choice research.

The streets on the East give access for pedestrians and cyclists into public courtyards. However, these spaces are fenced off which gives the area an ambiguous public or private function. Despite the newly transformed buildings on the Eastern side of the street, the area still lacks opportunities for social interaction and the facades on the ground floor of the new buildings are blind, except for the glass entrances.

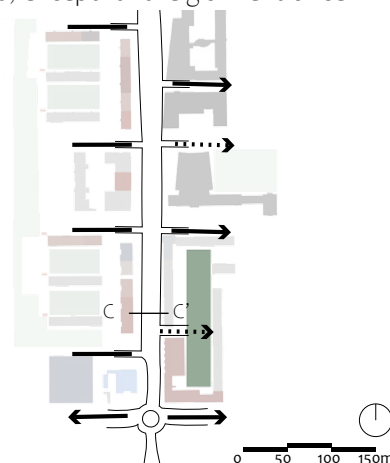
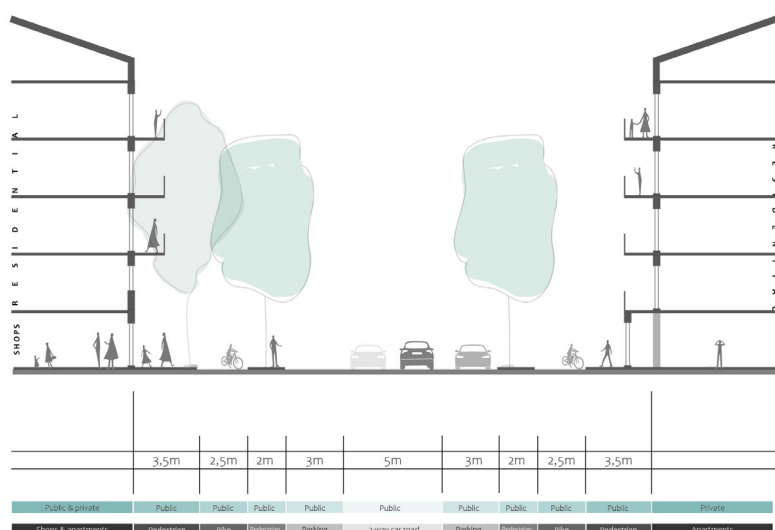


Fig. 74 Fences to access public space

Fig. 76 Jan Tooropstraat, many dead-end streets on the West

Fig. 75 Section C-C'



* The gradient shows the difference between parts of the street



Fig. 77 Monotonous facades on the Postjesweg



Fig. 78 Very car oriented

Fig. 79 Section D-D'



Zoom in Postjesweg

The Postjesweg separates the Northern and Southern side of the neighborhood. It is a wide street with a variety of shops, businesses, public transport and other facilities and is one of the most used streets in the area. The street is very car-oriented and gives room to 4 car roads and a large parking lot in front of the supermarket. As the Postjesweg houses most functions and public transport of the neighborhood, it has a high potential for creating interaction between users on the street. Especially because this is the only area in the neighborhood which has active functions during the weekends and because the street plays a vital role in connecting Overtoomse Veld with surrounding neighborhoods. However, due to the car oriented lay-out, inactive facades and a scarcity of entrances, greenery and benches, the interaction on the street remains to a minimum.

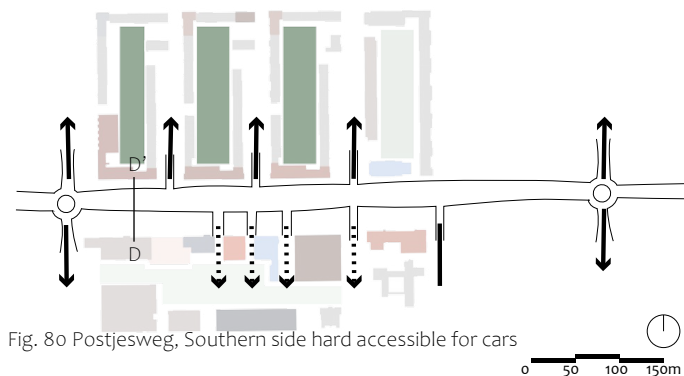


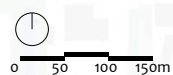
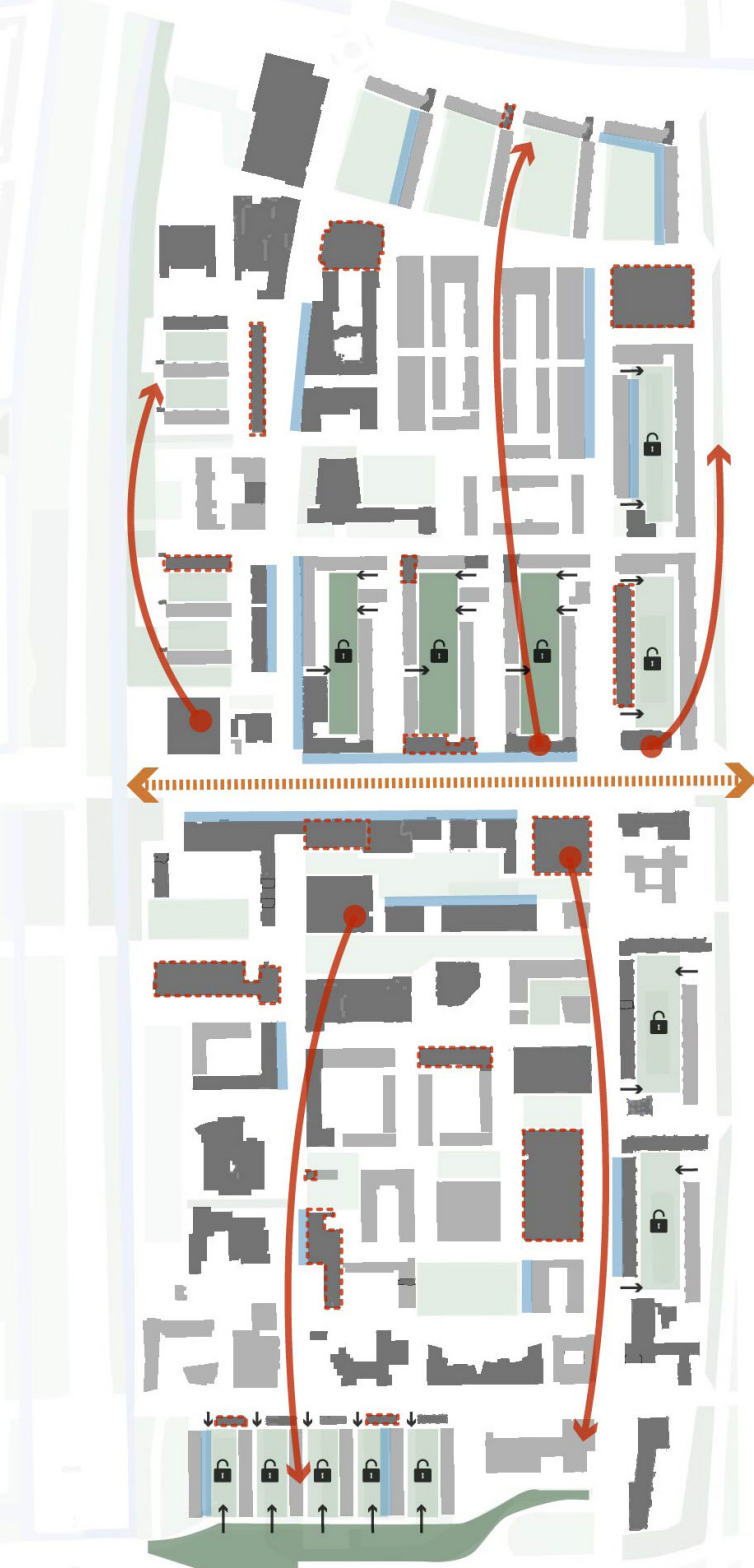
Fig. 80 Postjesweg, Southern side hard accessible for cars

5.2.4 Challenges and potentials

Interesting to see in the results of the angular choice analysis is the clear difference between streets with a high probability of being used and streets with a lower probability of being used. Three roads could again be distinguished by their darker red colour, just as in the angular integration analysis. However, a high probability of these streets being used leads apparently not directly to social cohesion in the area, as is investigated in the problem field (fig. 16). Despite the availability of functions, public transport and public spaces there is still a need for improvement in these areas. Jane Jacobs (1961) stressed the importance of a “close-grained diversity of uses” [p.14] in a city. Functions should complement each other, be interrelated and be active during different parts of a day. Therefore, more functions need to be added in the neighborhood, especially towards the borders of Overtoomse Veld, and these functions should also be active during the evening and in weekends.

The ambiguous spaces in the neighborhood need to be enhanced by making clear whether these spaces are public or private. In the current situation, there are no clear boundaries to the public or private spaces which makes no one feel responsible for a territory, this results in the anonymity of a space. This anonymity relates to social problems and a lack of social cohesion (Blockland-Potters in Van Dorst, 2012). Therefore, Van Dorst (2012) states, recognizable territories give a clear compartmentalization to space and make the built environment legible. Creating territories which consist of different zones of privacy can then support social cohesion.

Fig. 81 Challenges & potentials concerning the centralities



- Create seating possibilities & active facades
- ↔ More focus on pedestrians & cyclists, less on cars
- Clear accessibility & entrances towards public spaces
- Divide functions throughout neighborhood (attention to edges)
- ▤ Functions should be interrelated & active during different times & days

As explained in the problem field, the municipality of Amsterdam has the ambition to densify. However, analysis showed the injustice accompanying the proposal of rolling out the city centre and placing high-rise on the infrastructure bundle.

It is therefore important to investigate what the current density is of the city of Amsterdam and the neighborhood Overtoomse Veld. Besides looking at the FSI and GSI, the parcelation, ownership, and the centralities in the neighborhood, are taken into consideration in order to find potential areas for densification. The neighborhood will also be compared to other areas in the city where densification is happening at the moment. Not only to see in what way densification is applied in these areas, but also to see if this type of densification is also possible in Overtoomse Veld.

5.3.1 City scale

In order to find possible locations in the city to densify, it is important to investigate the physical density in the city. The FSI and GSI are two values which are extremely useful for describing this feature.

Meyer et al. (2008) explain the Floor Space Index (FSI) represent the built intensity of an area. It is the ratio between the built-up area, considering all floors, and the block area (fig. 82).

The Ground Floor Index (GSI) represents the coverage, or the relationship between built and unbuilt space at ground level, and therefore shows the compactness of an area. It is the ratio between the footprint of a building and the block area (fig. 83). The GSI ranges from 0 to 1 (Meyer et al., 2008)

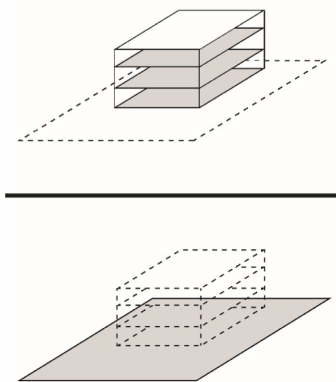


Fig. 82 Numerator and denominator for calculating the FSI (source: Planbureau voor de Leefomgeving (2019: 8))

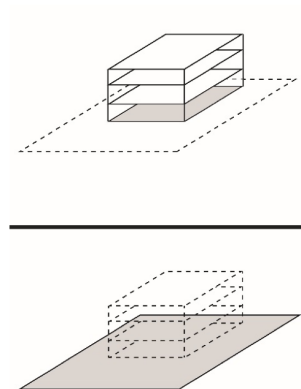


Fig. 83 Numerator and denominator for calculating the GSI (source: Planbureau voor de Leefomgeving (2019: 9))

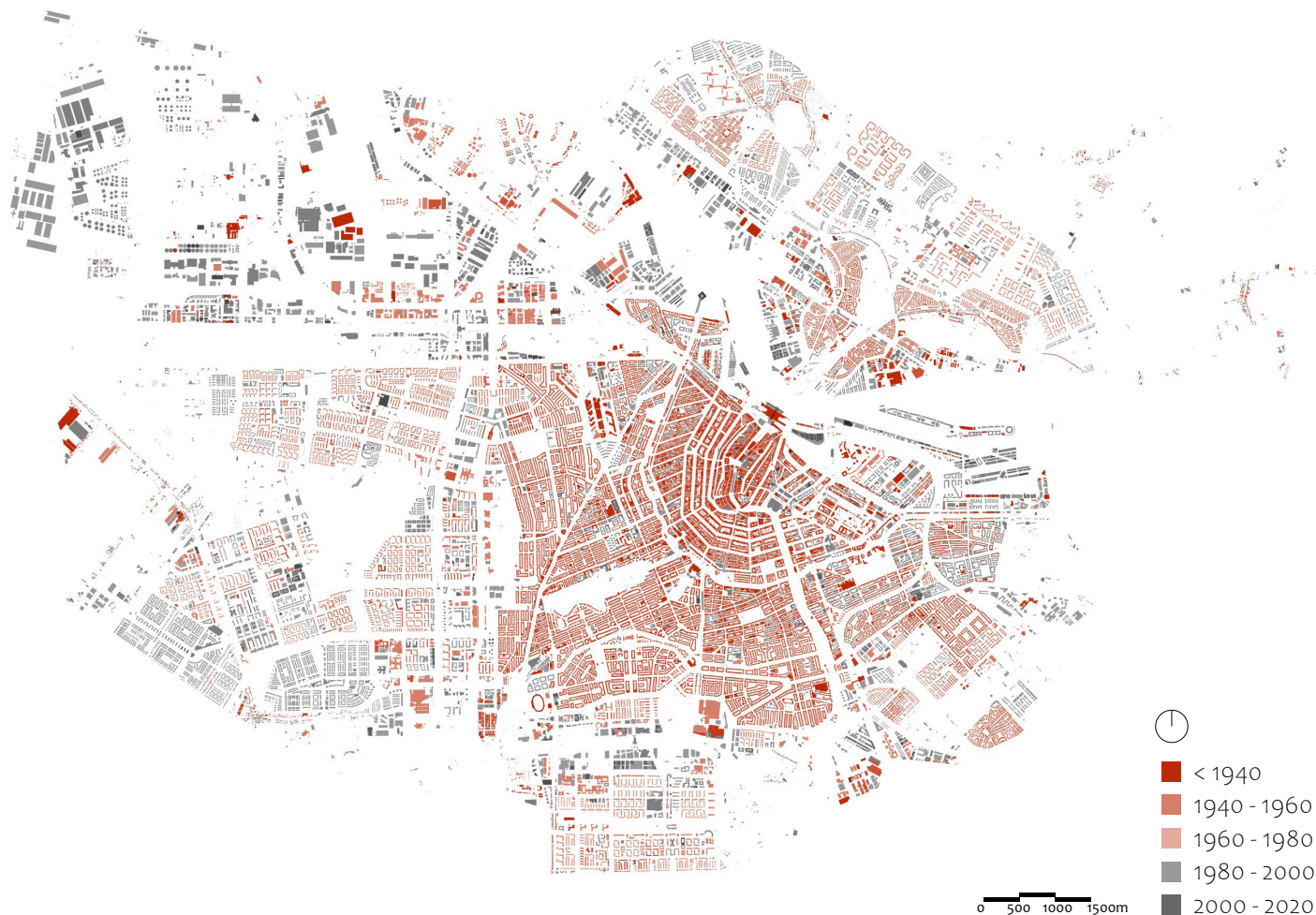
Fig. 84 FSI values Amsterdam
(based on open source GIS data)



Fig. 85 GSI values Amsterdam
(based on open source GIS data)



Fig. 86 Relation built year, intensity and compactness
(based on open source GIS data)



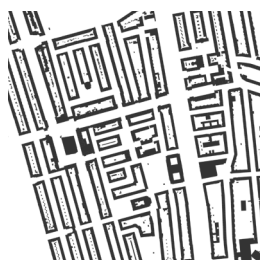
< 1940



FSI: 3,5 - 5
GSI: 0,8 - 1

High density
Protected area

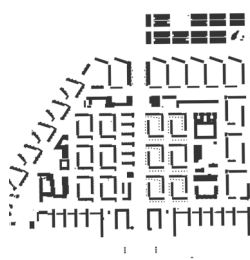
1940 - 1960



FSI: 1,5 - 2,5
GSI: 0,4 - 0,6

Closed blocks
Shared courtyard

1960 - 1980



FSI: 0,5 - 1
GSI: 0,4 - 0,6

Apartment buildings
Rich in open space

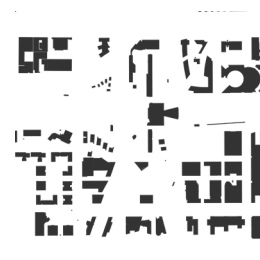
1980 - 2000



FSI: 1 - 1,5
GSI: 0,4 - 0,6

Average of 5 floors
Private gardens

2000 - 2020



FSI: 0 - 0,5
GSI: 0 - 0,2

Low density
Plenty of open space

In order to gain a deeper understanding of the FSI and GSI data from the last page, and to investigate the potential places for densification or new activities, the information is linked to different morphologies in the city. These variables are studied by investigating the intensity and compactness of buildings which are built in different times. Especially interesting here is the difference between pre-war housing, post-war housing and housing of the last decades.

Housing built before 1940 is mainly located in the historic city centre and it is part of the UNESCO world heritage. The area is characterized by its high density. However, due to its monumental status it is important to maintain the existing urban fabric.

The buildings which are built between 1940 and 1960 are characterized by their closed building blocks with shared courtyards. These houses are built after the second world war and have a lower intensity and compactness compared to the building from before 1940. Part of these building can potentially be used to foresee in the growing housing need. However, possibilities are still limited as they are part of the typical Dutch city image.

A lot of buildings in the city of Amsterdam are built between 1960-1980. These are mostly apartment buildings which are rich in open space. The open space can have an ambiguous public or private function as the area is not closed off by surrounding building blocks. A large amount of these houses can be found towards the outer skirts of the city and the overall intensity and compactness drops. This creates possibilities for densification in the city.

Housing built between 1980 and 2000 is characterized by their closed blocks and inner private gardens. These houses are, just like the housing built between 1960 to 1980, located more towards the edges of the city which creates therefore again potentials for densifying. However, the intensity of these buildings is in general higher than the buildings built between 1960 to 1980.

Finally, the buildings from 2000 to 2020 are characterized by their low density and open space. A large part of these buildings are currently located in the Western Harbour Area. These buildings are therefore mainly used for industrial use. As parts of these areas are being transformed over the last years, there might be possibilities to accommodate changing needs.

5.3.2 Neighborhood scale

Zooming in to Overtoomse Veld gives interesting results. In order to find potential areas to densify, three different aspects are included. In this way a solid conclusion can be drawn about the possibilities for densification and transformation in the neighborhood.

Where is space to densify?

The FSI and GSI show the intensity and compactness of an area, as explained before. When zooming in to Overtoomse Veld, some interesting results pop up. A huge variety is present in both the intensity and compactness of the buildings in the neighborhood.

Interesting to see is that some buildings on the edges of the neighborhood of Overtoomse Veld have a high FSI, which means a high intensity of buildings, and a low GSI. Buildings with a low GSI create possibilities for infill transformation.

Looking more inside the neighborhood we can see a lot of buildings with a lower FSI. These buildings can be transformed in order to increase the intensity. This would result in higher buildings inside the neighborhood. As the analysis of the connectivity and segregation showed clear borders in the neighborhood, partly due to the high-rise at the edges, a good transformation in the neighborhood might be to increase the high-rise inside the neighborhood and decrease it towards the edges in order to diminish the feeling of borders. The dotted areas show possibilities for densification and transformation.

* A side note needs to be made for the results of the FSI as some buildings are marked with different values even though these buildings have the same plan area, footprint and floors as surrounding buildings. Therefore some results need to be adjusted.

Fig. 87 Densification possibilities concerning FSI (source: based on open source GIS data)

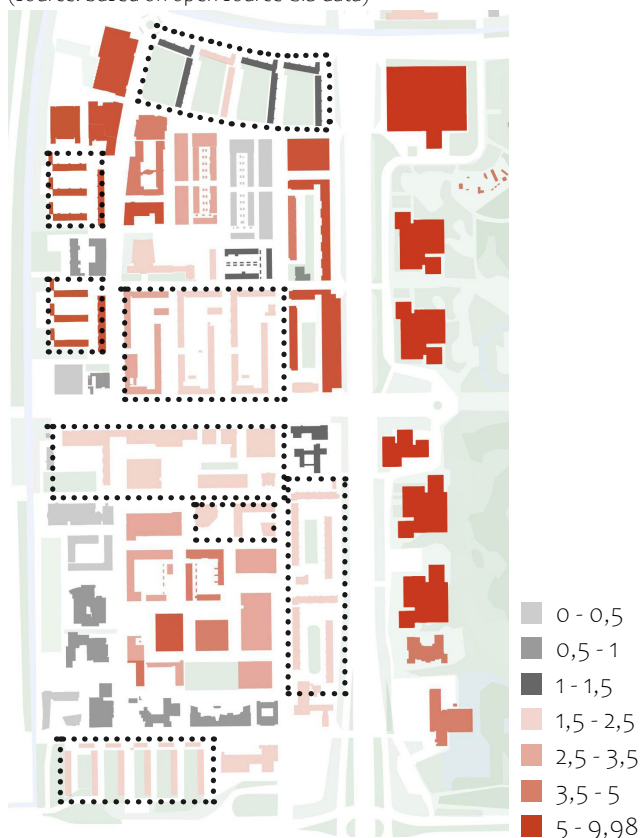


Fig. 88 Densification possibilities concerning GSI (source: based on open source GIS data)

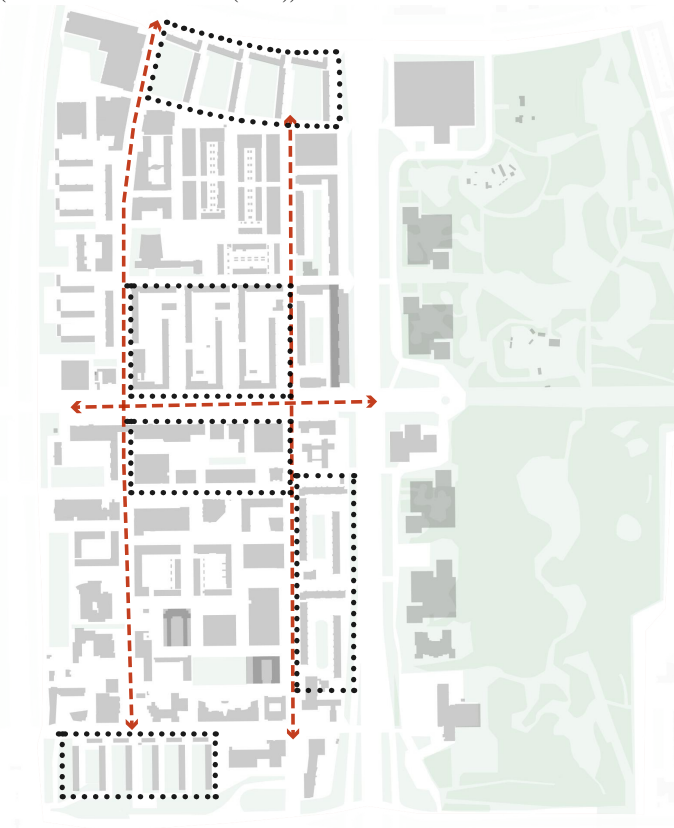


Where does it make sense to densify?

It is reasonable to densify in areas with a higher centrality. Higher centralities of areas in the neighborhood relate to the probability of streets being chosen due to, among other things, availability of amenities, possibilities to public transport and accessibility of the space. High probability of a street being chosen will therefore likely result in publicness in the public realm and can create chances for increasing the activity and interaction between residents. The results of the previous analysis showed three main streets which have a high probability of being chosen.

Combining these streets to the results of the FSI and GSI results in a map which shows possible densification locations mainly located in between the three main streets in the neighborhood which have a high probability of being used. By densifying these areas, it would not only help to foresee in the housing need, but it can also create a higher probability of using the streets in between the main streets.

Fig. 89 Densification possibilities concerning centralities (source: based on Parallel (2020))



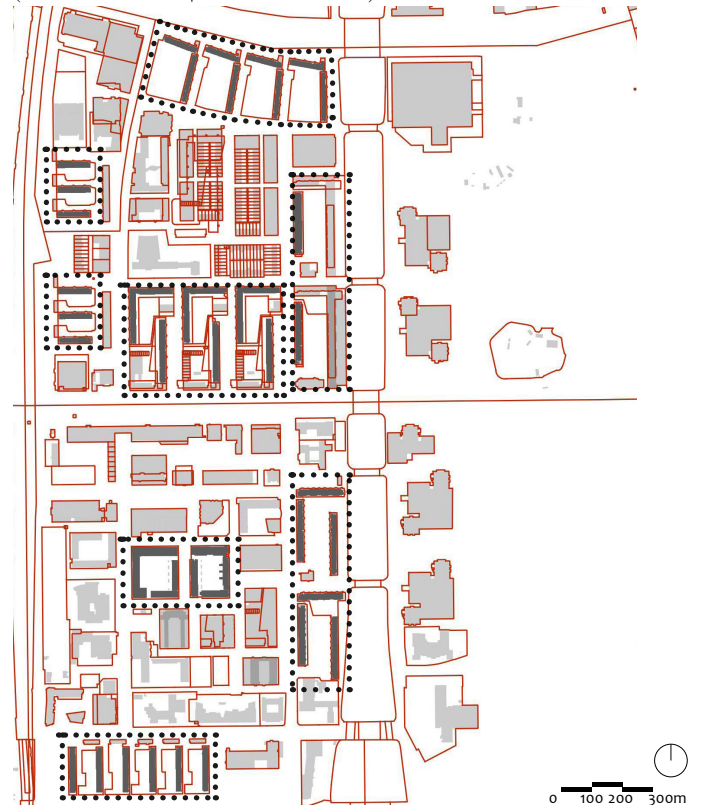
What different types of buildings have the potential to be densified?

A lot of the post-war building blocks are characterized by open spaces in the courtyard. As resulted from the previous analysis, these open spaces can have an ambiguous public or private function as they are not closed off by surrounding buildings. These areas can therefore have the potential to be densified.

Looking at the parcellation of buildings in the neighborhood also gives striking results. When more buildings are located on one parcel, there is a higher chance of having social housing in these buildings. These buildings are mostly owned by one owner, which gives the building blocks a higher chance of being easier to regenerate. Individual parcels have a higher chance of being owned by private owners, which makes it more difficult for multiple building blocks to be transformed.

The map below shows the parcellation of buildings in Overtoomse Veld and highlighted the areas which have a favorable position of being transformed. Almost all of the highlighted buildings are social housing in the current situation, as is investigated in the problem field (fig. 22).

Fig. 90 Densification possibilities concerning parcellation (source: based on open source GIS data)



5.3.3 Exploring other areas

In order to investigate the possibilities of densifying in Overtoomse Veld, it is interesting to see how densification happened in other parts of the city. Two areas are therefore investigated in order to gain information on how densification is applied in these areas, and if the applied strategies can be suitable for Overtoomse Veld. Amstel III and Sloterdijk Zuid have both similarities and differences compared to Overtoomse Veld. By analyzing current development processes, challenges, conflicts and possibilities will come to light which will offer chances for creating socially successful densification processes in Overtoomse Veld.

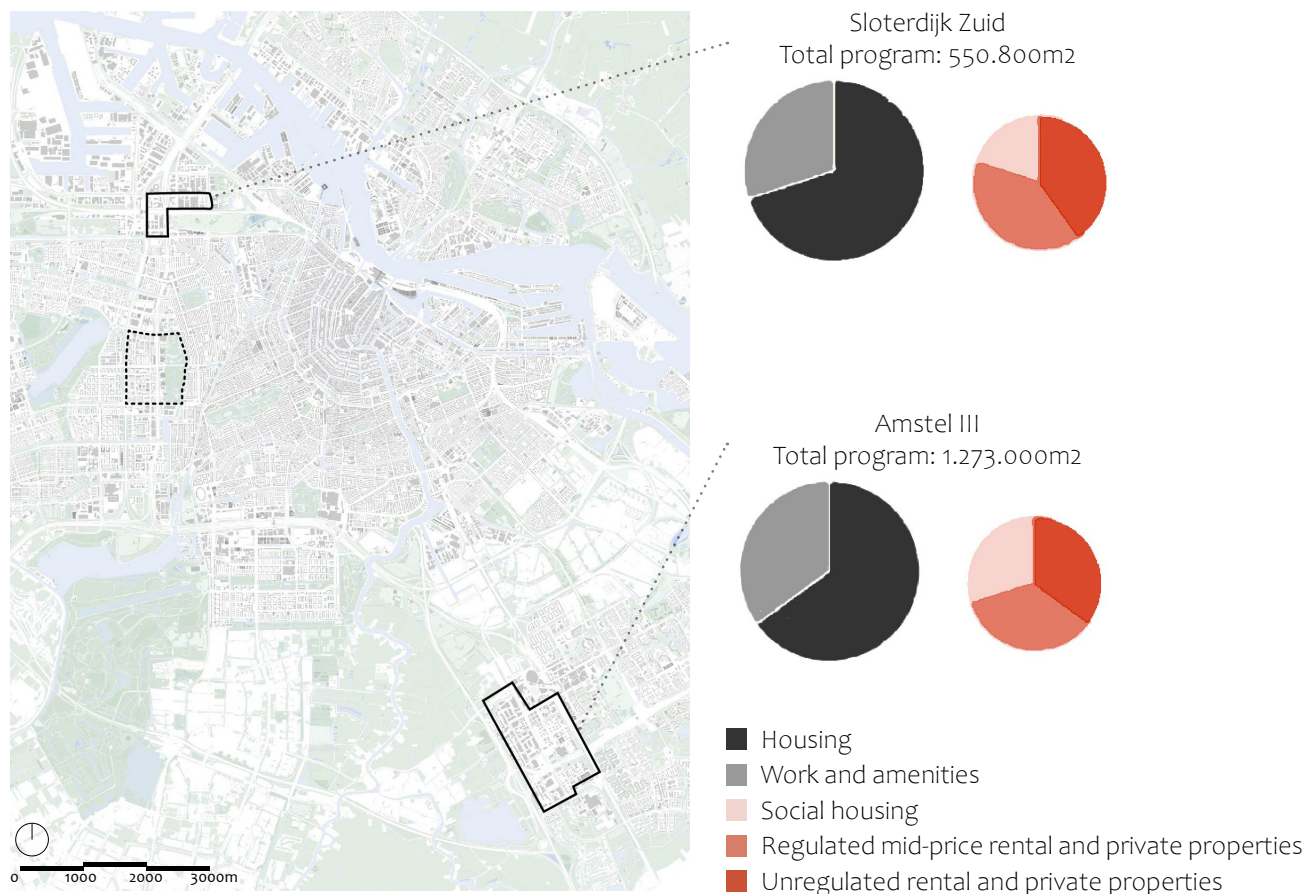


Fig. 91 General information about the two investigated areas

Amstel III

Amstel III is located at the South-East side of the city and the program will cover approximately 1.273.000m² of land. The area has, at first sight, not much in common to Overtoomse Veld. However, the surface of the area is similar, there is a separation of functions, monotonous building blocks, and it's located close to the centre. The separation of functions and monotonous building blocks looked, in the beginning, as negative characteristics of the area. However, the accessibility to the centre created a dynamic development location in the city (Gemeente Amsterdam, 2019b).

In the transformation of Amstel III, homes are being built in large numbers and high densities, lively public spaces are created and metropolitan amenities are added. Essential for this transformation was:

- a maximum FSI of 3
- a hierarchical framework of public spaces
- a link between the shape of the built environment to a framework with design rules (Gemeente Amsterdam, 2019b).

This strategy could possibly also be applied in Overtoomse Veld. A large part of the available buildings in the current neighborhood have a maximum FSI of 3. Also the large offer of public spaces can create opportunities for the hierarchical framework of public spaces.

The main difference between Amstel III and Overtoomse Veld is the offer of residential housing. Amstel III offers a lot of working possibilities and amenities, whereas Overtoomse Veld has a higher percentage of (social) housing, related to the current inhabitants. However, the application of mixed-use in Amstel III can be used as an example for Overtoomse Veld. This is an important factor which needs to be taken into consideration when using (parts of) the strategy of Amstel III in Overtoomse Veld.

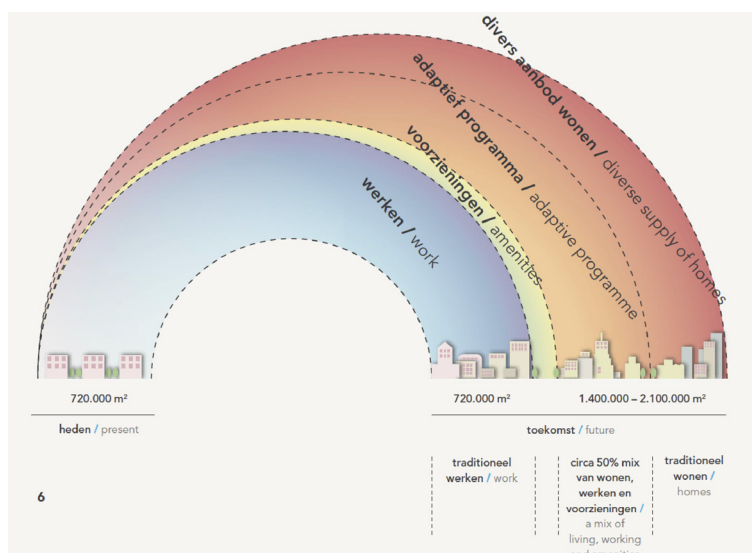


Fig. 92 Future program in Amstel III (source: Gemeente Amsterdam (2019b))

Sloterdijk Zuid

Sloterdijk Zuid will be transformed in the coming years to create a mixed area for living and working. The current area is characterized by a low density and many open spaces, partly due to the industrial functions located there.

The program of the area will be divided into 78,9% residential use, 16,4% businesses, 3,5% community amenities and 1,3% commercial amenities. The ambition is to create a maximum mixed-use area in order to foresee in the influx of new people to the city. A maximum mix at ground floor level is chosen (Gemeente Amsterdam, 2019b).

The project team of Sloterdijk Zuid is tackling its challenges by having conversations with users, developing parties and future managers to start a discussion about influencing the mobility behaviour of future users. This strategy can be interesting for developments in Overtroomse Veld as interviews and a questionnaire have already been conducted in this analysis phase in order to include different stakeholder in the process of development.

The priority in Sloterdijk Zuid is given to pedestrians and cyclists. The outdoor space has a 'non-dominant' traffic character and the main function on streets is meant for staying and interacting, vehicles are guests (Gemeente Amsterdam, 2019b). This is an interesting strategy which can be applicable to Overtroomse Veld as the neighborhood is framed by four infrastructural borders in the current situation. The public space at the East and South side in Sloterdijk Zuid are used as park-like runoff areas of the Westerpark. Attention is also given to the quality of collective and private spaces in buildings. The aim of these spaces is to design places where residents can withdraw from the intensity of urban life and create places where relaxation dominates. This strategy might also be suitable for Overtroomse Veld, as the Rembrandtpark mainly functions as an unsafe border, rather than a relaxed public space.

Building blocks in Sloterdijk Zuid are intersected by streets, open spaces and setbacks of high-rise buildings (fig. 93). The blocks are intersected by at least one connection between the two side streets. Tiered tall buildings of roughly 30, 40 and 60 meters high will rise in relatively small numbers above the dense layout of blocks up to 20 meters high at ground level (fig. 94). This type of densification might be a suitable approach for Overtroomse Veld, as the current high-dense buildings are creating a feeling of being isolated in the neighborhood.

The main difference between Overtroomse Veld and Sloterdijk Zuid, which should be taken into consideration, is that Sloterdijk Zuid will mainly be transformed as a Transit Oriented Development (TOD). The idea of TOD's focusses on the development of mixed-use areas which are located around transit stations in order to improve the accessibility of public transport and the creation of a more pleasant environment for walking and cycling. Even though some of these characteristics also apply to Overtroomse Veld, the neighborhood houses many residential buildings, which should also be catered in the strategy for densification and transformation.

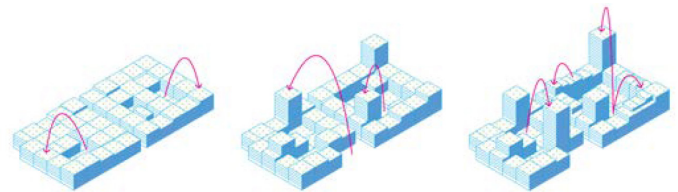


Fig. 93 Blocks intersected by streets, open spaces & setbacks of highrise buildings (source: Gemeente Amsterdam (2019b))

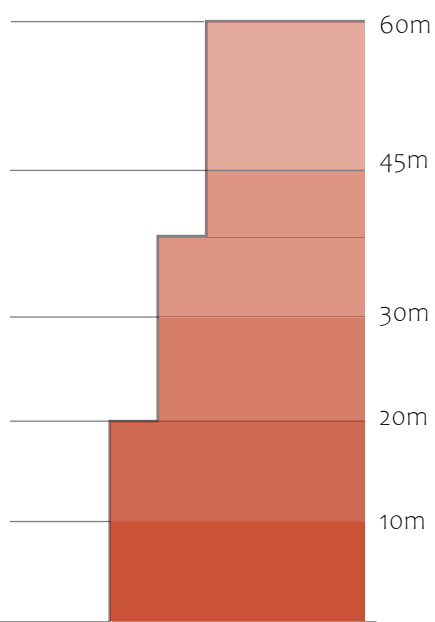


Fig. 94 Tiered buildings rise above layout of blocks
(source: Gemeente Amsterdam (2019b))

5.3.4 Challenges and potentials

As the city has the ambition to densify, it is important to find potential areas which can foresee in this densification in a socially just way. The analysis of the previous pages therefore combined three different aspects in order to come to the most solid conclusion of possible densification and transformation locations in Overtroomse Veld. By combining analyses of:

- Where is space to densify?
- Where does it make sense to densify?
- What different types of buildings have the potential to be densified?

Several locations have popped up which can be potential areas for densifying and transforming the neighborhood. The challenges and potentials map on the right shows these areas.

Fig. 95 Challenges & potentials concerning the ambition of the city to densify

Apply densification & transformation strategies of Sloterdijk Zuid



Possible areas for densification and transformation

Streets with high probability of being used + easy to reach

Improve areas in between central streets

The analysis of the previous pages is not only based on desk research and experiences from fieldwork, but also on results of an online questionnaire and interviews with residents conducted during a site visit. In this way the most insightful set of analysis can be conducted as the social aspect can be catered in the analysis. Therefore, this creates realistic opportunities for enhancing social cohesion in the neighborhood.

Rated liveability

In order to get the most insightful set of analysis, interviewees are selected with a range of age and different genders. There is also strived for a spread in locations while interviewing people during the site visit, which was dependent on the respondents' home who already filled in the online questionnaire. The ages, genders and locations can be found in figure 97.

The questionnaire gives especially striking results about the four main questions regarding the liveability in Overtoomse Veld (fig. 96). These questions are all rated negatively. These results need to be taken into consideration when designing the vision and strategy for the neighborhood.

Fig. 96 Negative answers regarding liveability

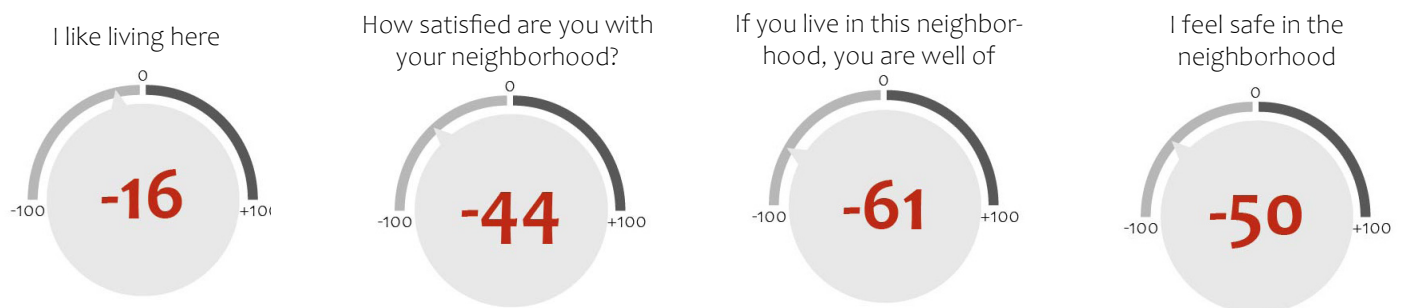
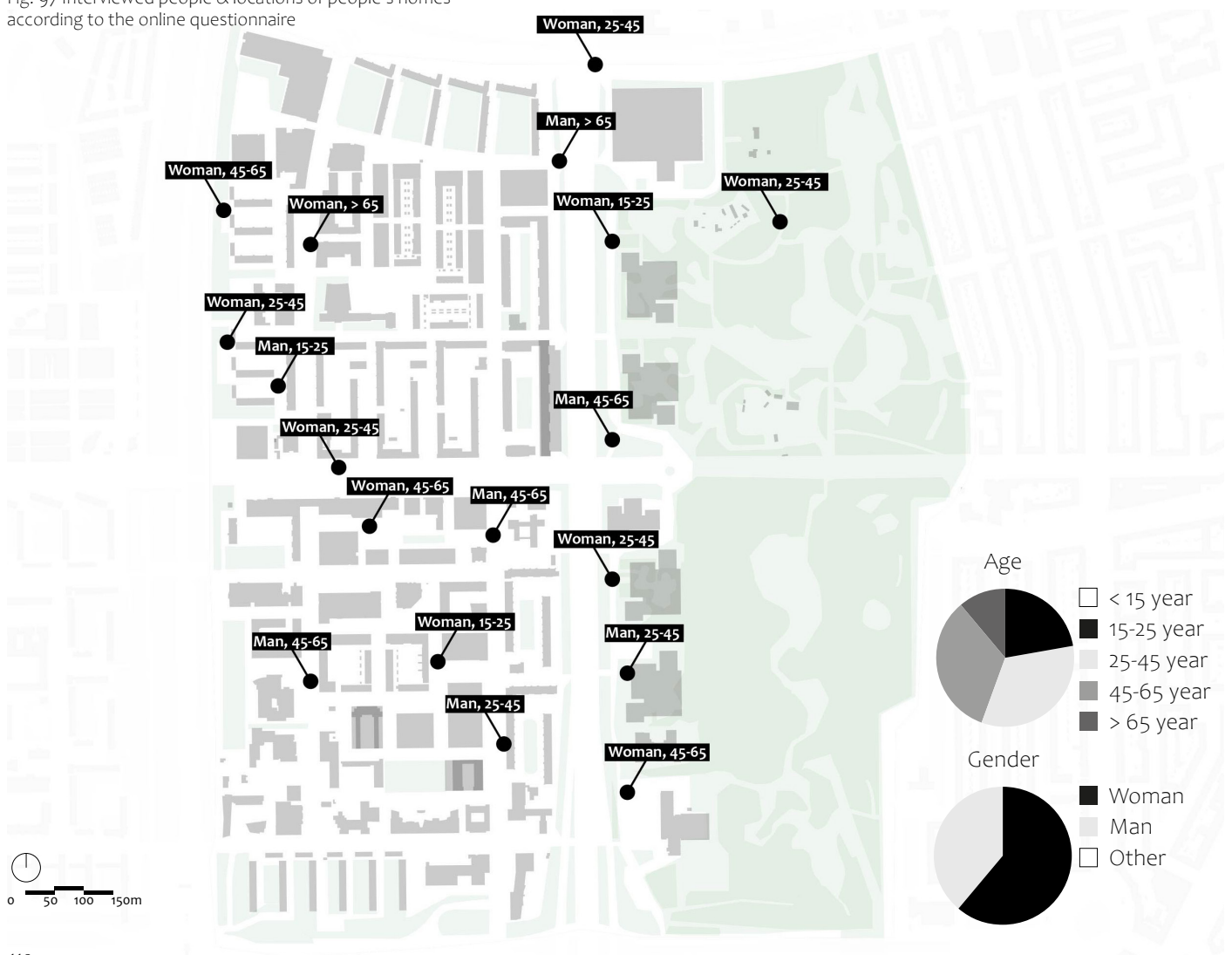


Fig. 97 Interviewed people & locations of people's homes according to the online questionnaire



Unsafety in relation to public & private spaces

Figure 98 shows the combination of respondents' answers regarding the feelings of unsafety in the neighborhood and the previous analysis of public and private spaces available in Overtoomse Veld. As the feeling of private spaces increases towards the edges of the neighborhood, mainly on the East and South side, also the feelings of unsafety increase. Feelings of unsafety are lower towards the centre of the neighborhood.

Even though people do not tend to feel unsafe in the centre of the neighborhood, there are not many people on the street during the fieldwork. An important factor in this might be the amenities and public transport stops which are, as explained in the previous analysis, mainly located on 3 streets in the neighborhood.

Fig. 98 Combination feelings of unsafety & public/private spaces



The results of the segregation and connectiveness analysis showed Overtoomse Veld is difficult to reach compared to the surrounding area. Which was striking, as the neighborhood is located quite close to the inner city centre of Amsterdam. A combination of the investigated factors can strengthen the feeling of a secluded, isolated place which influences the accessibility and can therefore again affect social life in the neighborhood.

However, the centralities analysis later showed that, even though the neighborhood is hard to reach from the surrounding area, once you have entered the neighborhood, different streets have a high probability of being used and a diversity of shops and amenities can actually be found inside Overtoomse Veld. As a high probability of a street being used, does not necessarily relate to social cohesion in an area is visible when looking at the rated social cohesion in Overtoomse Veld. The current situation can therefore actually increase the feeling of a secluded place where people outside the neighborhood are not entering the area, and residents of Overtoomse Veld are just living inside the neighborhood, but are not interacting with each other.

On top of this, there is an expected growth of 66% percent in the coming thirty years (Gemeente Amsterdam, 2020a). There are possibilities for densification, but a suitable strategy needs to be created.

The created vision for Overtoomse Veld focuses on the year 2050 as this is also the year which the municipality created a vision for. However, transformation towards a socially cohesive mixed-use neighborhood can start today, which will be explained in the coming chapters.

Scenario testing will be used as a method to explore transformation and densification possibilities in the neighborhood and the relation to achieving social cohesion. The project then aims to create a framework which can aid in the redevelopment of Overtoomse Veld on the short-term, and therefore foresees in guidelines of how a socially cohesive mixed-use neighborhood can be achieved.

6.1 vision & design goal

In 2050, Overtoomse Veld will be transformed from a **secluded, isolated** and **monofunctional** post-war neighborhood into a (safe) **socially cohesive mixed-use** neighborhood where there is place for a **diversity of people, functions, housing** and **public spaces**.

The neighborhood needs to be **densified**, but also well **connected** to the rest of Amsterdam. It is important to provide the residents with enough **space** and **opportunities** to stay, relax, recreate and interact close to home, or have easy accessibility to do this in other areas in the city.

Generally, **densification** is mainly used by the **city** as an opportunity to solve problems related to **housing shortage**, which will continue the coming **thirty years**. However, by creating a **spatial framework** that not only accommodates densification, but also creates a better **spatial structure** in Overtoomse Veld, problems related to segregation and socio-spatial justice can be solved to aid in the facilitation of a better social mix, and therefore **social cohesion** in the neighborhood on the **short-term**.



Fig. 99 Atmosphere impression of the vision

6.2 scenario structure

Scenario testing is used in the project to investigate alternatives of the urban fabric, how differently people use the neighborhood, and the application of different types of densities, in order to investigate the relation with achieving social cohesion. The focus in these scenarios is therefore on two main topics:

- Where can densification take place?
- How can social cohesion be achieved?

The first topic will be investigated by looking more into detail at the relation to the larger surrounding city network, the possibilities for adjusting buildings, locations where space for housing can be maximized, and what type of change can take place where.

The topic of achieving social cohesion will be analyzed by investigating the relation between social cohesion, social control and privacy zoning. The theory of Van Dorst (2005), explained in the theoretical underpinning, is used for this.

After the different investigations the necessity and suitability of altering the urban configuration, in order to achieve social cohesion, will be evaluated. The project then aims to create a framework of transformation which can aid in the redevelopment of Overtoomse Veld on the short-term and therefore foresees in guidelines of how a socially cohesive mixed-use neighborhood can be achieved. This framework consists of key interventions and (possible) strategic places.

On top of this it is, within the limited time frame of the project, not possible to also in-depth investigate other post-war neighborhood in Amsterdam. Therefore, the framework can be deployed as a work of reference which can be utilized in other post-war neighborhoods in Amsterdam with similar challenges and potentials as Overtoomse Veld. This approach ensures some degree of transferability. The application and investigation of the different zones plays a vital role in this approach, which will be further explained on the next pages.

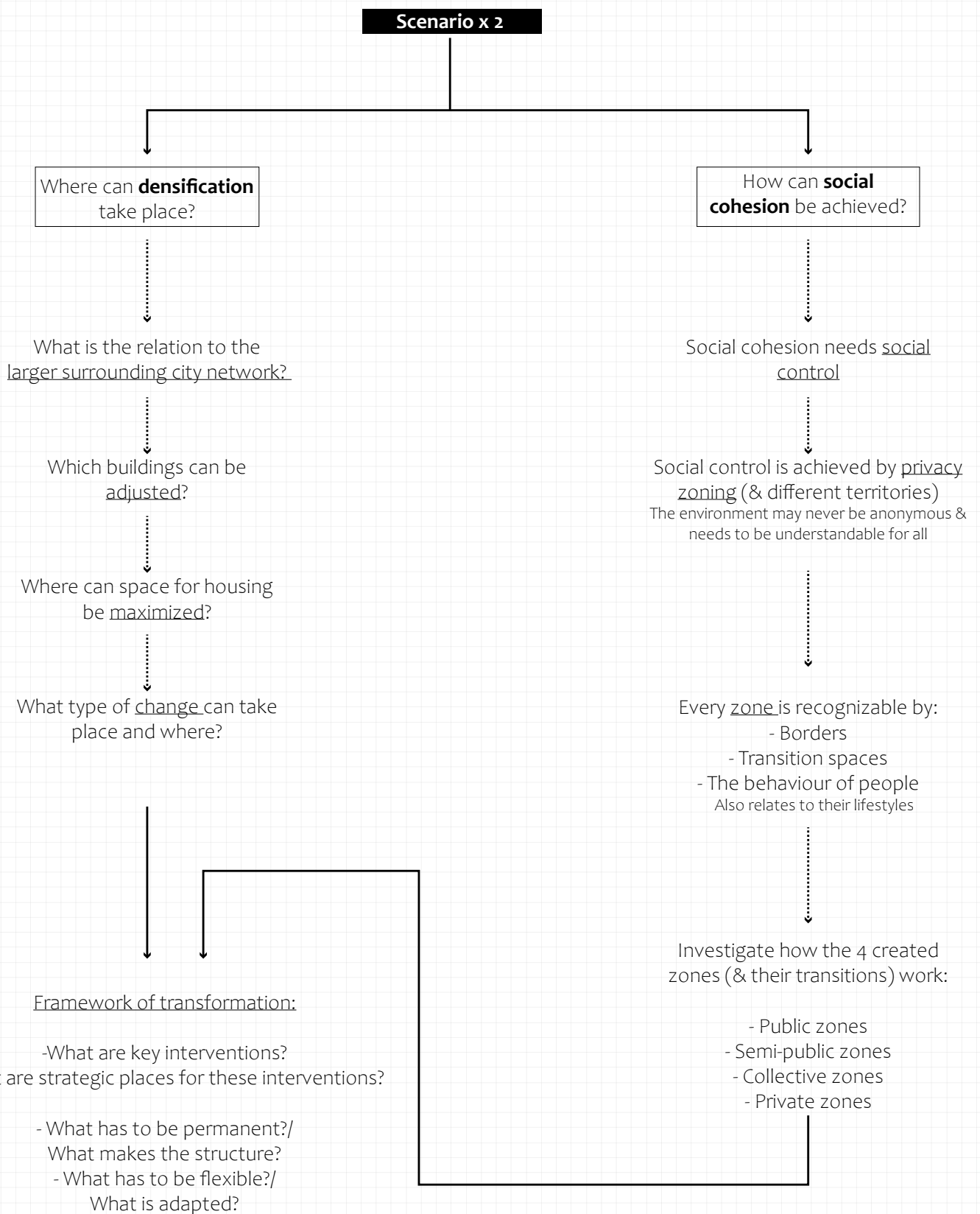


Fig. 100 Scenario structure

6.3 the 4 zones

As is explained previously, in order to achieve social cohesion, social control is needed and social control is achieved by privacy zoning (Van Dorst, 2005). As the project aims to create a framework of transformation, some kind of transferability is necessary. The project therefore opts for an approach that aims to capitalize on the potential of certain zones which need to be present in every scenario, in order to achieve the final goal of social cohesion.

Four different zones are identified: public zones, semi-public zones, collective zones and private zones. Every zone is recognizable by certain borders, transitions and the behavior of people. On top of this they have different characteristics, atmospheres, qualities and potentials in order to support privacy. The design objectives belonging to each zones are established by looking into literature, investigating reference cases and taking into account results from fieldwork.

Public zone - spaces of encounter

Public zones are the areas where it is expected everyone in the neighborhood intermingles. The spaces are located close to modes of transport which connect Overtoomse Veld with the surrounding city network and function as spaces which serve residents and visitors due to different layers of activity as amenities, housetypes and key intersections.

Desired qualities & design objectives

In the basis, public zones have the possibility to facilitate the highest degree of interaction and urban life in the neighborhood. These spaces should therefore have a wide range of amenities which foresee in the needs and demands of all residents and visitors of the area. The connection to the larger city network is therefore of crucial importance. In order to facilitate this connection, public transport, bikes and pedestrians should be prioritized over the use of cars in the neighborhood. Public zones give much space for pedestrians in front of buildings to stimulate spontaneous interactions.

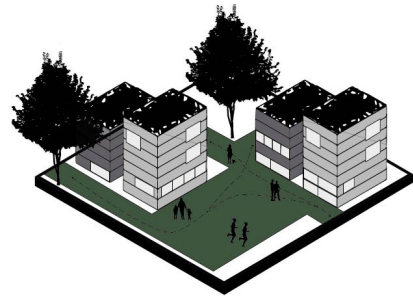
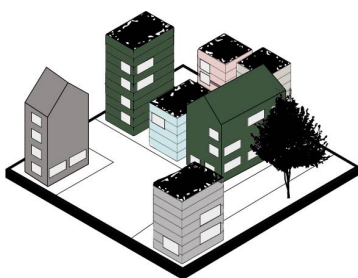
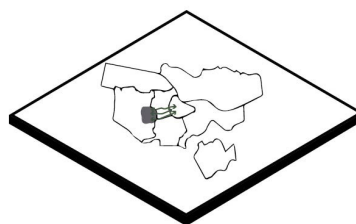


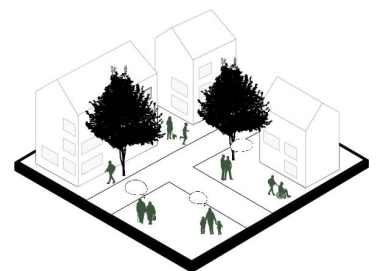
Fig. 101 Current public zone
(source: Google Earth (03.05.2021))



Wide range of amenities for all residents



Connect to larger city network



Prioritize pedestrians & stimulate encounters

Semi-public zone - publicly accessible, privately owned

Semi-public zones need to function as transition spaces between the more public and more private areas. The spaces are publicly accessible, but privately owned.

Desired qualities & design objectives

Semi-public zones create clarity for the surrounding area. It is important that the space and adjacent streets are activated and that the transition is made clear in order to create opportunities for interaction with and without agenda.

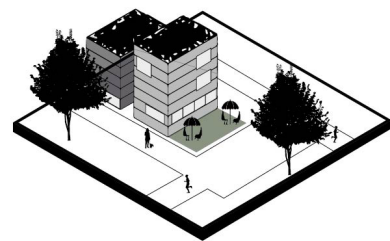
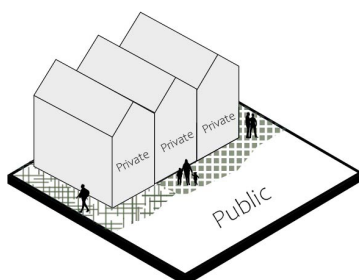


Fig. 102 Current semi-public zone
(source: Google Earth (03.05.2021))



Stimulate transition between
public & private areas



Activate the streets

Collective zone - spaces of gathering

Collective zones promote exchange and are used by, or belong to, a specific group of people. Talen (2008) emphasizes “This is important in any neighborhood, but it is especially important in a diverse neighborhood as a way of counteracting the distrust or fear residents might be harboring about people unlike themselves” [p.160]. Collective zones promote interaction, which provides a better chance for informal, voluntary control. This often relates to the presence of a community centre, shared work gardens or other types of formal and informal events which can be organized in these spaces.

Desired qualities & design objectives

The role of people’s lifestyle and different stakeholders plays a crucial part in collective zones. As the spaces give some sort of belonging to the area, people need to feel they can adjust things and initiate ideas. This requires a good collaboration between residents and between residents and the municipality. Therefore, the presence of community organizations is important, just as creating clarity who the collective space belongs to and when it can be used. The latter can be facilitated by making the spaces accessible at restricted times. On top of this, the indoor groundfloor next to these communal spaces needs to be activated to stimulate the use of the area. In order to do this, a strategic use of indoor and outdoor spaces is required.

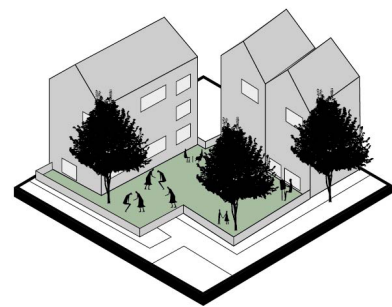
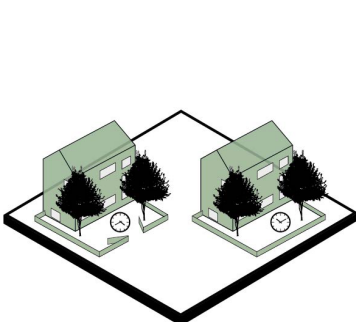
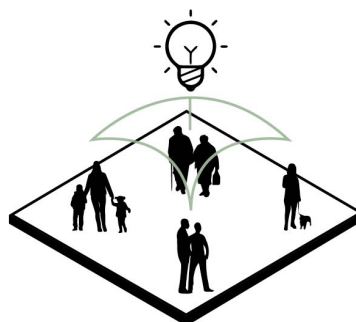


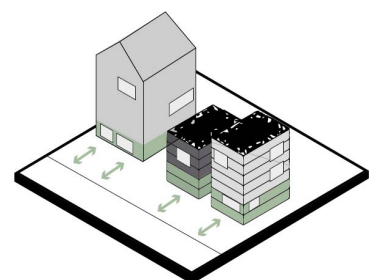
Fig. 103 Current collective zone
(source: Google Earth (03.05.2021))



Clarity who & when the space
can be used



Community organizations & collaboration
between residents and the municipality



Strategic use of indoor
& outdoor space

Private zone - spaces for the individual

As is explained in the elaboration of privacy zoning and the relation to territories, the environment must not only offer opportunities to make contact, but also to seek privacy (Van Dorst, 2005). It is therefore important to create private zones where individuals or households can withdraw from the more public areas in the neighborhood. However, most important is that individuals have power over the amount of interaction happening in their private spaces. The transition from public zones to these private zones therefore plays a crucial role.

Desired qualities & design objectives

Accessible possibilities for interaction are needed when owners feel the need to interact with neighbors and passers-by, while staying in their private space. This also relates to the outdoor space, located next to private zones, which need to be activated. In order to make people feel safe and secure, eyes on the street are a vital characteristic.

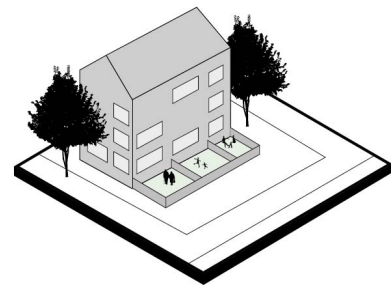
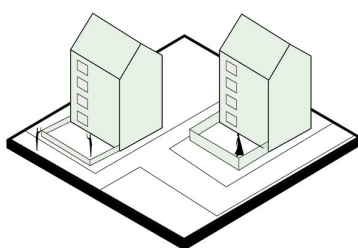
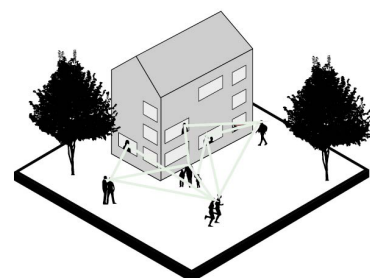


Fig. 104 Current private zone
(source: Google Earth (03.05.2021))



Accessible possibilities for interaction,
owners decide how much



Eyes on the street from private spaces

6.4 current situation

6.4.1 Domination

The topic of domination in spaces relates to the previously mentioned zones. The maps below show the domination of groups of people in the neighborhood. This domination is based on available services, functions, facilities and experiences during fieldwork. Mentioned before is the ambiguity which is present in several outdoor spaces and zones. The maps below give more clarity into this topic.

Several open spaces are not considered as dominated by anyone. However, these spaces are publicly accessible. This

results in an anonymous environment which then results in an area which is not understandable and which influences the behaviour of people crossing this space. In other words, territories are not clear and privacy zoning is not happening. In this way, social cohesion can never be achieved in the neighborhood as it currently is.

On top of this, space dominated by youngsters is clearly present in Overtroomse Veld. This domination occurs when no functions are present and there are no eyes on the street.

Fig. 105 Space dominated by cultural clusters



- Stores, cafes & restaurants
- Hotels
- Cultural institutions
- Open spaces dominated by cultural clusters

Fig. 106 Space dominated by children & families



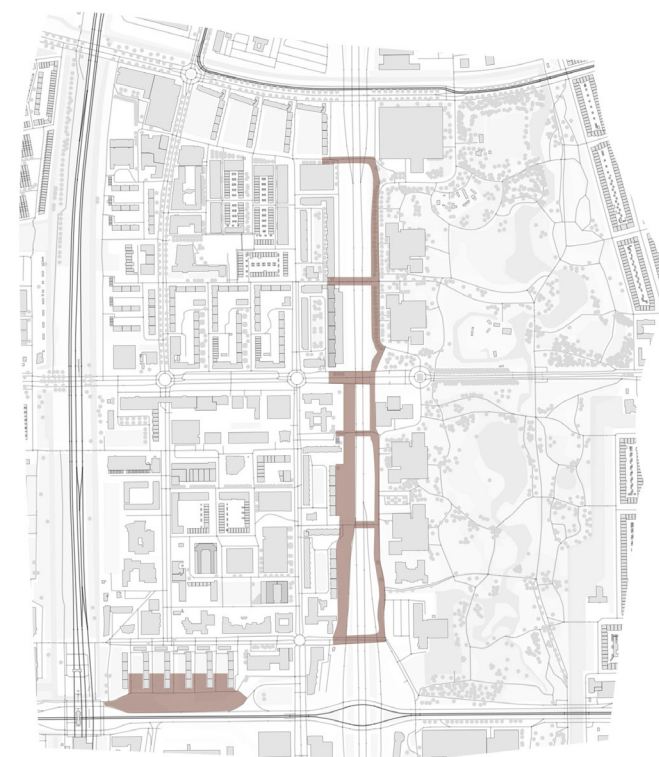
- Schools
- Institutions
- Open space with playground & schoolyards

Fig. 107 Space dominated by businesses & offices



- 0 50 100 150m
- Offices & businesses
- Institutions
- Open spaces dominated by offices & businesses

Fig. 108 Space dominated by youngsters



- 0 50 100 150m
- Open space dominated by youngsters
- Bus
- Tram
- Train

6.4.2 Streets as transitional areas

The domination of different groups in the neighborhood results in different degrees of publicness on streets. Talen (2008) explains transitional areas can be open spaces or streets. Streets can act as linkages between otherwise separated spaces. The page on the right explains the situation and working of streets in the existing situation.



High publicness - main street

Spaces with a high degree of publicness are areas where people are currently actually coming, but the spaces do **not motivate to stay and interact** due to a **lack of seating, outdoor functions, facilities** and an abundance of cars.



Less publicness - neighborhood street

Less public routes create transitions from the public to the more private areas. Adjacent to these less public routes can zones be created which function as semi-public spaces. These spaces are often located **near schools** as the playground of schools can function as a semi-public space. They therefore have this double function of stimulating co-operation. The spaces are publicly accessible but privately owned and **little fences** can create clear transitions.



Almost no publicness - residential street

Currently, problems occur in the more private areas of the neighborhood which prevents residents from **withdrawing from the more public areas**. Areas where there is almost no publicness currently, do have a high degree of open (green) spaces. The spaces are connected to the more public areas but cannot be closed off, no functions or facilities are available, there are blind facades and residents do not feel responsible for the space. One could say the **transitions are missing**. This results in **underutilized abandoned areas**.

Fig. 109 Different degrees of publicness on streets



6.4.3 Open spaces as transitional areas

In order to make the zones more identifiable and let residents recognize the space, clear transitions are needed which link the zones spatially. Transitions between public and semi-public spaces will be more soft, while the transitions between public and private areas will be harder. As people feel more responsible for the more private spaces they want to have more control over it which asks for clearer borders. The zones and transitions will be translated differently in each scenario.

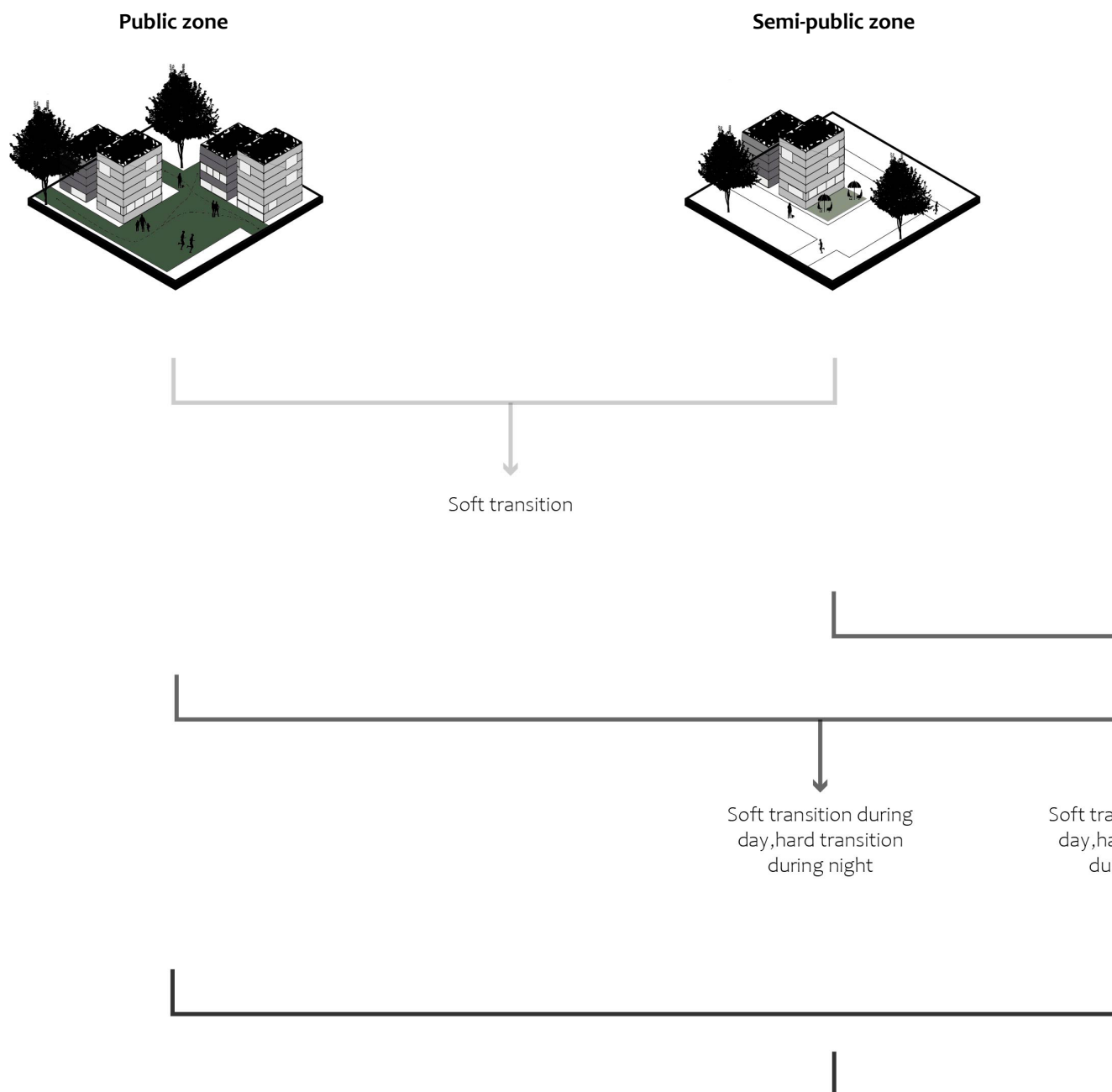
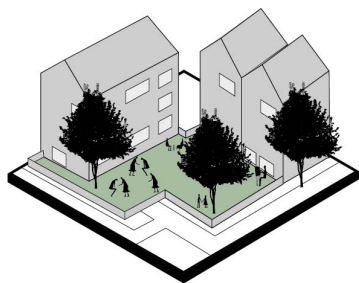
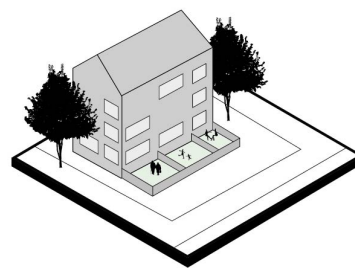


Fig. 110 Transitions between open spaces

Collective zone



Private zone



Soft transition

Transition during
Hard transition
during night

Transition

Hard transition

6.5 pattern language

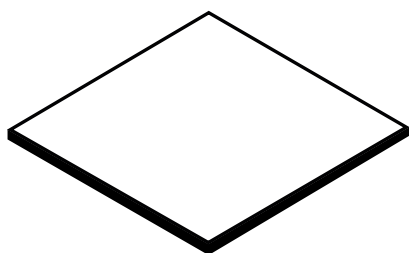
As the variety of zones are present in every scenario, but the objectives will be translated into design in another way, depending on the characteristics per scenario, design testing is used in order to investigate that what is claimed can actually work. This approach is realized by creating a pattern language. Each pattern is a solution to a problem which occurs more often in the neighborhood.

Every pattern consists of the same structure. It first gives a statement with an idea or hypothesis. Thereafter, an explanation is given which supports the pattern. This can, among other things, be based on theory or empirical observation. Finally, an instruction is given so you know exactly what to do.

“The sequence of patterns is both a summary of the language, and at the same time, an index to the patterns. If you read through the sentences which connect the groups of patterns to one another, you will get an overview of the whole language. And once you get this overview, you will then be able to find the patterns which are relevant to your own project” [p. xviii] (Alexander et al., 1977).

In conclusion, after applying this approach in every scenario, an overview can be created of patterns which are relevant in all scenarios and therefore needed in order to achieve a socially cohesive mixed-use neighborhood.

A need specific for the scenario



X.o Title of the pattern

A statement which summarises the idea or hypothesis

An explanation which supports the pattern

A proposed design intervention in this scenario

Relates to other patterns

Involved stakeholders



Scale

- B** Building
- BS** Block - street
- N** Neighborhood
- C** City

Theory

- J** Jane Jacobs - The Death and Life of Great American Cities (1961)
- T** Emily Talen - Design for Diversity (2008)
- D** Machiel van Dorst - Een Duurzaam Leefbare Woonomgeving (2005) + Machiel van Dorst - Liveability (2012)
- H** John Habraken - The Structure of the Ordinary (1998)
- G** Jan Gehl, Birgitte Svarre - How to Study Public Life (2013) + Jan Gehl, Lotte Johansen Kaefer, Solvejg Reigstad - Close Encounters with Buildings (2006)

Interviews & questionnaires

- I** Interviews
- Q** Questionnaires

In order to investigate possibilities of achieving social cohesion between current and new residents, different scenarios are created. The first part elaborates on the social profiles of different groups, whereafter designs are made based on the needs, demands and requirements.

7.1 social profiles

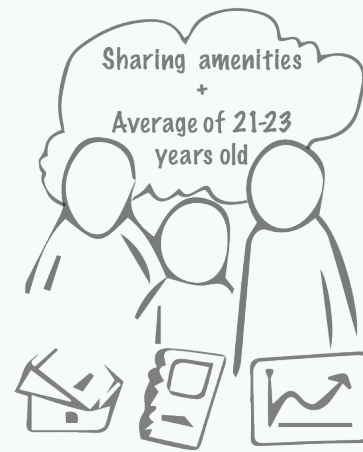


7.1.1 Students

The first scenario is a soft strategy, projected based on a growth of inhabitants which mainly consists of students. In the last twenty years, the amount of students is doubled. The Vrije Universiteit Amsterdam had a large increase of 12 percent in the last year (Heyblom, 2021). This increase of students is also visible in the search and need for more student housing (VSNU, 2021).

Looking at housing size and income, student are quite similar to current residents. They often live in studios or in housing with shared facilities. These apartments are comparable to oneperson households and family housing current residents live in. Besides this, students have relatively less to spend, which is comparable to the lower-income residents living in Overtoomse Veld.

However, despite these similar housing characteristics, there is still a difference in lifestyle between students and current residents. The availability of amenities plays an important role in this. Local amenities and shops need to be valued, but also more global amenities need to be introduced in order to foresee in the different needs and demands of current residents and new residents. People can be mixed physically, but in order to create social cohesion, the social-cultural aspects should also be taken into consideration in the design. This strategy can therefore be seen as a soft strategy which focuses on people partly similar to current residents, but also creates innovation in the neighborhood.



Personal characteristics

Average age of 21 to 23 years old

Proportional male/female distribution

55% lives in an apartment with shared facilities (family housing), 25% lives in a multi-room apartment, 20% lives in a studio (oneperson household)

Often no long-term stay



Living environment

Prefer living in a central location or on campus

Prefer to live inside the cityring. Students associate living in the innercity with a feeling of safety, but also more liveliness and possibilities to undertake activities. However, after living in Amsterdam for a while, students tend to change their requirements based on location, but a good connection to the centre stays important

Are attracted to lively and 'upcoming' neighborhoods

Value presence of local and global shops

(Boterman et al. 2015)
(Ministerie van Binnenlandse Zaken en Koninkrijksrelaties,
2020)



Housing

Often share facilities with roommates

Prefer a multi-room apartment on a central location

Students have an aversion to rooms smaller than 16m², in relation to the housing costs which are involved

(Ministerie van Binnenlandse Zaken en Koninkrijksrelaties,
2020)

7.1.2 Knowledge workers



The second scenario focuses on a more extreme strategy, based on an influx of knowledge workers. As is stated in the problem field, cities around the world are trying to attract as many talented, high educated workers as possible. Businesses and entrepreneurs settle where these creative knowledge workers are based (Milikowsky, 2018). The municipality of Amsterdam therefore strives for creating an environment in which this economy thrives (Rath, in Milikowsky, 2018). Therefore, this scenario can be seen as a scenario about what the municipality think they want.

As the social profile shows, the needs and demands of this group differ from residents currently living in Overtoomse Veld. Concerning housing type and sizes, knowledge workers earn relatively more and therefore often live in housing which is larger than average. Besides housing, preferences relating amenities are mainly geared towards having global amenities to create a more international environment. These requirements result in the need for creating new building typologies where a variety of housing, and a variety of amenities can be located. This therefore asks for a more extreme strategy.



Personal characteristics

High educated, (young), often single people

Starting a professional career

Earn relatively more

Dutch knowledge workers:

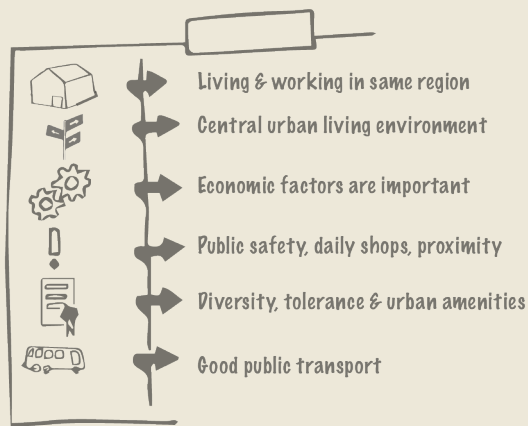
- Choose living in the city for higher education and presence of businesses that relate to highly educated professionals

Foreign knowledge workers:

- 56% single, 30% has a partner, 13% comes with children
- 45% from Europe, another large group from OECD, BRIC and Turkey
- After 8 years, more than half leave the Netherlands again
- Are attracted to international oriented regions related to international oriented companies with many other foreign knowledge workers

Fig. 112 Social profile knowledge workers

(Planbureau voor de Leefomgeving, 2014)



Living environment

Prefer living and working in the same region

Prefer the central urban living environment

Economic factors as proximity of jobs, personal networks and job opportunities are important

Just as public safety, daily shoppings facilities and proximity of amenities

Urban amenities play an important role

Singles prefer:

- Neighborhoods with residents between 25-45, as these neighborhoods tend to have more cafes & restaurants
- Neighborhood with residents with a relatively higher income

Families prefer:

- Close proximity of international schools
- Housing in a green, more quiet suburb

Foreign workers have a preference for good public transport & a higher willingness to commute

Dutch workers have less preference of commuting than foreign knowledge workers

No preferences concerning neighborhoods with rental/owner-occupied housing or year of construction

(Planbureau voor de Leefomgeving, 2014)



Housing

Singles prefer a more compact, central (rental) apartment

Families prefer bigger owner-occupied housing

Affordability is important, but knowledge workers have in general more to spend, which results in larger housing

Having a garden is of lesser importance for foreign knowledge workers than for Dutch knowledge workers

(Planbureau voor de Leefomgeving, 2014)
(Decisio, 2019)

7.2 the soft strategy - influx of students



The following pages zoom in to the details of the soft scenario.

7.2.1 Spatial strategy

Figure 113 shows the spatial strategy for the soft scenario. On the one hand, this scenario investigates transforming and enhancing the existing situation in the neighborhood. On the other hand, densification can be used as a tool to improve the connectivity and accessibility with the rest of the city and it can be a first step towards introducing new housing types, which can later relate to other groups of people, like knowledge workers, coming to Overtoomse Veld.

Connectivity and accessibility are important topics in this scenario as students value:

- Places to undertake activities, which is possible in the park
- A good connection to the city centre

Therefore, in order to stimulate the connection, it is chosen to look for densification and transformation possibilities which resulted in a focus on 3 streets. In order to make these streets successful, destination and integration are important characteristics which should be investigated.

Influx of students



Adjust the existing & introduce new



Global & local amenities



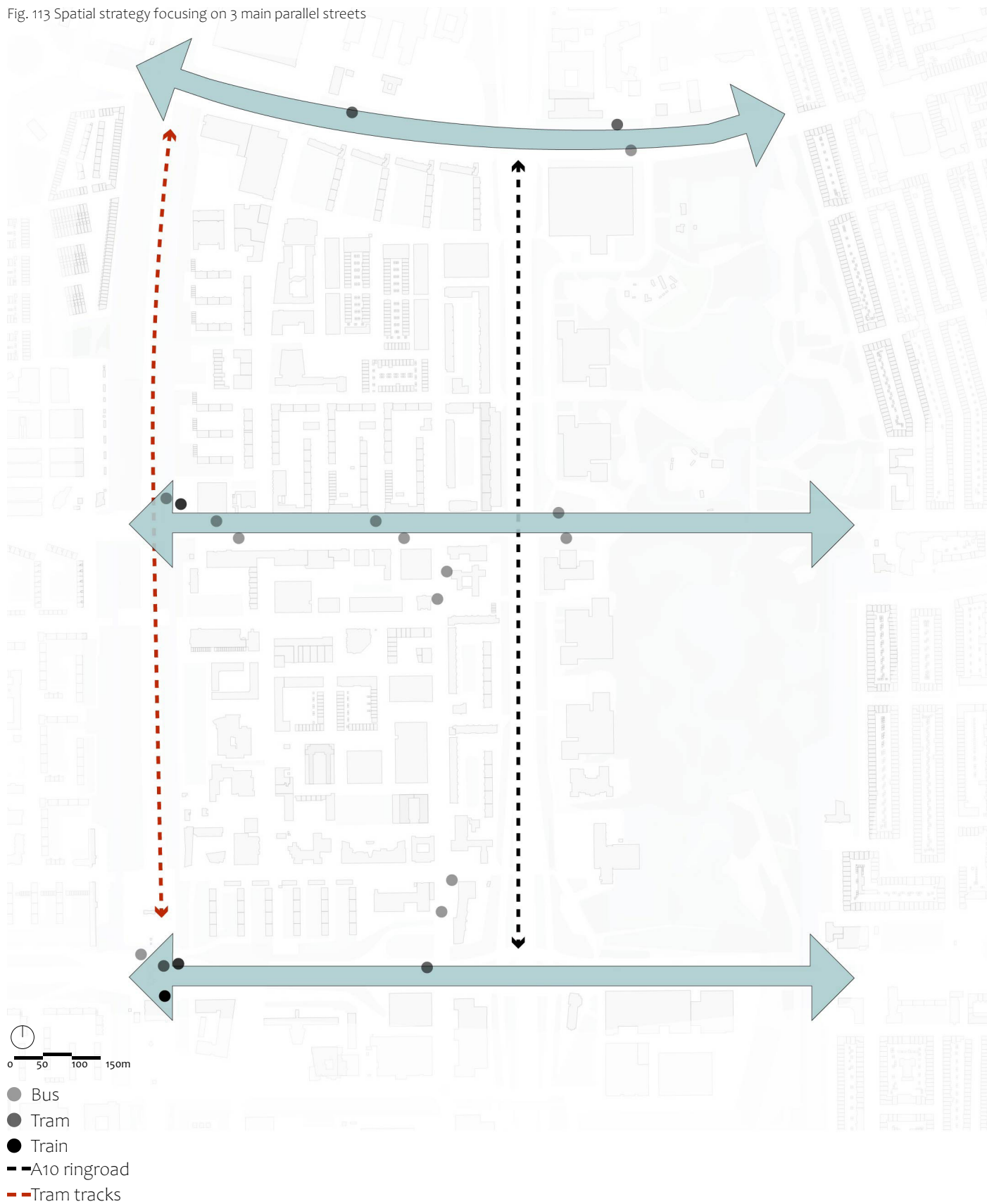
Private gardens & public courtyards



50-60m² & 100m² housing



Fig. 113 Spatial strategy focusing on 3 main parallel streets



Detected & missing qualities

Zooming in to the area around the Jan Evertsenstraat, it is visible there is an abundance of public space available. Small play facilities and even a vegetable garden shared by residents is present (2). However, the lack of territorial depth creates problems in the area relating to the space not being used or feeling unpleasant (1). On top of this, the scarcity of entrances leading to the public space from the building block, and the poor quality of these facades, do not stimulate the use of the area and the space lacks eyes on the street.

The courtyards inside the building blocks on the Postjesweg have potential. Private gardens are located adjacent to the facades and the yard creates spaces for sharing the area. However, the low fences, lack of seating facilities, playing possibilities and ways of entering the shared courtyards creates a dead zone (3). Looking at the more public street it is visible no places for integration can be found on the street and no seating possibilities are present.

The situation on the Cornelis Lelylaan is very similar to the one of the Jan Evertsenstraat. The lack of transition spaces between public and private areas create ambiguity on the street (6), which results in the available facilities not being used.

Zooming out more and looking at the whole neighborhood again, it is visible the existing situation is preventing transitions into the park and interaction on the streets is not stimulated due to a lack of functions and amenities (4). In this way, the A10 prevents transitions from and to the neighborhood (5). The park is precisely located where people are currently not passing and, as it is now, probably never will. Which is problematic, as the connection through the Rembrandtpark is needed in order to connect Overtoomse Veld with the rest of the city.

Jacobs (1961) clearly emphasized a mixture of functions and amenities surrounding a park influences and attracts a mixture of users who are making use of the space throughout different times of a day which creates a lively area. It is therefore important to create spaces for integration and provide the streets with a clear destination in order to stimulate the connection to the park, and further to the city centre.

Detected qualities:



Play facilities



Presence of a communal vegetable garden



Many spaces with potential

Missing qualities:



Possible transitions into the park



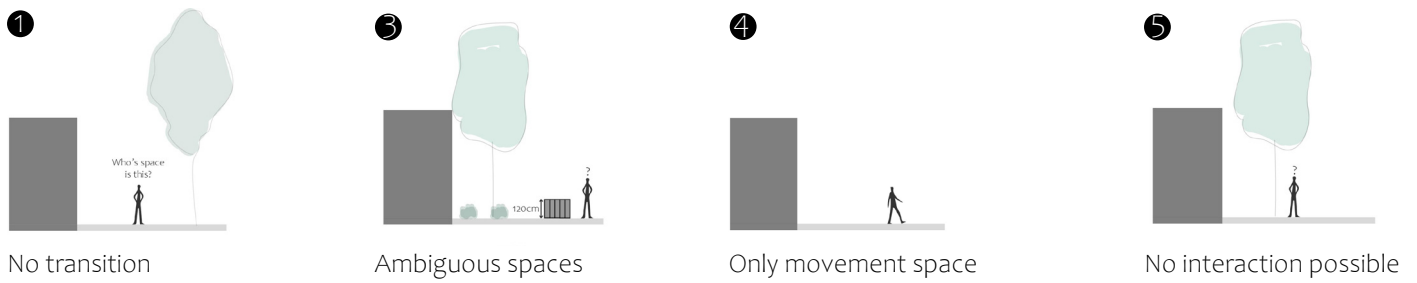
Active functions & seating possibilities



Scarcity of entrances to public space from building blocks



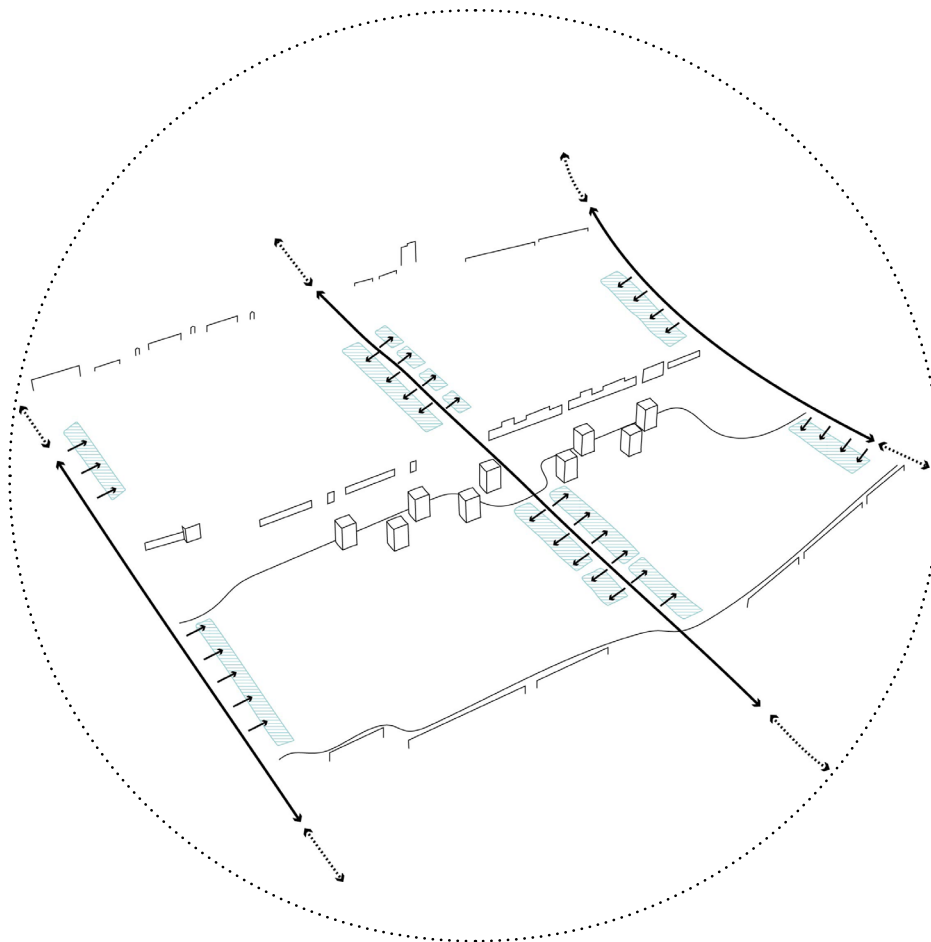
Safety & eyes on the street



7.2.2 Patterns

Three main needs came out of the analysis which need to be taken into consideration when looking at this scenario. These needs can be viewed as patterns which are mainly related to the larger scale. Each of these patterns link again to other patterns which influence the smaller scale, shown on the next four pages.

N.o Link to the city network

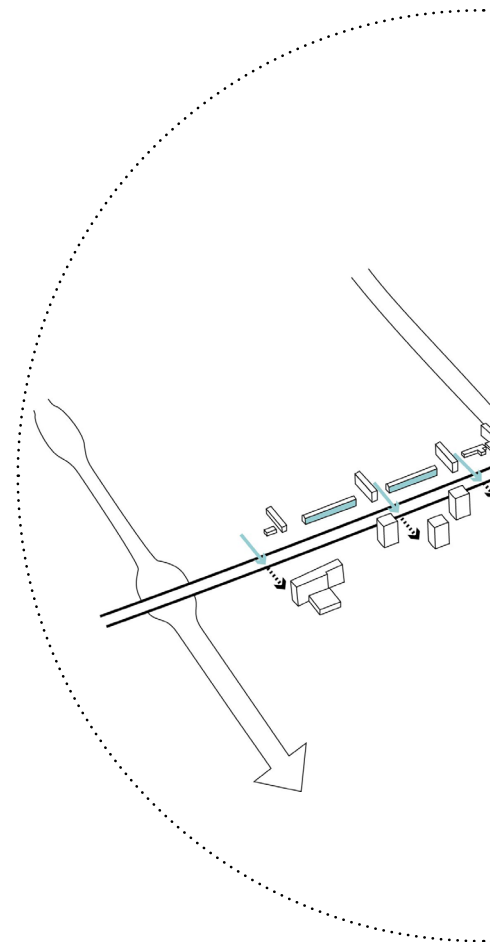


Main streets in the neighborhood need to link to the surrounding city network in order to create a good connection on the larger scale.

Relates to: N.1, N.2, P.O, Z.O, Z.6
Municipality, traffic businesses



P.o Permeability & continuity

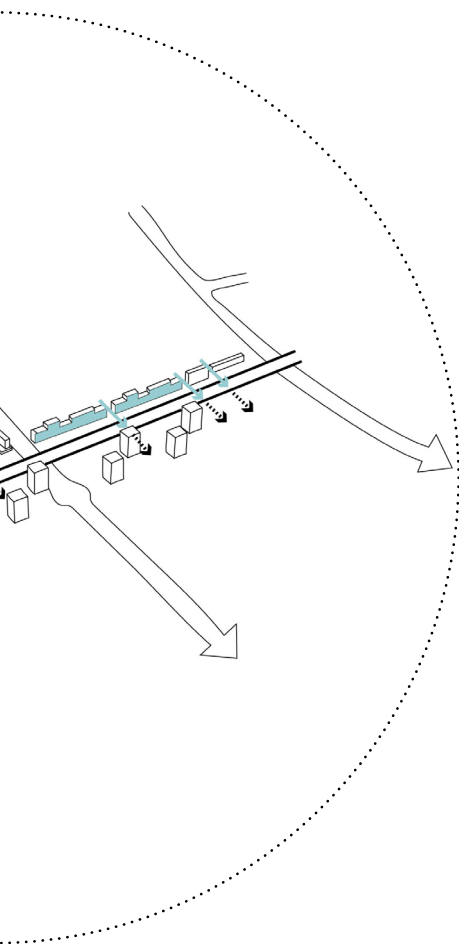


The neighborhood needs to have a continuous network of streets which requires permeability and continuity.

Relates to: N.O, N.1, N.2, P.1, P.2, P.3
Municipality, landowners



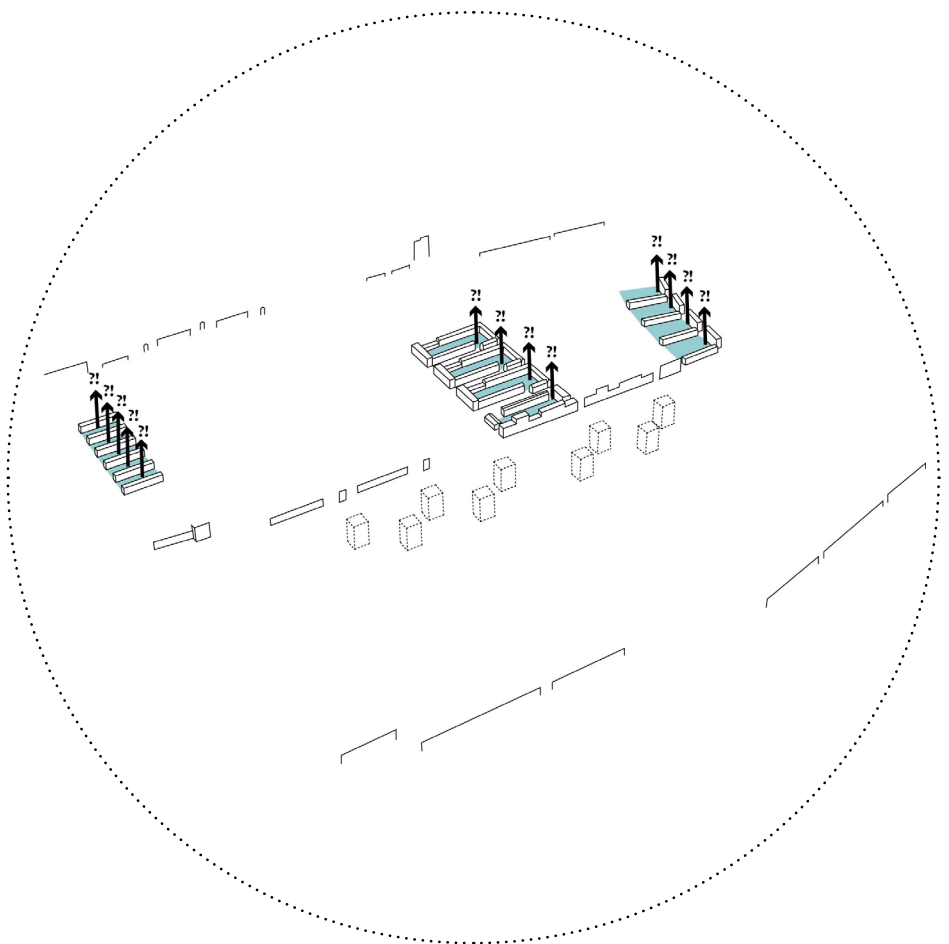
Continuity in the neighborhood



Continuity with the surrounding area which
continuity at the edges.

P.3, P.4, P.5, P.6, Z.0, Z.6, Z.7, Z.8
Municipality, landowners, residents

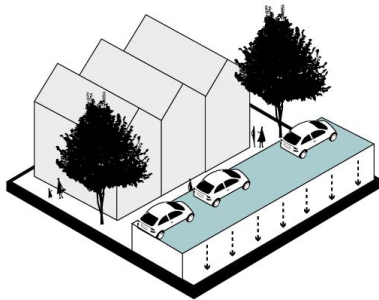
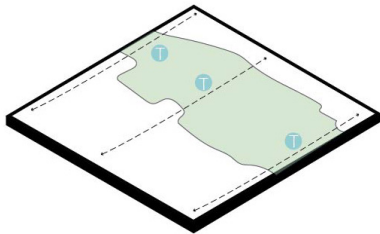
Z.0 Clarification of the living environment



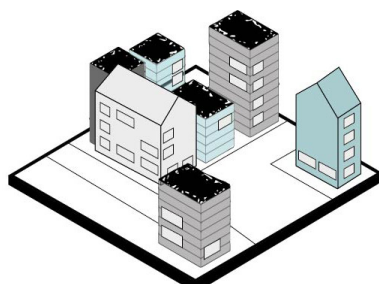
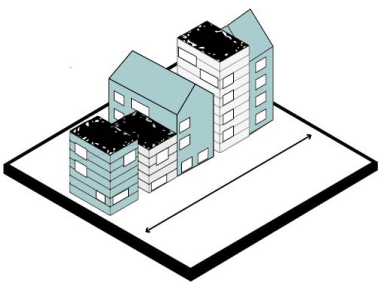
A differentiation of zones needs to be established in the neighborhood. Van Dorst
(2005) emphasizes distinct zones can help in making the living environment more
clear and readable.

Relates to: N.0, P.0, P.6, Z.1, Z.2, Z.3, Z.4, Z.5, Z.6, Z.7, Z.8
Municipality, landowners, residents, community organizations

Link to the city network



Permeability & continuity in the neighborhood



N.1 Introduce public transport to link to Stadsstraten

Public transport creates better accessibility and connectivity from and to the neighborhood. Implementing it on the three main streets connecting to existing and potential Stads- and hoofdstraten can create a better link with the surrounding city network as Stadsstraten are described by the Gemeente Amsterdam (2017b) as urban meeting and exchange spaces which play an important role for shops and traffic management.

Relates to: N.0, N.2, P.0, P.2, Z.4, Z.6
Municipality, transport businesses

N.2 Downgrade ringroad

Downgrade A10 ringroad to stimulate the connection with the surrounding city network. The elevation of the ringroad and scarcity of crossing underneath prevent connection with the larger network. By removing the elevation and reducing car lanes the space allows for crossings to surrounding areas while also facilitating infrastructure along the street.

Relates to: N.0, N.1, P.0, P.3, P.6, Z.6, Z.7
Municipality, transport businesses, landowners

P.1 Diverse facades

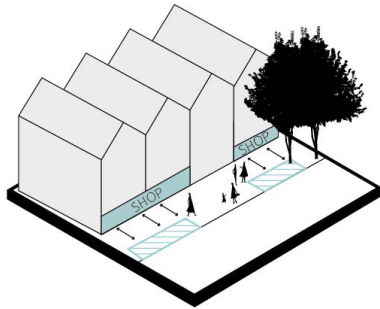
Buildings should have a diverse facade in order to stimulate movement on streets which link to the surrounding area. Groundfloor facades influence public life. According to Gehl et al. (2006), in front of active facades, pedestrians have a slower pace, there is a higher change of people stopping, and more activities can take place on the more pleasant, more crowded streets. They emphasize: “closed facades pacify while open and interesting facades activate urban users” [p.33].

Relates to: P.0, P.2, P.3, Z.4, Z.6
Municipality, landowners, residents

P.2 Mixture of functions & amenities

A mixture of functions and amenities influences and attracts different users who are using the space throughout different times of a day which creates a lively area. Not just architectural variety, but a mixture of economic and social diversity results in people with different schedules making use of space which stimulates permeability and continuity (Jacobs, 1961). Functions need to be aligned with needs and demands of residents (Talen, 2008).

Relates to: N.1, P.0, P.1, P.3, Z.6
Municipality, retail owners, residents

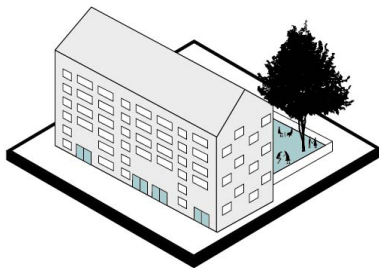


N BS

P.3 Pocket spaces

Introduce pocket parks, small public spaces or possibilities for temporary activities for residents and passers-by to meet, play or rest. The small spaces increase the amount of green and diversifies public spaces. Shops have the possibility to extend to these pocket spaces and use the space more wisely. The spaces can be implemented on leftover spaces, between blocks or on parking lots, and buffer pedestrians from cars.

Relates to: N.2, P.0, P.1, P.2, Z.6
Municipality, landowners, retail owners, residents

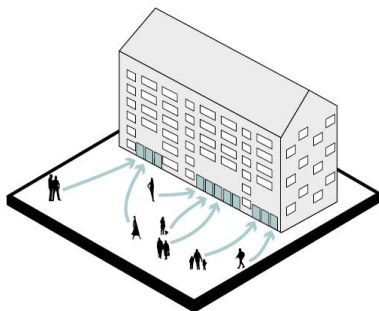


BS B I

P.4 More entrances in building blocks

Focus inside courtyards is on pedestrians and cyclists. This results in multiple ways and entrances from different sides in the building block which gives access to the space in order to improve the permeability and continuity.

Relates to: P.0, P.5, Z.5, Z.6, Z.7
Landowners

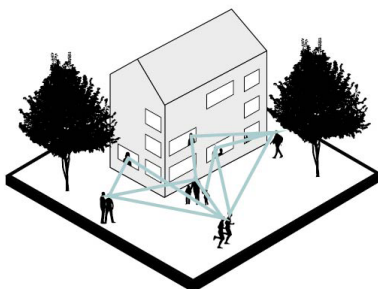


BS B D

P.5 Collective entrances

As P.4 states, multiple entrances from different sides give access to building blocks, it is important to find a balance between private and collective entrances in order to stimulate interaction and create spontaneous encounters between the different people living in a variety of housing.

Relates to: P.0, Z.7
Landowners



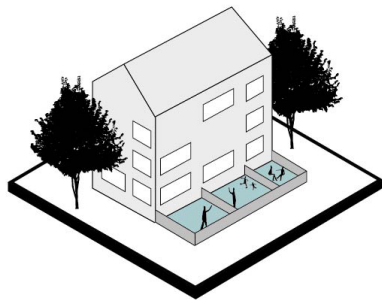
N BS B J T

P.6 Create transparency by eyes on the street

It is important that when people look out of their window, they can directly look to the public realm adjacent to them. "Natural surveillance of public places (...) is essential, especially in a socially diverse area" [p.184] (Talen, 2008) in order to create not just permeability and continuity, but also safety. This also relates to theories of Jacobs (1961) where she emphasizes the importance of eyes on the street.

Relates to: N.2, P.0, Z.0, Z.1, Z.2, Z.3, Z.4, Z.6, Z.7, Z.8
Retail owners, residents, community organizations

Clarification of the living environment

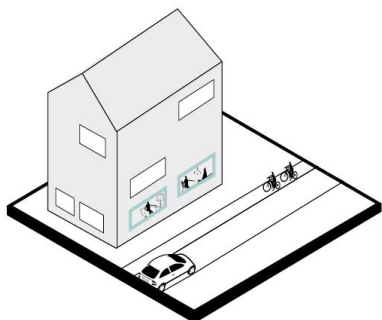


BS B D

Z.1 Front gardens

Private spaces as front gardens are created to introduce accessible possibilities for interaction, but also to function as extra safety measures for playing children in the (semi-)public or collective spaces surrounding the gardens. Private gardens can contribute to creating a clear compartmentalization of space (Van Dorst, 2005).

Relates to: P.6, Z.0, Z.2, Z.3, Z.8
Municipality, landowners, residents

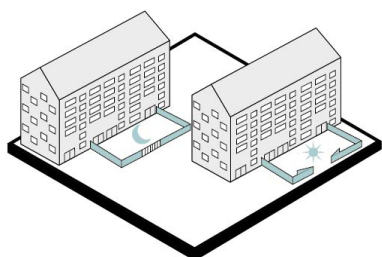


BS B J G

Z.2 Public rooms at public street side

Having a private outdoor space at one side of the house, results in placing the more public rooms as livingroom and kitchen at the public street side. This relates to pattern P.6 in order to create eyes on the street.

Relates to: P.6, Z.0, Z.1, Z.7
Residents, retail owners, community organizations

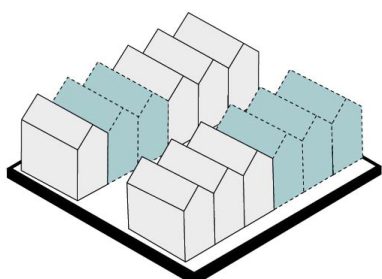


BS B T

Z.3 Possibilities to close off spaces

Create possibilities to close off spaces which are dedicated to a certain group of people. For example at night, when no one makes use of the space. It provides clarity in who and when the space can be used, by preventing uninvited people making use of the space. Important for this pattern is the clarification of collaborations and responsibilities of included stakeholders.

Relates to: P.1, P.6, Z.0, Z.1, Z.4, Z.7, Z.8
Municipality, landowners, retail owners, residents, community organizations

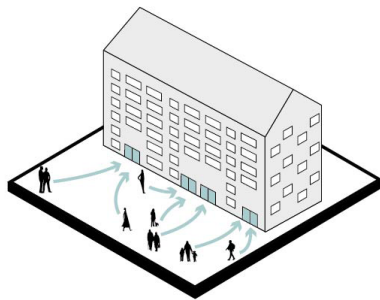


C N BS B H

Z.4 Increasing density

Increasing density can contribute to the application of territorial depth. Habraken (1998) explains: “Two processes can be distinguished. A territorial power, in a “top down” action which subdivides its own space to increase territorial depth. Or a more “bottom-up” approach where a number of territories appropriate their own public space from the more general public space” [p. 214].

Relates to: N.1, P.1, P.3, P.6, Z.0, Z.8
Municipality, housing associations, landowners

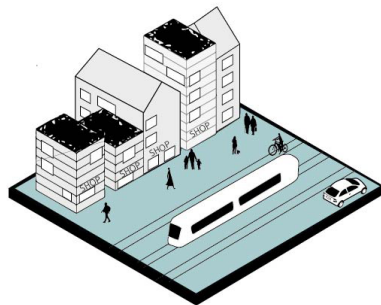


BS B I Q

Z.5 Individual entrances

Individual entrances, which give access to housing on the groundfloor, can aid in the clarification of zones. The individual entrances can stimulate the connection with the public space and create opportunities for people of making the space surrounding their entrance their own. As pattern P.5 states collective entrances stimulate spontaneous encounters, a balance needs to be found in these different types.

Relates to: P.4, P.5, Z.0, Z.8
Landowners, residents

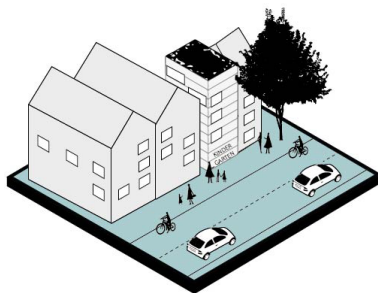


C N BS B

Z.6 Main street

Main streets need to be created for the connection of the neighborhood with the surrounding areas. Streets link to highly used streets from the surrounding area and are intensely used by different people throughout the day. Street profiles are wide and give much space to pedestrians, but also space is created for public transport and cars. On top of this, public functions are located in buildings adjacent to the street.

Relates to: N.0, N.1, N.2, P.0, P.1, P.2, P.3, P.6, Z.0, Z.7, Z.8
Municipality, landowners, retail owners, residents

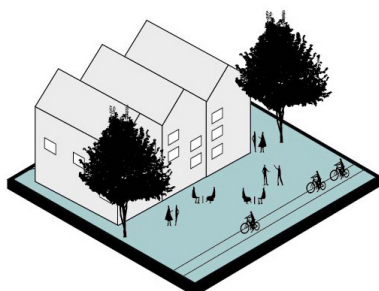


N BS B

Z.7 Neighborhood street

Neighborhood streets connect the main streets to areas located more inside the neighborhood. The streets are more intensely used by traffic, compared to the residential streets. Mainly residential buildings and the more semi-public functions, as kindergartens and workspaces, are located on the neighborhood streets.

Relates to: N.2, P.0, P.4, P.5, P.6, Z.0, Z.2, Z.3, Z.6, Z.8
Municipality, landowners, retail owners, residents



N BS B

Z.8 Residential street

Residential streets can be seen as the most private public spaces in the neighborhood. The streets are dominated by slow traffic and contain more quality to stimulate people to stay and interact. Buildings surrounding the streets are mainly residences or collective functions shared by residents.

Relates to: P.0, P.6, Z.0, Z.1, Z.3, Z.5, Z.6, Z.7
Municipality, landowners, residents, community organizations

7.2.3 Exploration of densification

After establishing the focus of this scenario, it is investigated more in detail where densification can take place on the three chosen streets. As the maps show, not only possibilities inside the neighborhood occur, but also possibilities in the Rembrandtpark.

Fig. 115 Which buildings can be adjusted around the 3 streets?



- Energylabel C or lower
- Low FSI, GSI or building quality
- Built before 1960
- Over 50% owned by social housing corporations

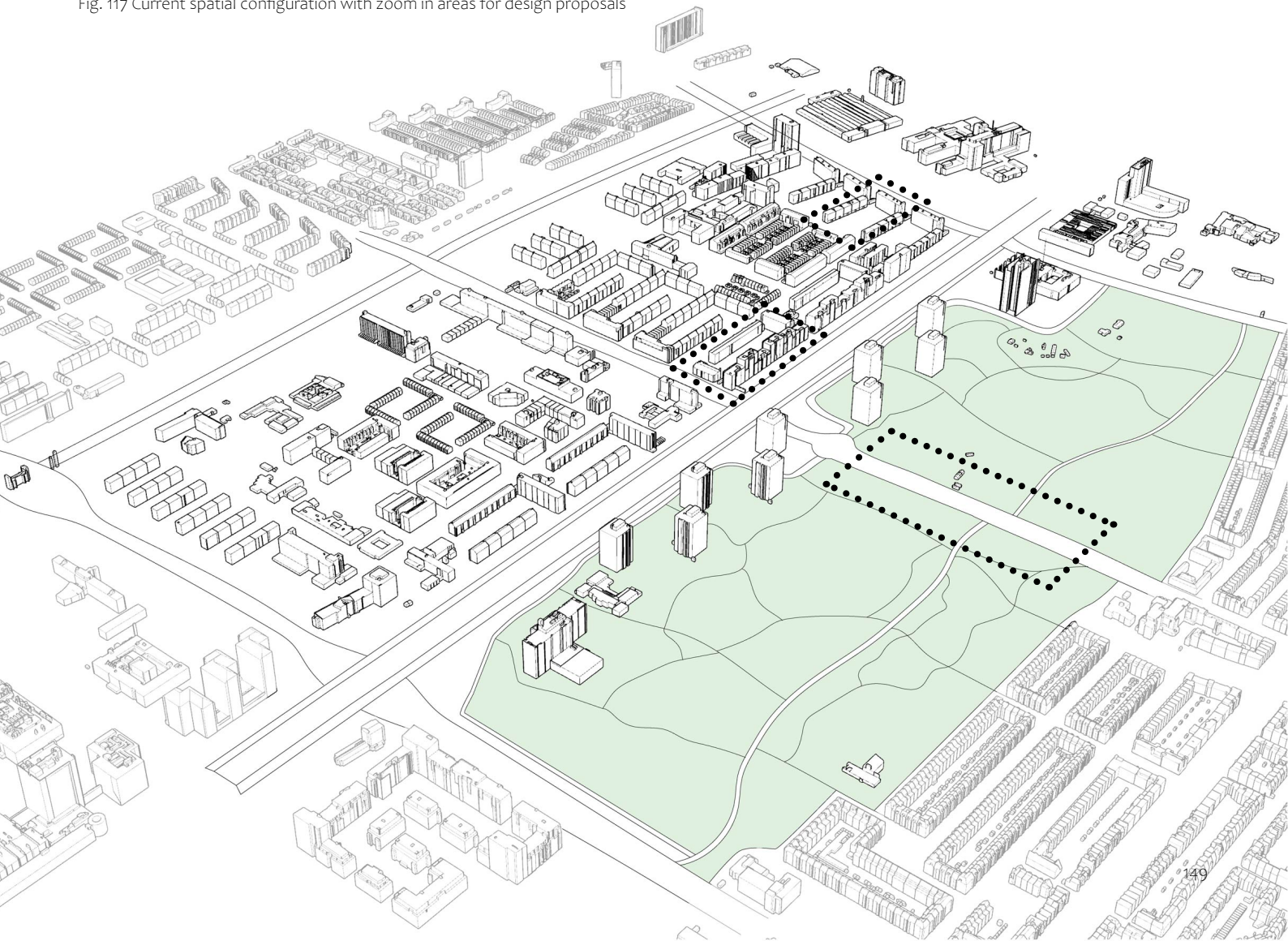
Fig. 116 Where could space for housing be maximized?



- Potential areas for maximizing housing space

Figure 117 shows three areas in the neighborhood which will be used as guidelines to show how the transformation and densification in this scenario will work and what the qualities are of the spaces. A distinction can be made between adjusting existing housing and building new.

Fig. 117 Current spatial configuration with zoom in areas for design proposals



Case studies

Case studies of different blocks, located in different countries, cities and environments, are done in order to investigate what type of spatial configuration can be suitable for the new housing in the park.

Osterbro - Copenhagen

+ Multiple entrances from building block into the courtyard

- Limited entrances from street into blocks
- Ambiguous or no private spaces in the courtyard

The configuration of Osterbro, Copenhagen can be a suitable building configuration to apply in Overtoomse Veld. However, the zones of collective and private spaces need enhancement. On top of that, is the density lower than in the Pijp.

Fig. 118 Osterbro (source: Google Earth (08.04.2021))



Fig. 119 Osterbro on Postjesweg

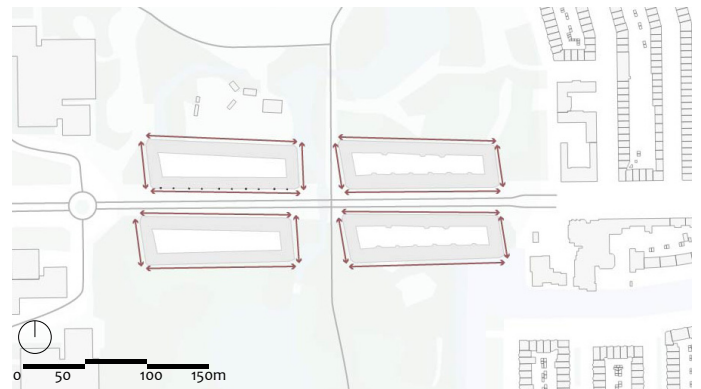


Fig. 120 Transition street-block



Fig. 121 Transition block-yard



Massena - Paris

+ Different types of open spaces
+ Many public functions on the ground floor

- Not dense enough. It takes up too much space of the park
- Not suitable for the application of private gardens, needed in this scenario

The building typology which is applied in Paris is a very interesting one. However, it is not the best one to apply in this scenario. The configuration is not suitable for the application of private gardens and the typology takes up too much space of the park. This configuration is, however, suitable if there would be large differences between residents, which asks for a variety of open spaces.

Fig. 122 Massena (source: Google Earth (08.04.2021))



Fig. 123 Massena on Postjesweg



Fig. 124 Transition street-block

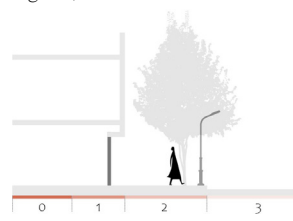
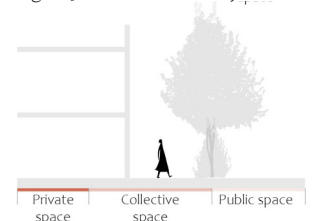


Fig. 125 Transition block-yard



De Pijp - Amsterdam

- + Many entrances from the street into the building blocks
- + High density
- + Diverse facades with groundfloor functions

- Closed block, no possibilities to enter the yard from the public street
- No space for private & collective areas in courtyard

The building configuration of the Pijp would be suitable as a high density will be achieved with varying facades and functions. On top of this, not much of the park needs to be removed due to the high density. However, adjustments of the block are needed to implement the configuration in a suitable way.

Fig. 126 De Pijp (source: Google Earth (08.04.2021))

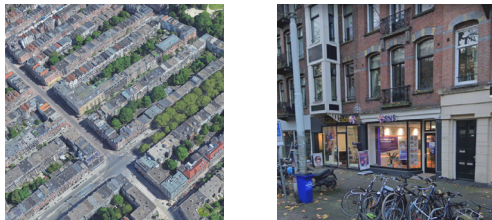


Fig. 127 De Pijp on Postjesweg

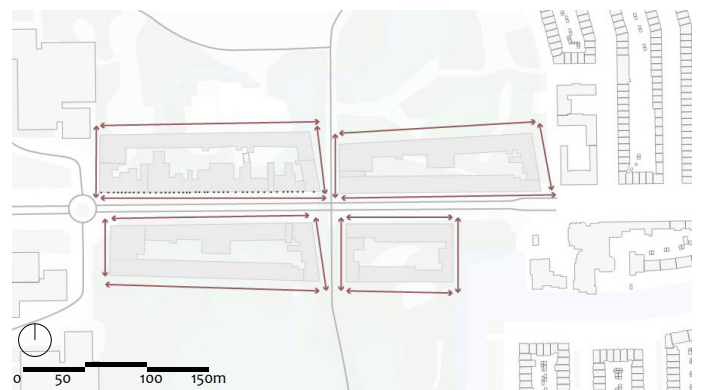
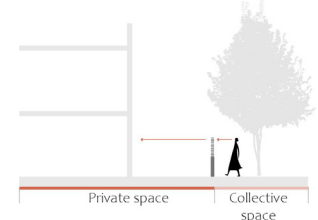


Fig. 128 Transition street-block



Fig. 129 Transition block-yard



Ijburg - Amsterdam

- + Visual difference in order to achieve urban depth
- + Pedestrian paths crossing the public space in the blocks

- Building blocks are too large, they take up too much space of the park
- Different pavement keeps people away from the facade, but does not motivate to claim the space

The typology applied in Ijburg would not be suitable to apply in Overtoomse Veld as the blocks take up too much space and do not aid in the activation of the public streets crossing the park.

Fig. 130 Ijburg (source: Google Earth (08.04.2021))

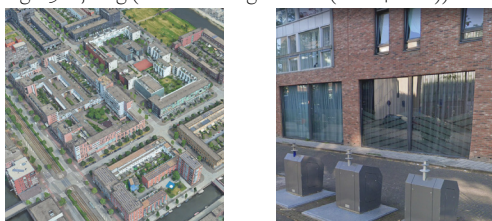


Fig. 131 Ijburg on Postjesweg

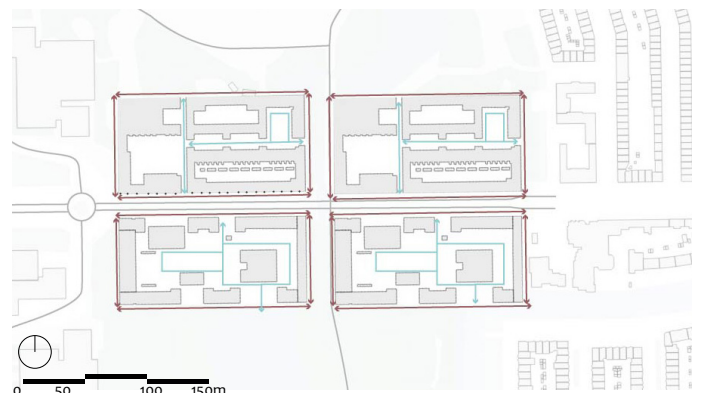
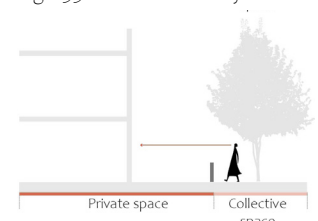


Fig. 132 Transition street-block



Fig. 133 Transition block-yard



Connection Overtoomse Veld

Important to note is that the densification in the park is used as a tool for the realization of the connection between Overtoomse Veld and the surrounding area.

Hausleitner (2019) explains continuity of economic conditions can create a successful location. When there is no continuous presence of activities, connections are not facilitated. Just the connection of a road is not enough and can be unsafe during nighttime. Which is the case in the current situation.

A small part of the park is therefore used for new buildings which house functions and residences to create activities, movement and stimulate interaction, in order to facilitate the connection between Overtoomse Veld and the city centre.

On top of that, there are currently only a few possibilities to enter the Rembrandtpark from the edges. No transitions are possible from the Postjesweg which divides the park in two separate areas. The new buildings in the park should therefore facilitate this transition towards the park.

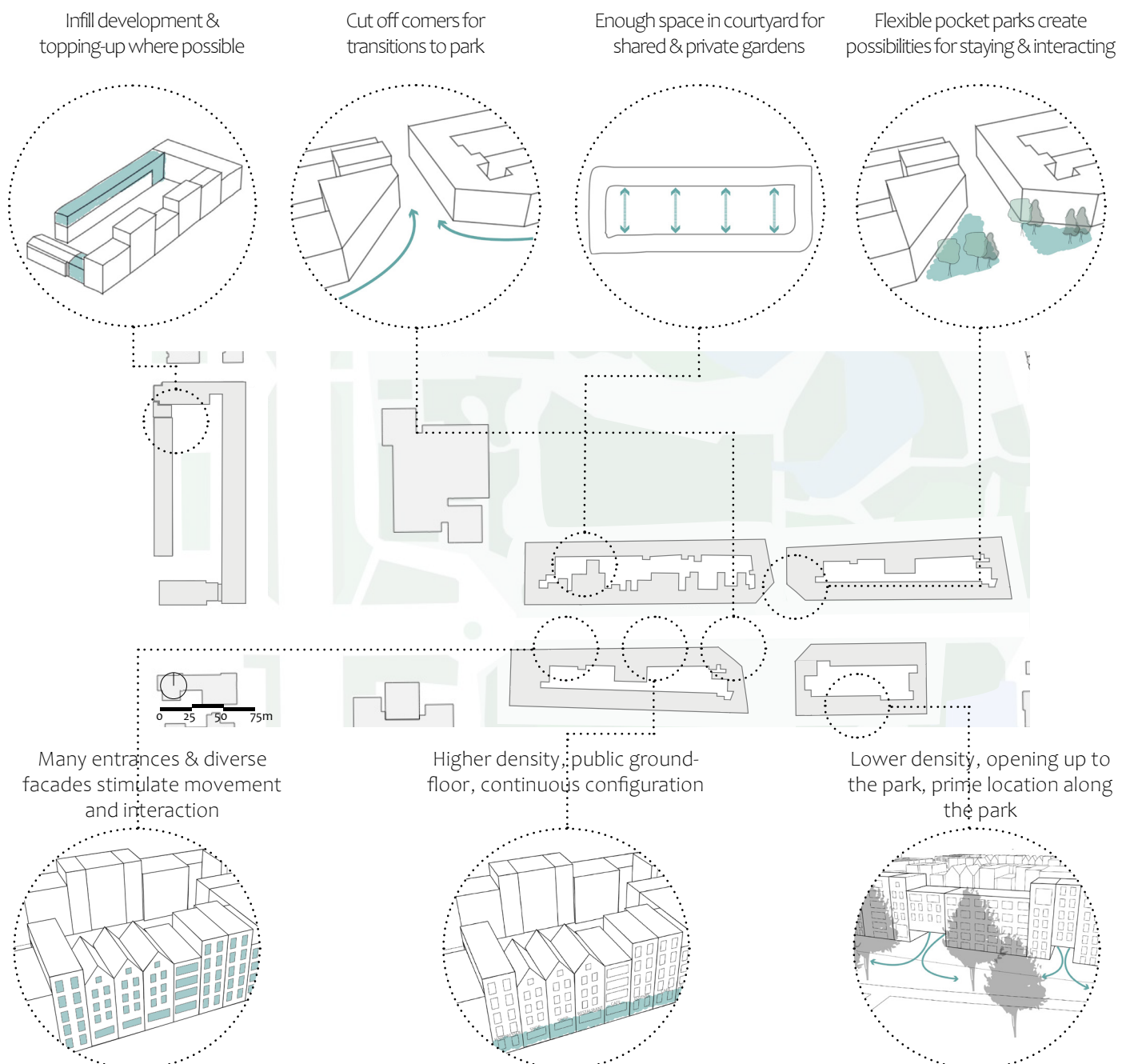
Fig. 134 Facilitating the connection through and in the park is important



Needed qualities building configuration

By doing case studies and looking at references, it is investigated what qualities are important for the buildings in this scenario. These qualities are explained below.

Fig. 135 Needed qualities building configuration



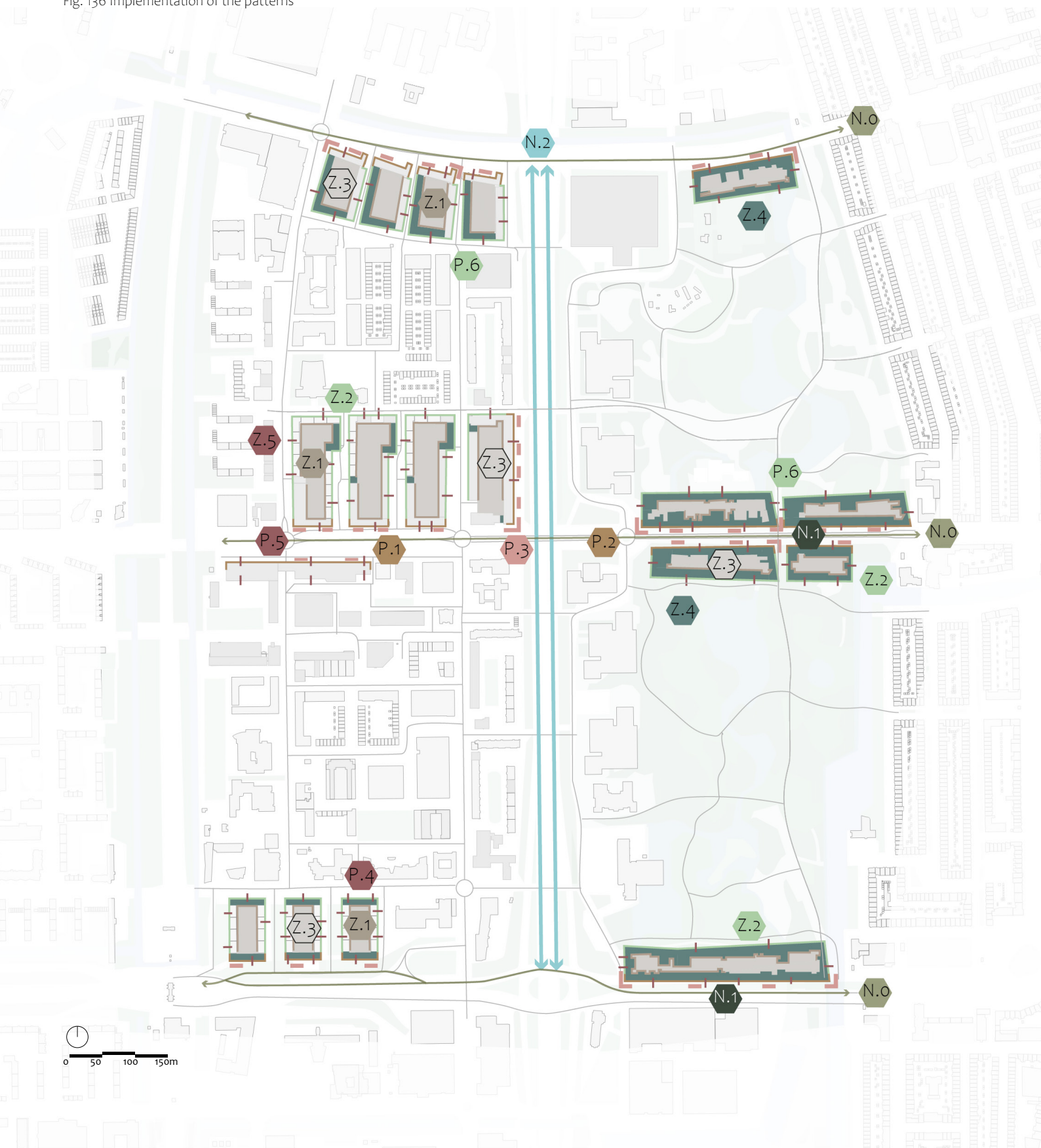
7.2.4 Where to implement the patterns

Figure 136 shows where the different patterns can be implemented in the neighborhood, taken into account the exploration for densification. The application of patterns changes the building configuration, domination and publicness in spaces and therefore zones. Public functions are mainly located around the main streets whereas semi-public or collective functions are more situated on the neighborhood street.

As certain patterns link with specific zones, but others just target the transition, it is chosen to zoom in to 3 locations to show how these factors influence the different zones in the neighborhood and investigate how the zones work, link to each other and what the qualities are.

-  N.0 Link to the city network
-  N.1 Introduce public transport to link to Stadsstraten
-  N.2 Downgrade ringroad
-  P.0 Permeability & continuity in the neighborhood
-  P.1 Diverse facades
-  P.2 Mixture of functions & amenities
-  P.3 Pocket spaces
-  P.4 More entrances in building blocks
-  P.5 Collective entrances
-  P.6 Create transparency by eyes on the street
-  Z.0 Clarification of the living environment
-  Z.1 Front gardens
-  Z.2 Public rooms at public street side
-  Z.3 Possibilities to close off spaces
-  Z.4 Increasing density
-  Z.5 Individual entrances
-  Z.6 Main street
-  Z.7 Neighborhood street
-  Z.8 Residential street

Fig. 136 Implementation of the patterns



Domination

The application of patterns results in changes in the neighborhood which influence the domination in spaces. By overlaying these maps, spaces occur with a high degree of publicness,

Fig. 137 Space dominated by cultural clusters



- 0 50 100 150m
- Stores, cafes & restaurants
- Hotels
- Cultural institutions
- Open spaces dominated by cultural clusters

Fig. 139 Space dominated by businesses & offices



- 0 50 100 150m
- Offices & businesses
- Institutions
- Open spaces dominated by offices & businesses

where multiple groups of people come, or spaces which are more private, where only a certain group comes.

Fig. 138 Space dominated by children, families & residents of the block



- 0 50 100 150m
- Schools
- Institutions
- Open space with playground & schoolyards

Fig. 140 Different actors with the spaces they dominate



- 0 50 100 150m
- Cultural cluster related
- Children, families & residents of the block related
- Businesses & offices related

Fig. 141 (semi-)public zones around main street

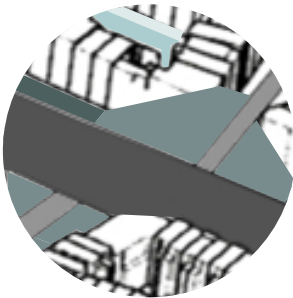


Fig. 142 Transition public to more private zones

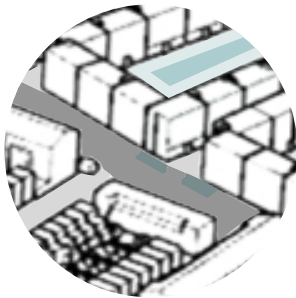


Fig. 143 Private zones around residential street

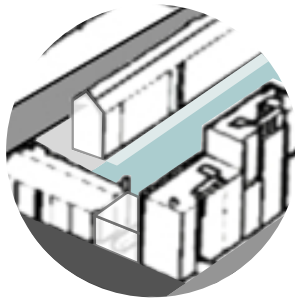
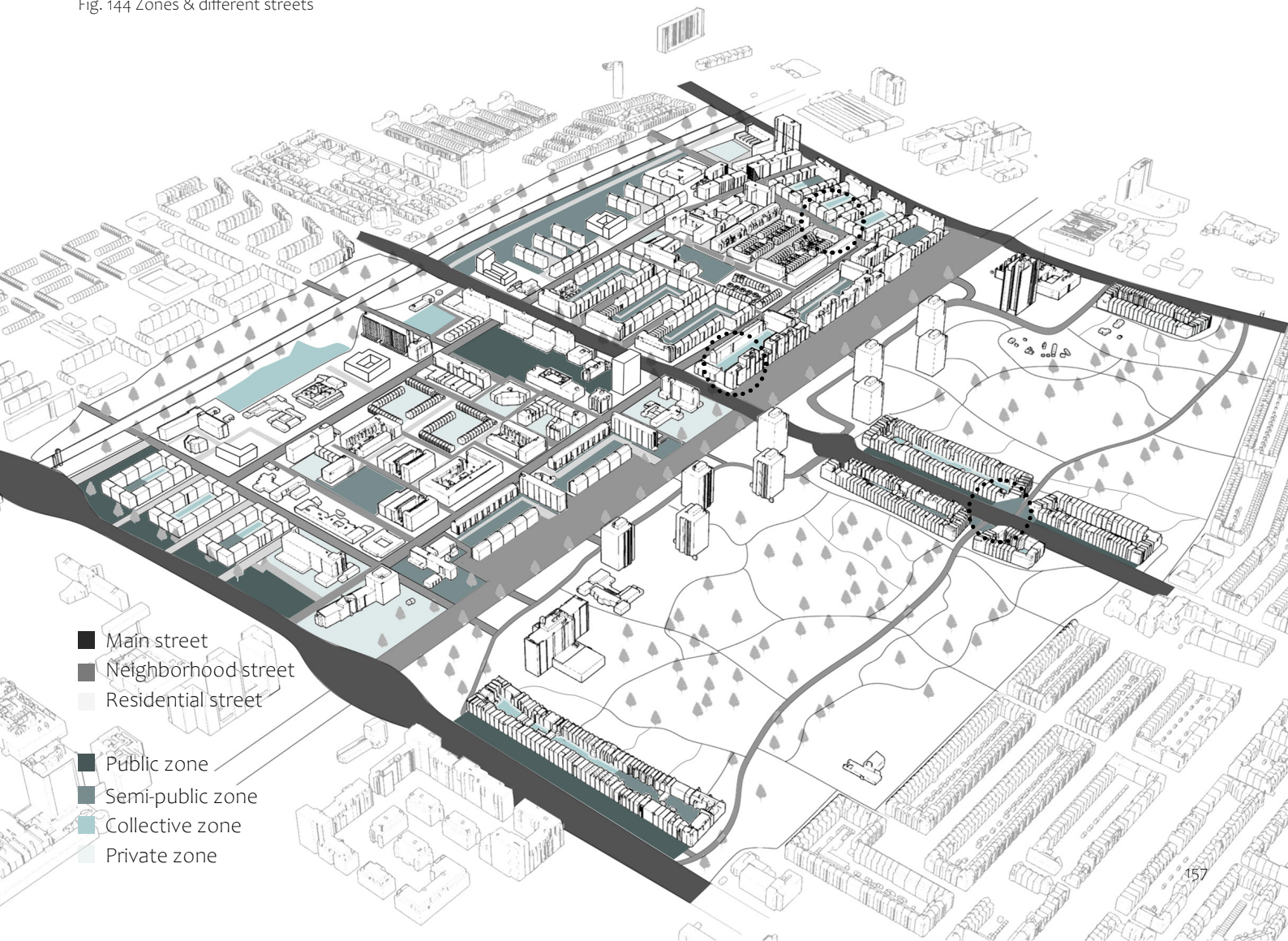


Fig. 144 Zones & different streets



- Main street
- Neighborhood street
- Residential street
- Public zone
- Semi-public zone
- Collective zone
- Private zone

Patterns of streets

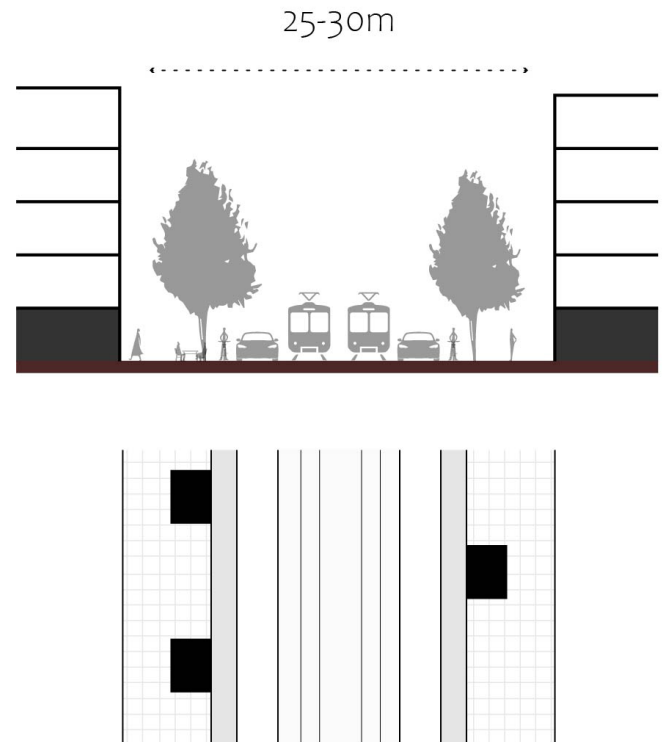
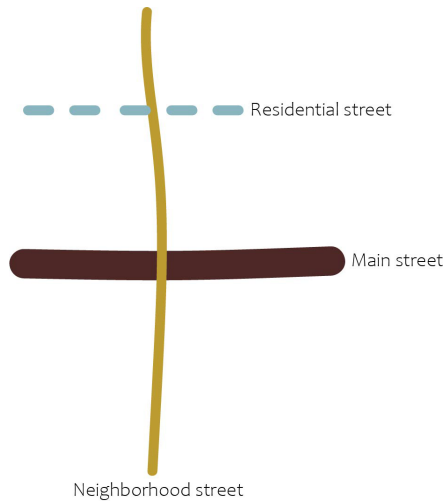


Fig. 145 Main street

Main street

Network & infrastructure

Main streets need to be created for the connection of the neighborhood with the surrounding area. The streets link to highly used streets, as Stadsstraten, from the surrounding area. Many different forms of traffic make use of the street. They are intensely used by different people throughout the day, street profiles are wide, and give much space to pedestrians. On top of this, space is created for public transport, cyclists and cars.

Functions

Mainly the most public functions are located in the buildings adjacent to the main streets. These functions consist of shops, cafes and restaurants.

Furnishment

As the main streets play a large role in the link to the surrounding area, activities and possibilities for interaction need to be created to stimulate the connection. Diverse facades and a mixture of functions can stimulate this. Parking spaces can be used to create pocket parks which stimulates temporary activities and interaction. These pocket spaces can also be introduced on corners to stimulate the transition towards neighborhood streets. Also shops have the possibility to extend to these spaces.

Density

High density blocks can be placed around these streets due to the large street width. Transitions towards buildings need to be realised by entrances and permeability of the block.

Relates to: N.0, N.1, N.2, P.0, P.1, P.2, P.3, P.6, Z.0, Z.7, Z.8 & T.0, T.1, T.3, T.4, T.5, T.7, T.8, G.0, G.1, G.2, G.3, G.6, G.7

- Public function
- Semi-public functions as kindergarten & repairshop
- Collective function as communal/shared room

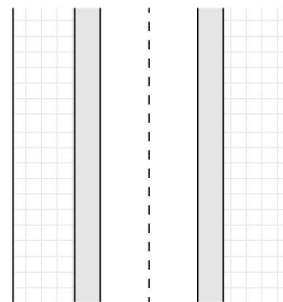
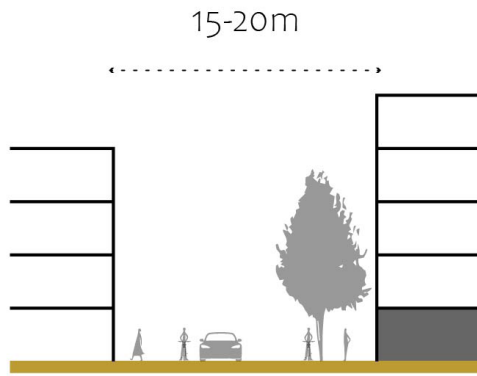


Fig. 146 Neighborhood street

Neighborhood street

Network & infrastructure

Neighborhood streets connect the main streets to areas located more inside the neighborhood. The streets are more intensely used by traffic, compared to residential streets. Space is created for two car lanes, bicycle paths and pedestrian pavement.

Functions

Mainly residential buildings and semi-public functions are located on these streets. Examples of semi-public functions are workspaces, kindergartens and repairshops.

Furnishment

Semi-public functions can be located on the corners of the block to introduce the transition between the neighborhood and residential street. These functions can have outdoor spaces as terraces. The different pavement and fences of terraces create clarity on the street.

Density

Adjustments to existing blocks surrounding the neighborhood streets can be done in order to improve the quality. Collective entrances and eyes on the street, by placing the public rooms at the public street side, play an important role to create a pleasant outdoor space.

Relates to: N.2, P.0, P.4, P.5, P.6, Z.0, Z.2, Z.3, Z.6, Z.8 & T.0, T.1, T.4, T.5, T.8, G.0, G.2, G.3, G.5, G.7

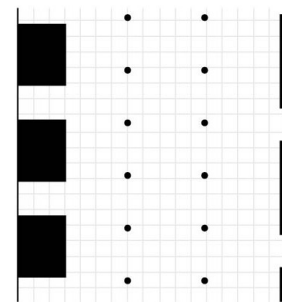
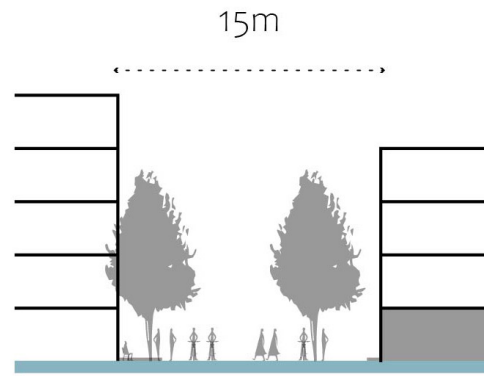


Fig. 147 Residential street

Residential street

Network & infrastructure

As residential streets can be viewed as the more private areas, they are dominated by slow traffic and contain more quality to stimulate people to stay and interact.

Functions

Functions on and around the residential streets are mainly residences or collective functions shared by residents which are more community orientated.

Furnishment

Cars can enter, but are guests on the residential streets. This is facilitated by the application of one pavements material. Car lanes are recognizable by lights in the pavement. In this way, pedestrians and cyclists are stimulated to make use of the whole street. As the streets have a more private, "outdoor living room" feeling, front gardens and strips of green are introduced in front of housing. Also playgrounds and sportsfield can be found on and around these streets.

Density

Also here adjustments to existing blocks can be done to enhance the existing quality. Front gardens and individual entrances can stimulate eyes on the residential streets.

Relates to: P.0, P.6, Z.0, Z.1, Z.3, Z.5, Z.6, Z.7 & T.0, T.4, G.0, G.3, G.4, G.5, G.6



NEW HOUSING IN THE PARK (semi-)public zones around the main street

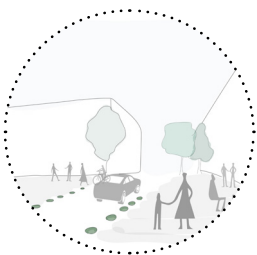


Fig. 148 Visualisation of main street surrounded by new buildings in the park

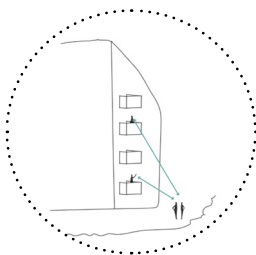


As the Postjesweg, Jan Tooropstraat and Cornelis Lelylaan will be activated and linked with the surrounding city network, the streets have high potential to attract a variety of users in the park. Densification, which include different shops, housing and amenities, is applied on these streets to stimulate the connection. Pedestrians dominate the public zone by application of one pavement material. Terraces and pocket parks can be viewed as semi-public zones. The transitions are identifiable by change of pavement, benches and green. Several shops also have a private outdoor space at the inside of the block, these spaces are privately owned and publicly accessible when the shops are open. This requires clear privacy zoning in the area and visible transitions to cross from one space to another.

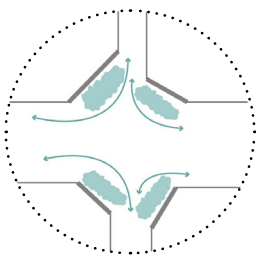
Pavement lights shows car lane on crossing, pedestrians dominate



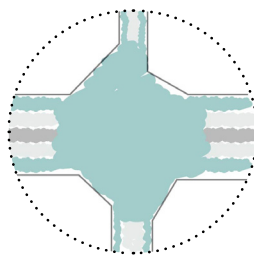
Windows & balconies create eyes on the street



Flexible pocket parks and cut off corners for transitions to park



Pedestrians dominate crossing by material change



Enough space in courtyard for shared & private yards

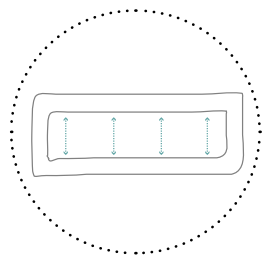


Fig. 150 Achieved qualities Postjesweg



Fig. 151 Section E-E' current situation

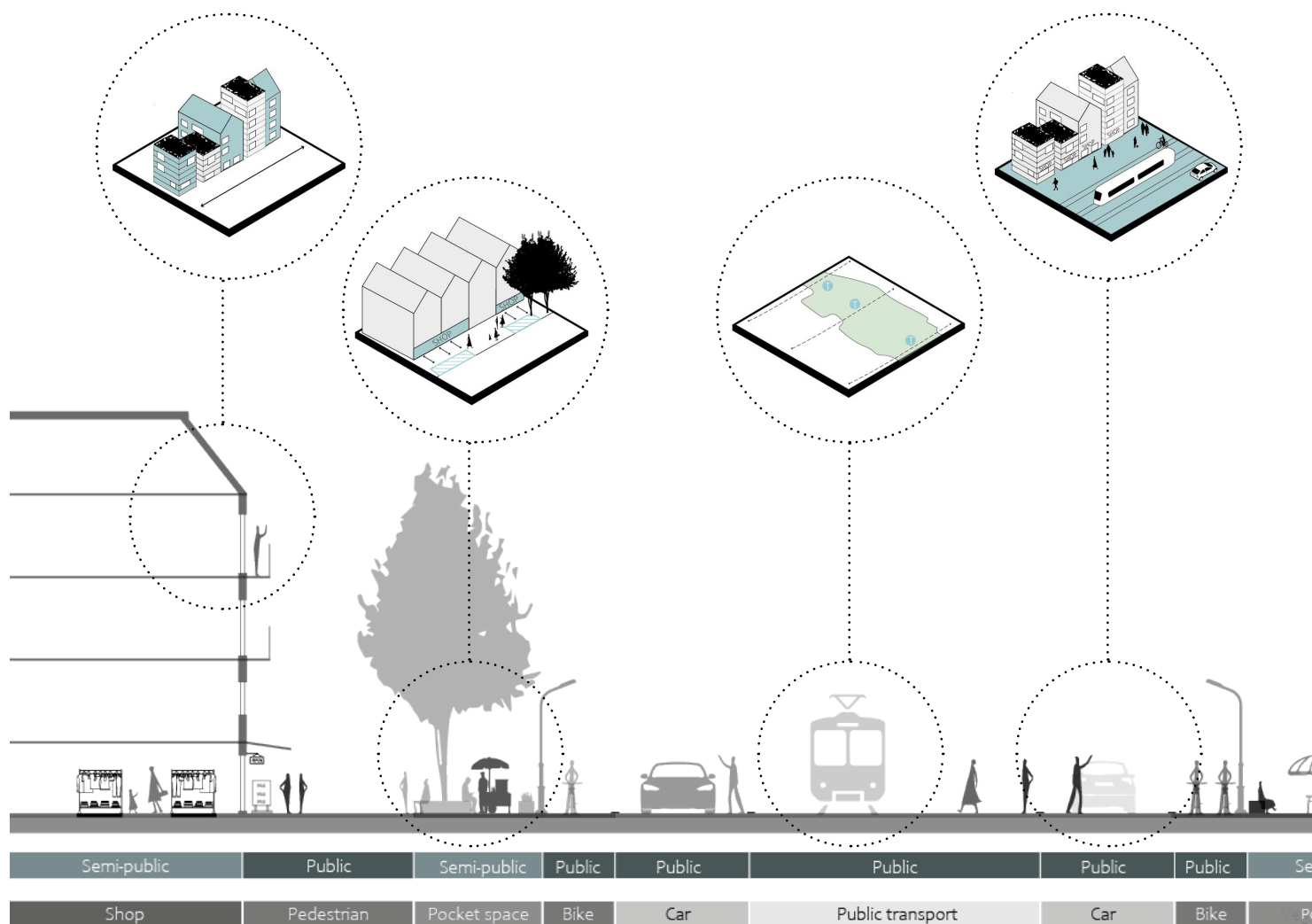
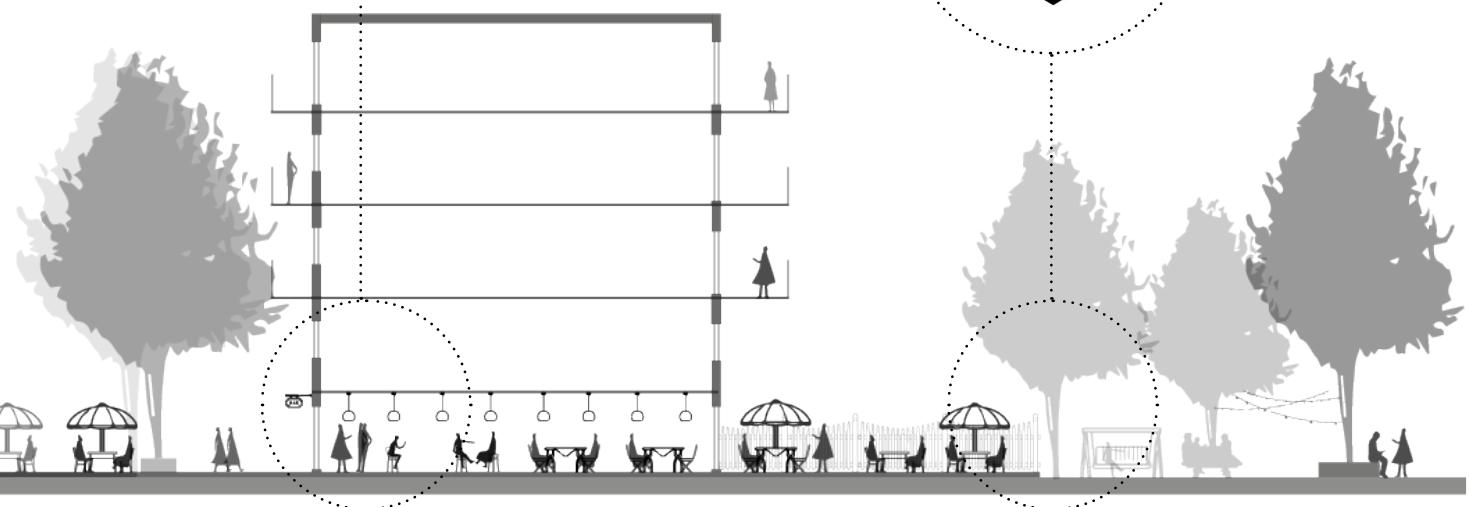
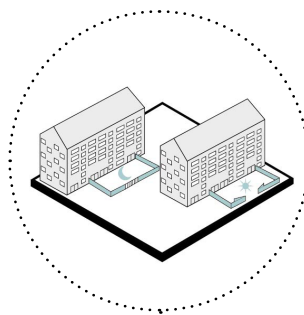
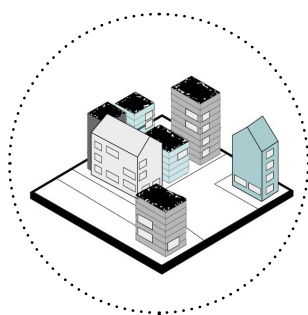


Fig. 152 Section E-E' new situation. Certain patterns link to specific zones



0 2,5 5 7,5m



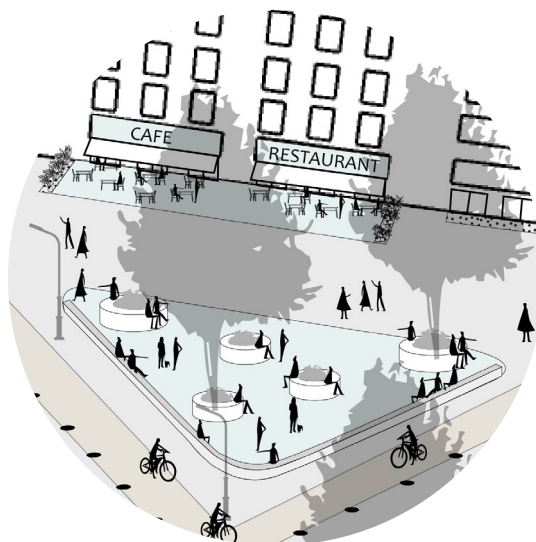
semi-public	Public	Semi-public	Semi-public	Collective
ocket space	Pedestrian	Bar/restaurant	Terrace	Courtyard

0 2,5 5 7,5m

Possibilities for shops to extent to the street



Small pocket park with seating possibilities



Temporary activities for residents, visitors & passers-by like food stands



Fig. 153 Flexibility of pocket parks on corners

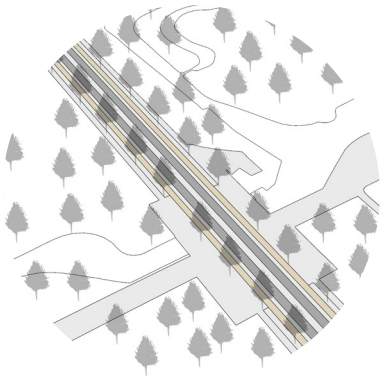


Fig. 154 Current situation Postjesweg

- ① **Manage & diversify ownership** of newly built housing in order to prevent gentrification
- ② **Communal cooperative** for pocket spaces to integrate current & new residents and shopowners
- ③ Community organizations require a **good collaboration** with the **municipality** about who owns and maintains the space

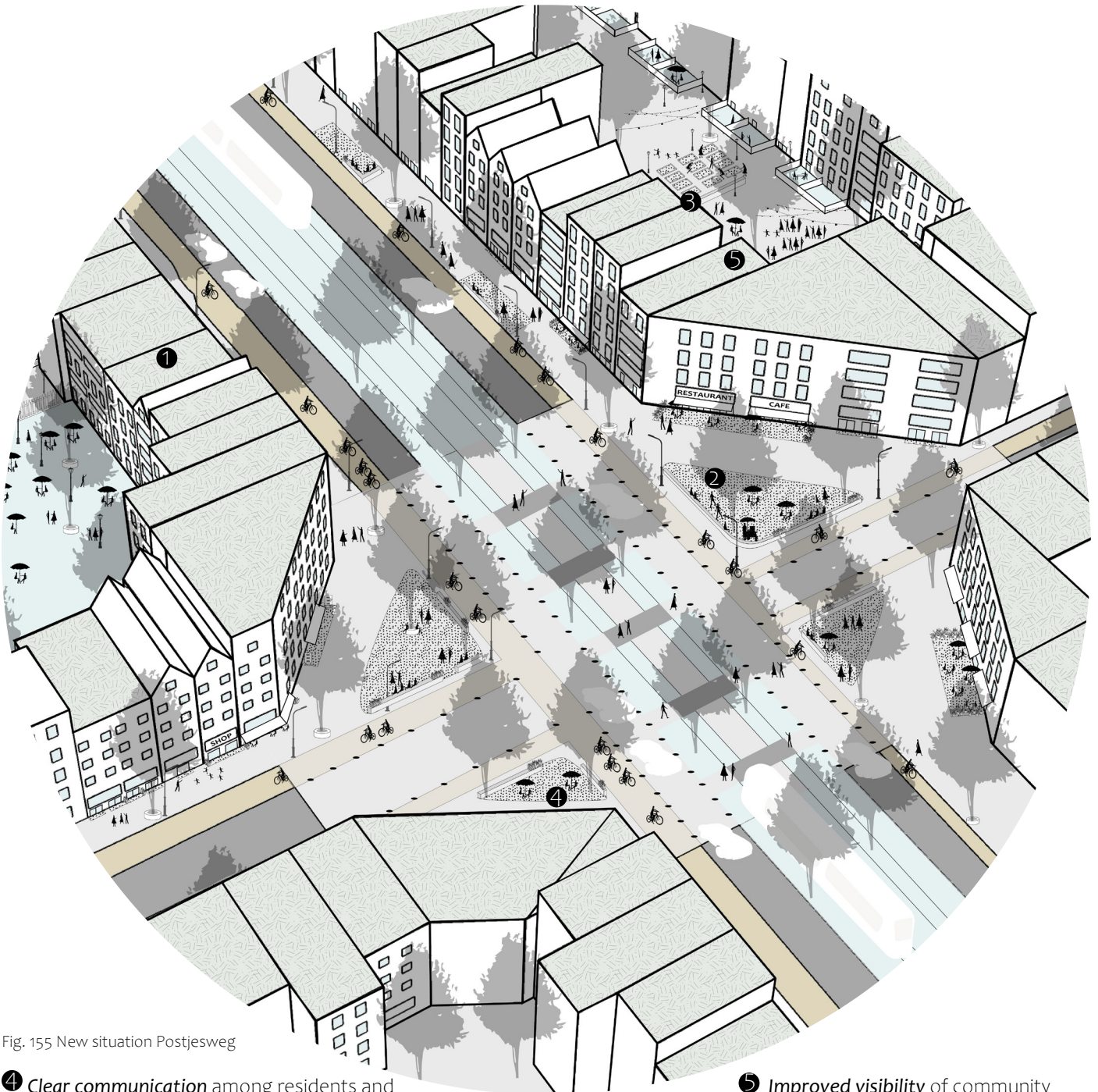


Fig. 155 New situation Postjesweg

- ④ **Clear communication** among residents and with shopowners is important for communal cooperatives for pocket spaces
- ⑤ **Improved visibility** of community organizations to stimulate interest and **facilitate participation**



DEVELOPMENT IN THE NEIGHBORHOOD

the transition from public to more private zones

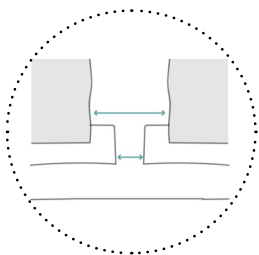


Fig. 156 Visualisation from public to more private zones

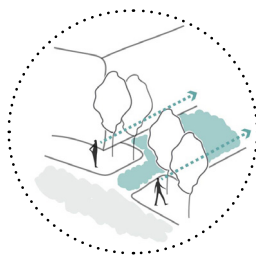


Changes have been made in the urban fabric to make the transition from the public to the more private zones better readable. The existing parcels are densified. A narrow street creates a more private atmosphere, green and different pavement mark the change of territory, and semi-public functions are located on the corners of the building. Looking at the different functions and relation of buildings and streets, it is visible the corner shops emphasize, with transparent facades, terraces with different pavement material, and borders of green, a more semi-public zone, while the small front gardens introduce the transition to private zones. This is an example of a location where social cohesion can be achieved between residents who are more individual orientated. Every household has their own apartment and outdoor space, but privacy zoning and different territories are clear which creates opportunities for spontaneous encounters and social control, which aids in achieving social cohesion.

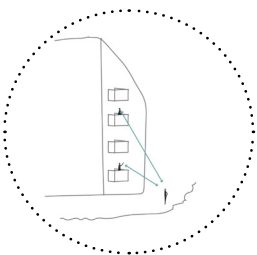
Narrow street creates a more private atmosphere



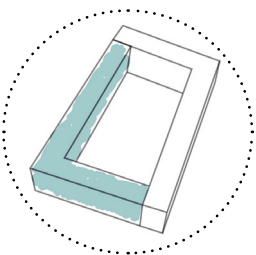
Green & different pavement to mark change of territory



Windows & balconies create eyes on the street



Densification which aids in clarification of zones



Street dominated by slow traffic, gives easier possibilities for interaction

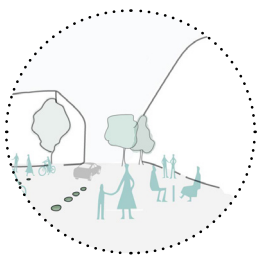
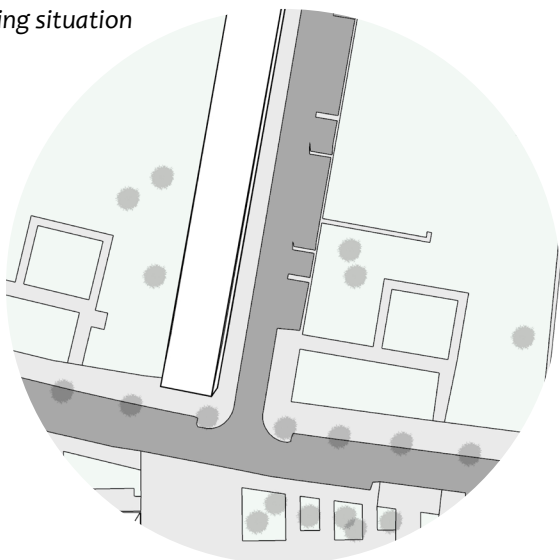


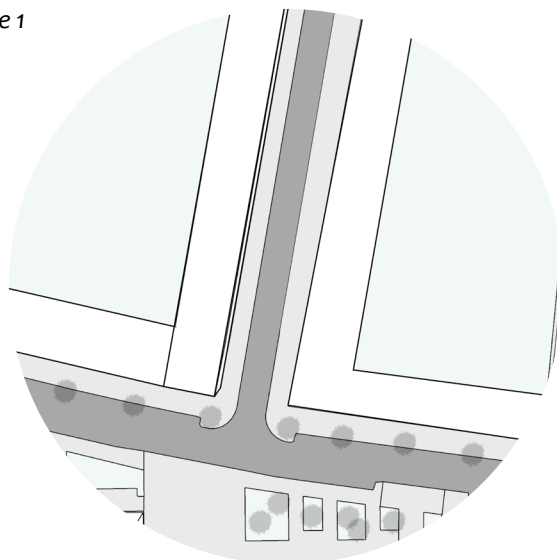
Fig. 158 Achieved qualities Jan Voermanstraat

Fig. 159 Phasing Jan Voermanstraat

Existing situation



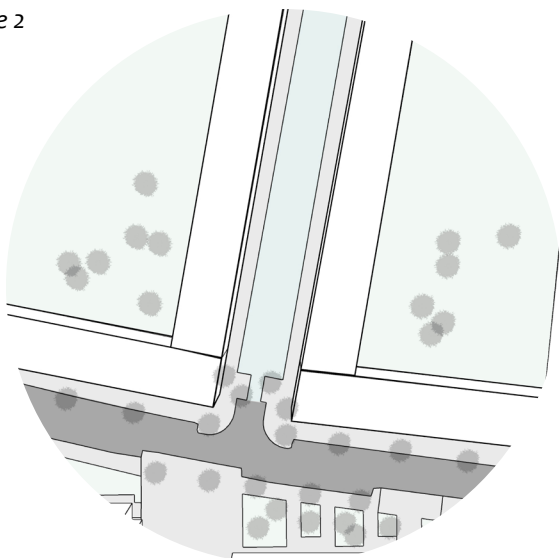
Phase 1



Densification around the open yard

Reduction of existing parking spaces

Phase 2

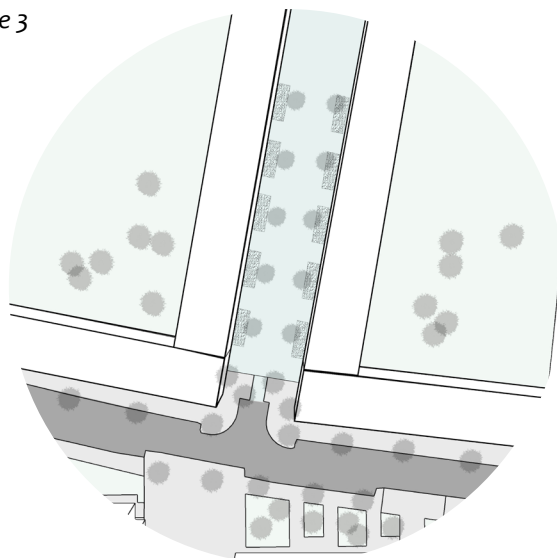


A more narrow passage is created

Application of green and different materials marks the change of streets & creates privacy

Further reduce car dominance

Phase 3



More greenery on the residential street

Pedestrians dominate the space:
safe open space for residents, including children

Application of front gardens on residential street,
semi-public functions on neighborhood street

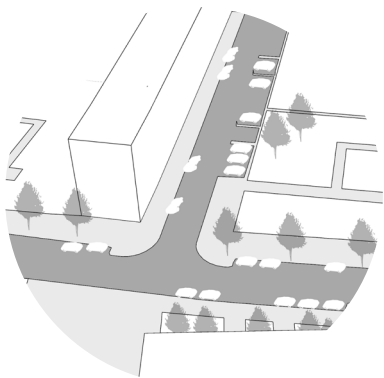


Fig. 160 Current situation Jan Voermanstraat

① **Improved visibility** of community organizations to stimulate interest and *facilitate participation*

② Existing housing completely owned by **social housing corporation**
(source: Gemeente Amsterdam (2019c))

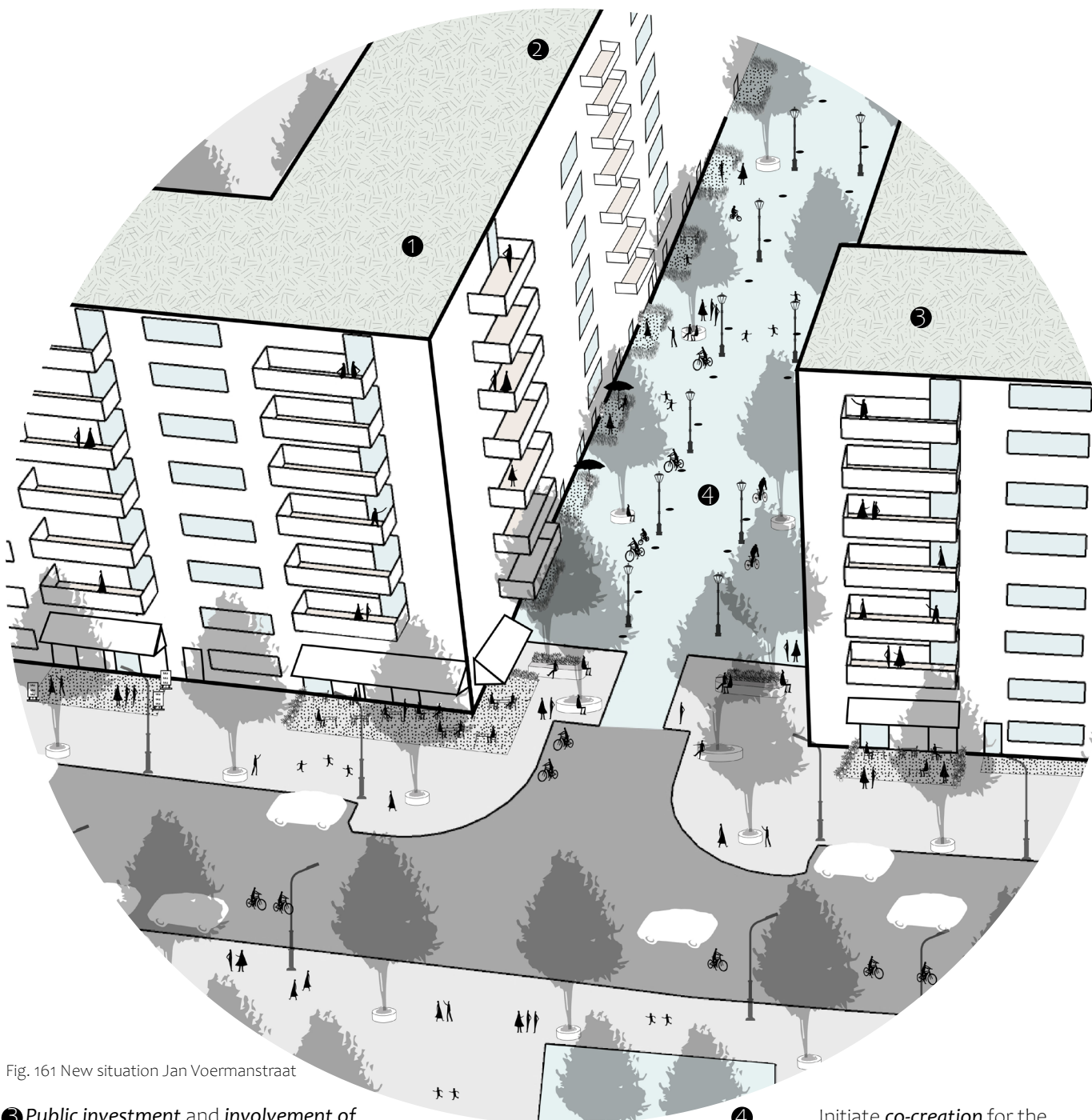


Fig. 161 New situation Jan Voermanstraat

③ **Public investment** and *involvement of social housing corporations* needed for new housing

④ Initiate **co-creation** for the transformation of the more private streets



EXISTING HOUSING WITH PRIVATE & COLLECTIVE YARD

the more private zones around the residential street



Fig. 162 Visualisation of the transformed courtyard with private & collective zones



Fig. 163 Willy Sluiterstraat (Source: Google Earth (12.05.2021))

Densification of buildings is applied which aids in the readability of different zones. In this way, housing is created for future residents and spaces can be transformed into private zones where residents withdraw from the public, or collective zones for a certain group of people where accessible interactions are created and possibilities occur for (communal) activities. In order to promote the usage and activation of the collective zone, it is important the right typologies are surrounding the space. Therefore, people who are in need of more shared and collective facilities will mainly be located more inside the neighborhood with the presence of these collective zones, while residents who are more individual or not looking for this kind of interaction are mainly located on the more central locations. Social cohesion, different zones and housing typologies are therefore related.

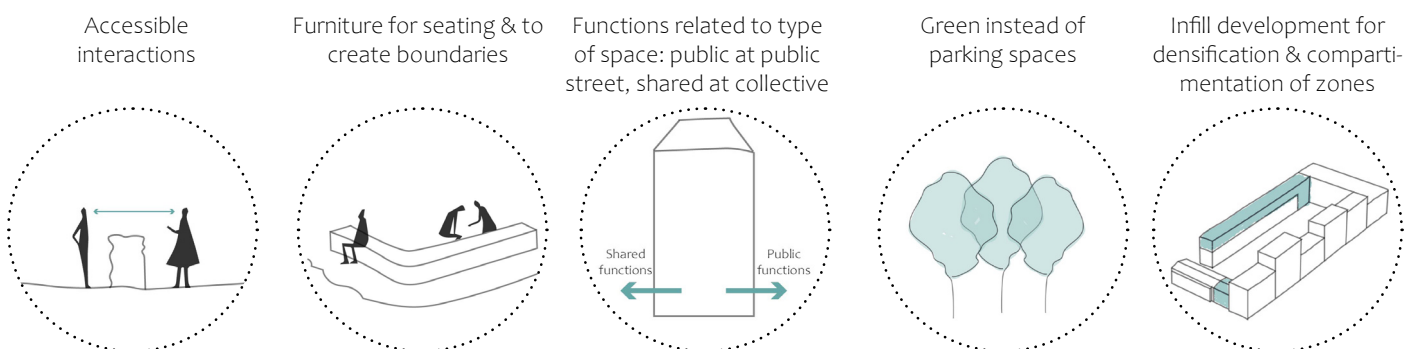


Fig. 164 Achieved qualities Willy Sluiterstraat

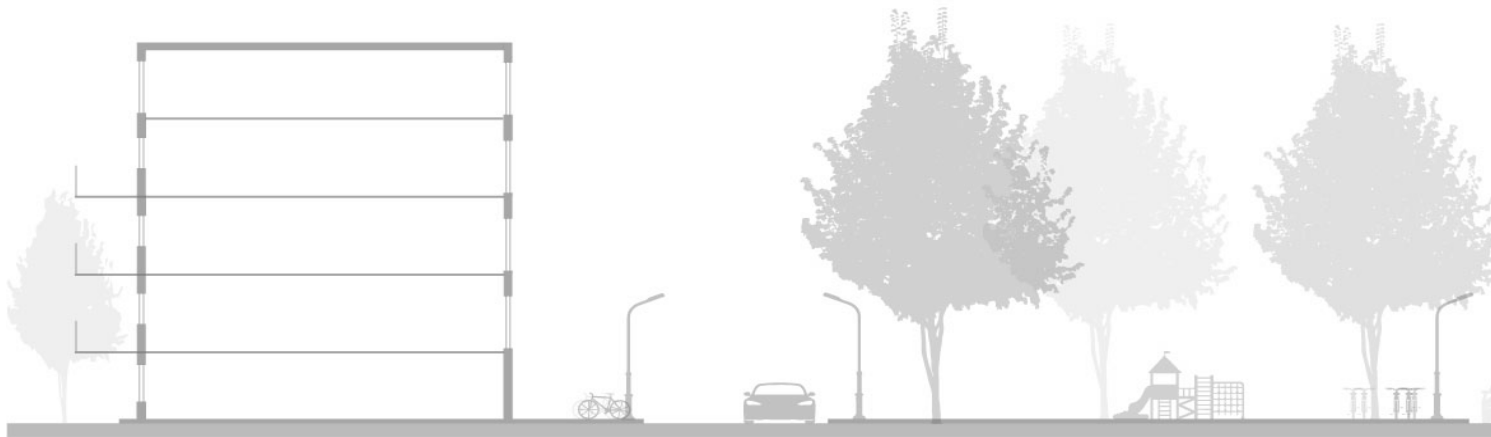


Fig. 165 Section F-F' current situation

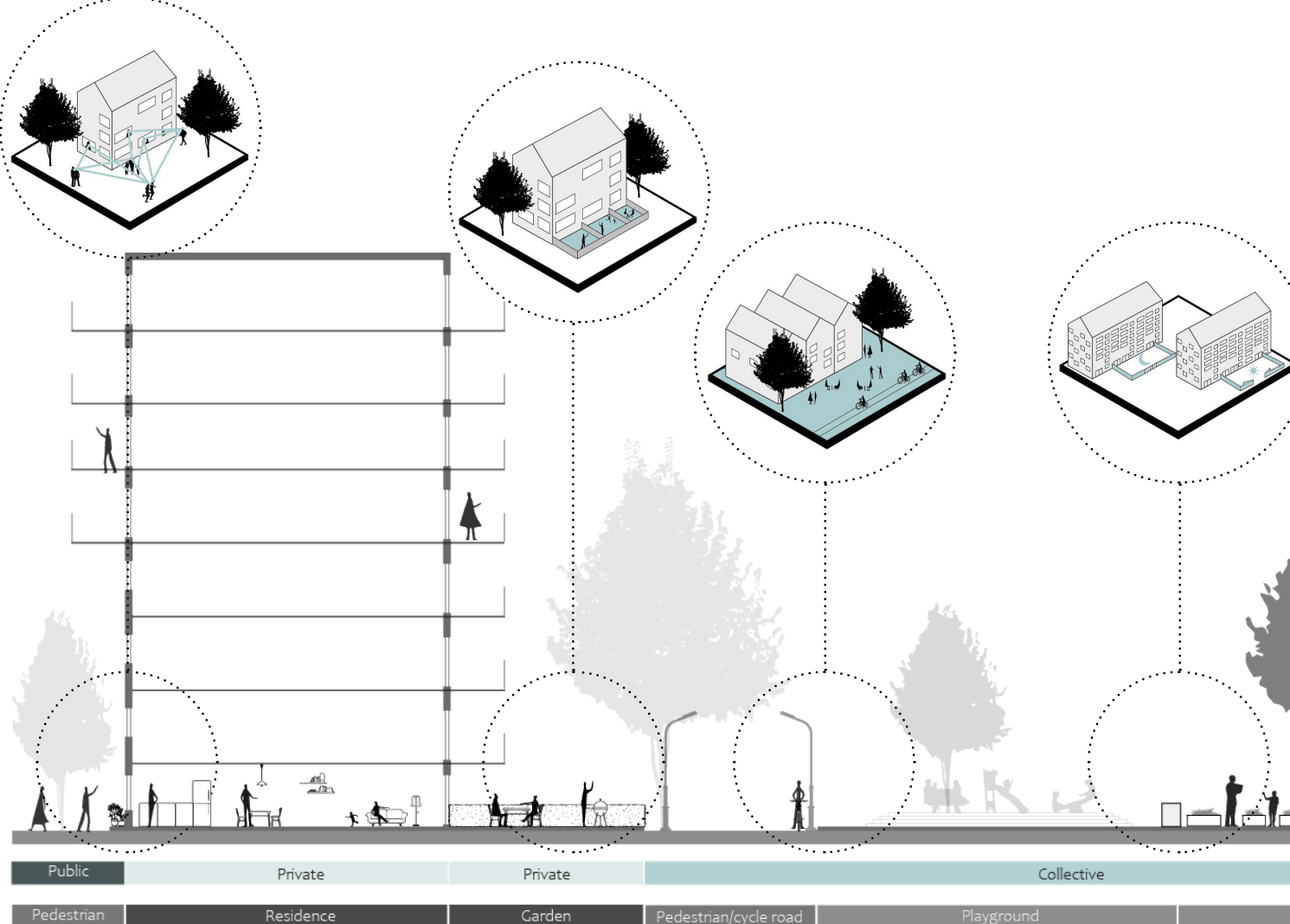
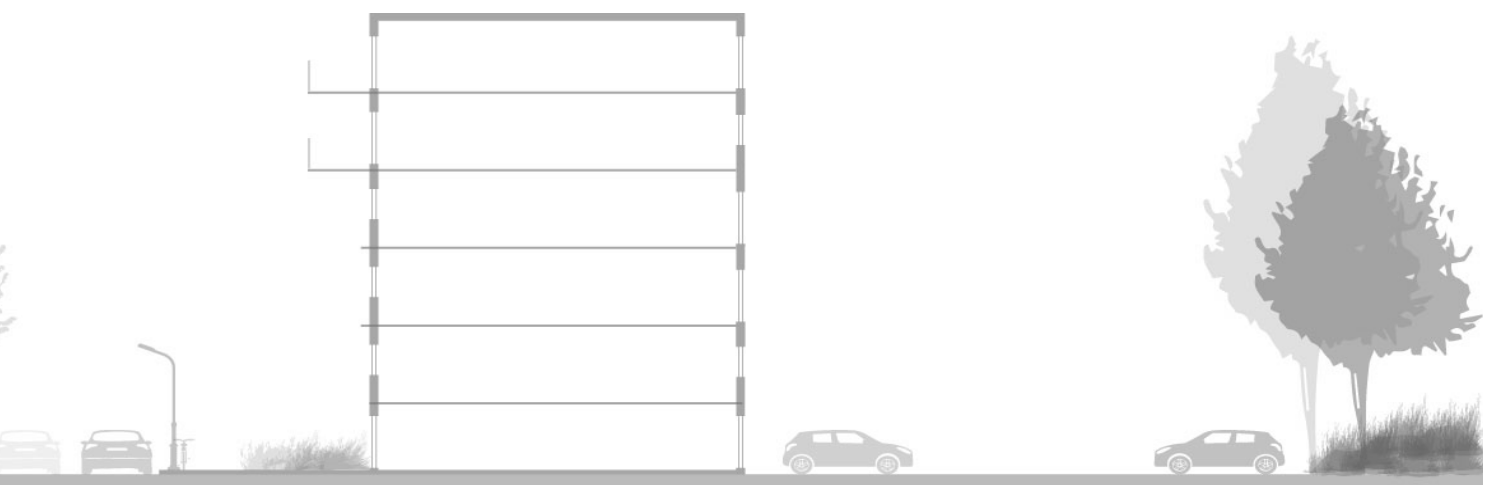
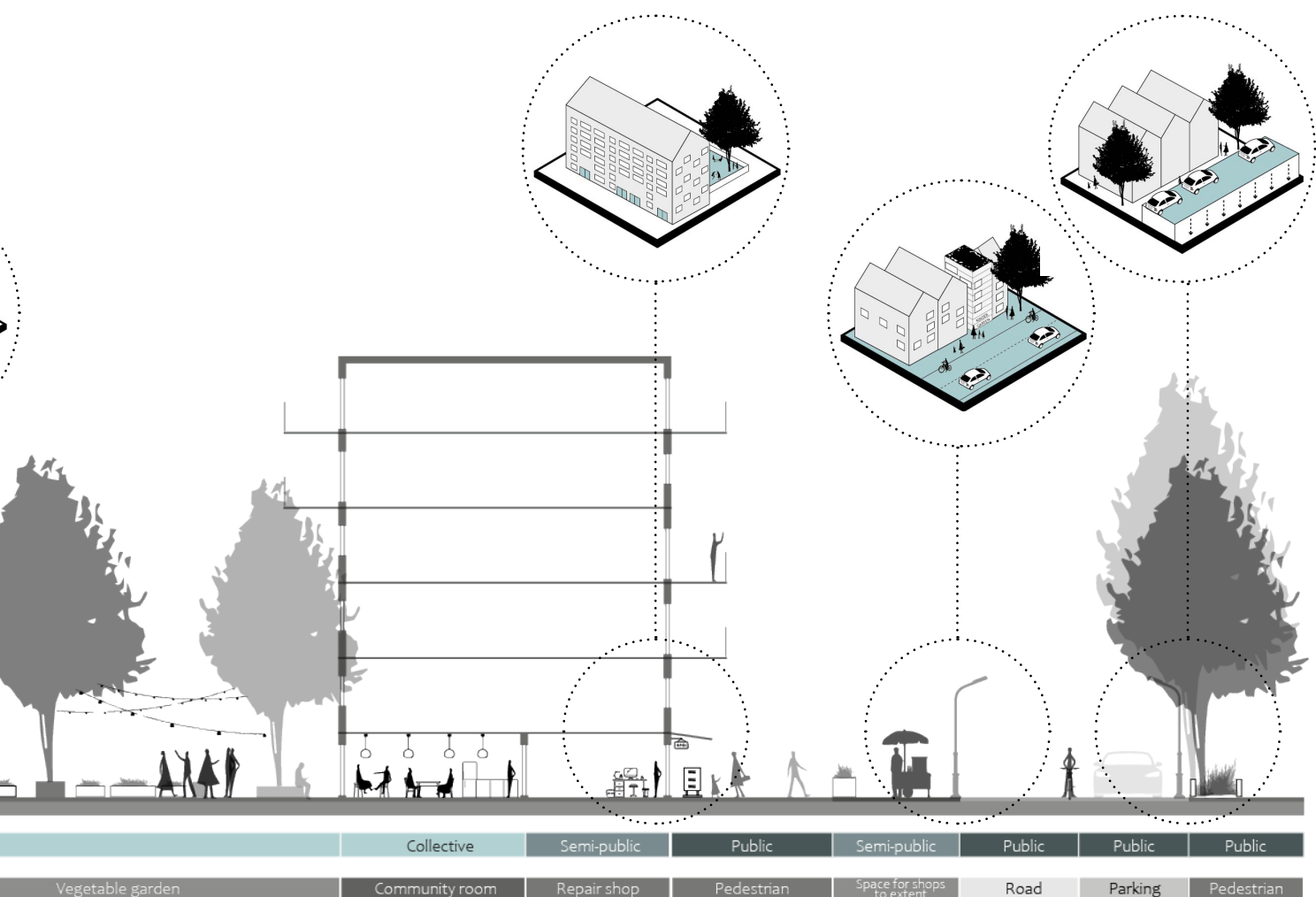


Fig. 166 Section F-F' new situation. Certain patterns link to specific zones

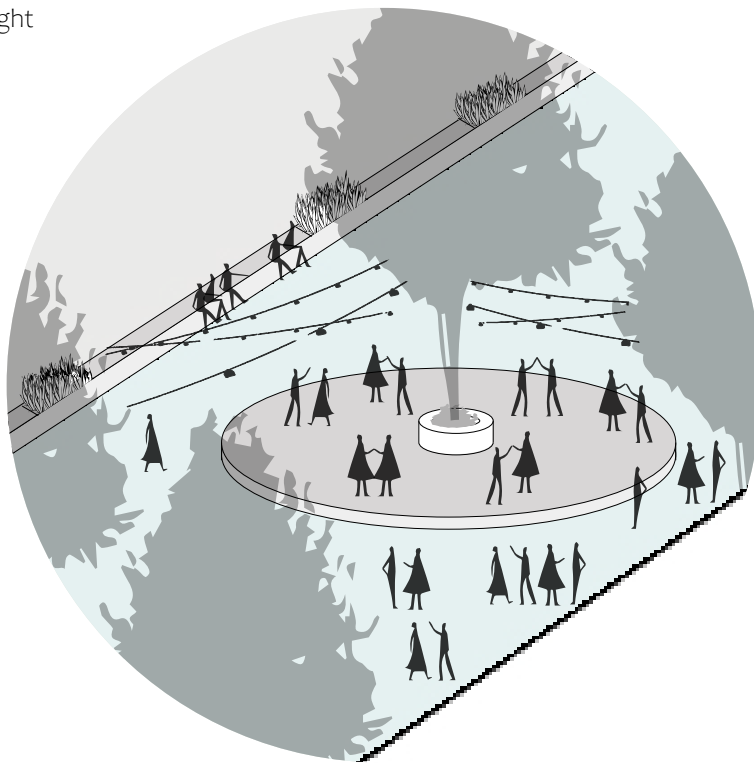


0 2,5 5 7,5m



0 2,5 5 7,5m

Regular event: tango night



Special event: food festival



Fig. 167 Event proposals collective space

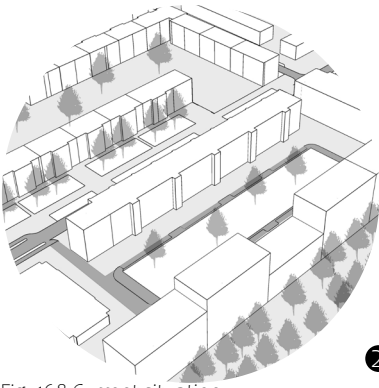


Fig. 168 Current situation
Willy Sluiterstraat

② Existing housing completely owned by **social housing corporation**
(source: Gemeente Amsterdam (2019c))

④ Initiate **co-creation** for the transformation of the collective spaces which have existing play & sport facilities

① **Improved visibility** of community organizations to stimulate interest and **facilitate participation**

③ **Public investment** and **involvement of social housing corporations** needed for new housing

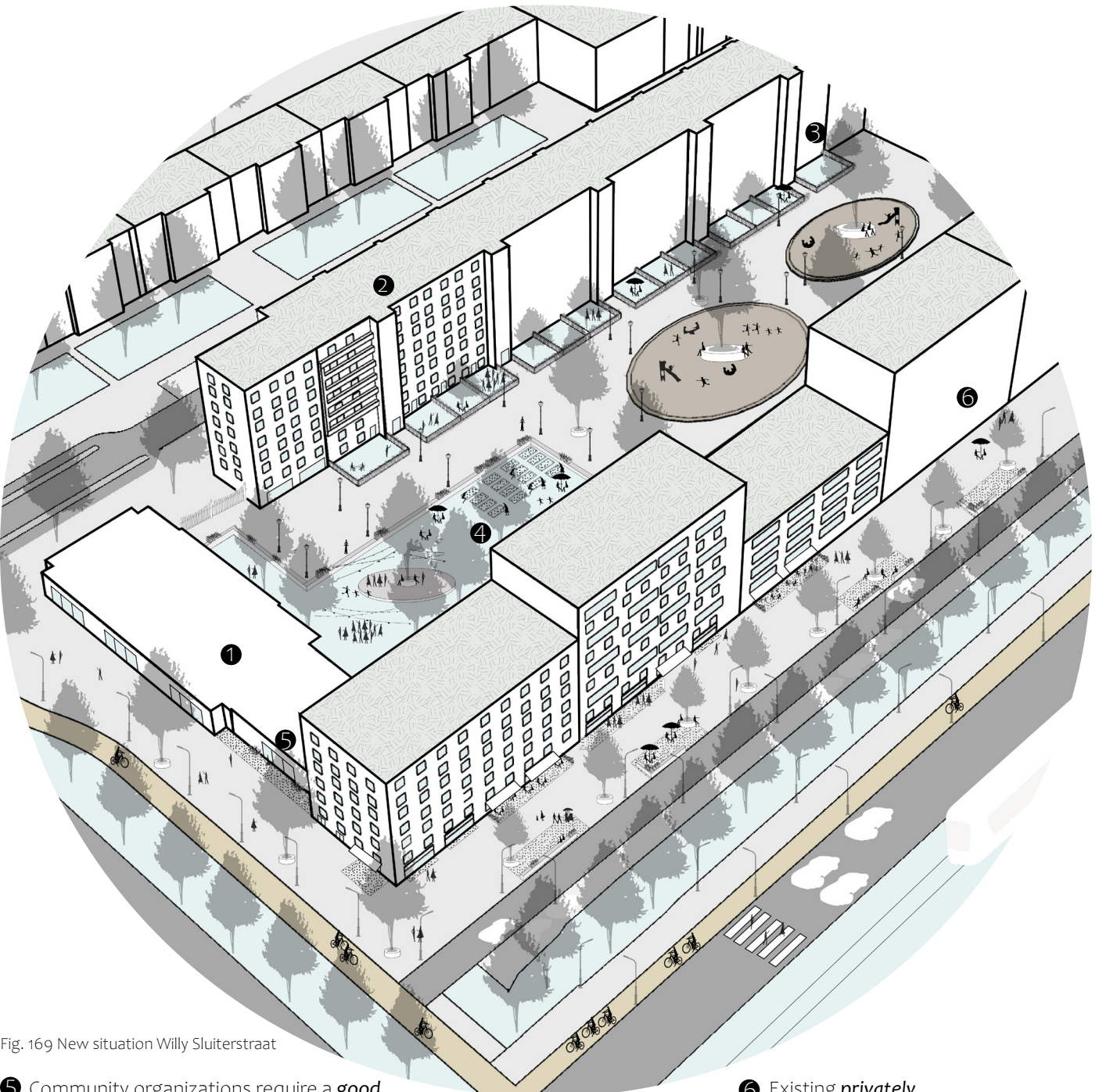


Fig. 169 New situation Willy Sluiterstraat

⑤ Community organizations require a **good collaboration** with the **municipality** about who owns and maintains the space

⑥ Existing **privately owned** housing
(source: Gemeente Amsterdam (2019c))

7.2.5 Relation diversity of people & building types

The diversity of people needs to be embedded in the diversity of building types in order to aid in the achievement of social cohesion. Some people are in need of more shared facilities, while others live a more individual life, the design of the neighborhood should be able to facilitate these different needs. People with similar needs will reside in similar buildings and housing typologies. This is visualized in figure 172.

On top of this, it is investigated what type of transformation can aid in the diversity of residents. The existing 80m² housing needs to change as it is either too large and too expensive or too small. Transformation and new housing is needed:

- 50-60m² for oneperson households & studios
- 100m² for family housing & housing with shared facilities

Diverse typologies, extension and infill of housing plays an important role in keeping residents when they are expanding their family or start earning more. In this way people can stay in Overtoomse Veld, instead of moving somewhere else.

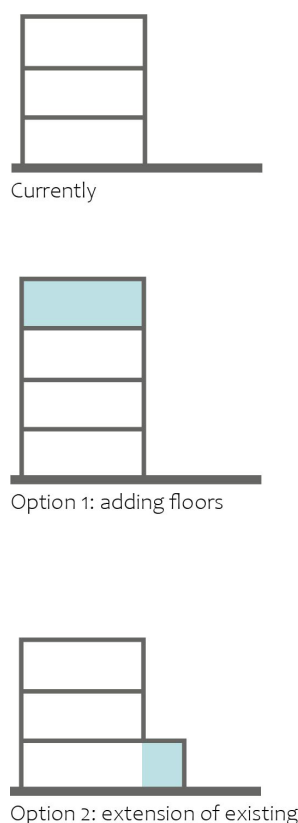


Fig. 170 Options for expanding & enlarging current housing

On top of this, the quality of existing housing is transformed by adjustments of the facades to create more light, air and outdoor space (fig. 171). Also moveable walls can create opportunities when the needs concerning housing types and sizes of residents changes.

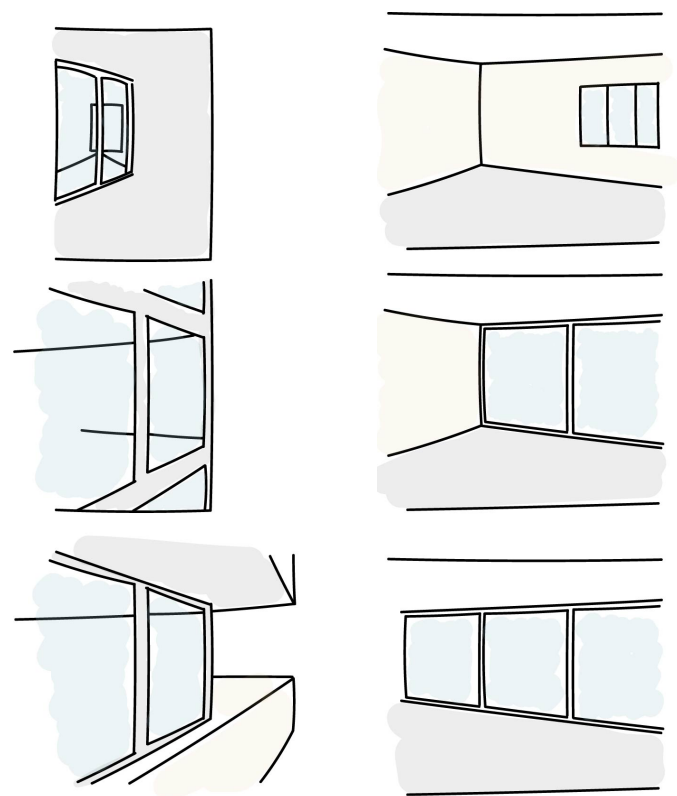


Fig. 171 Adjustments to existing facade to create more light, air & outdoor space

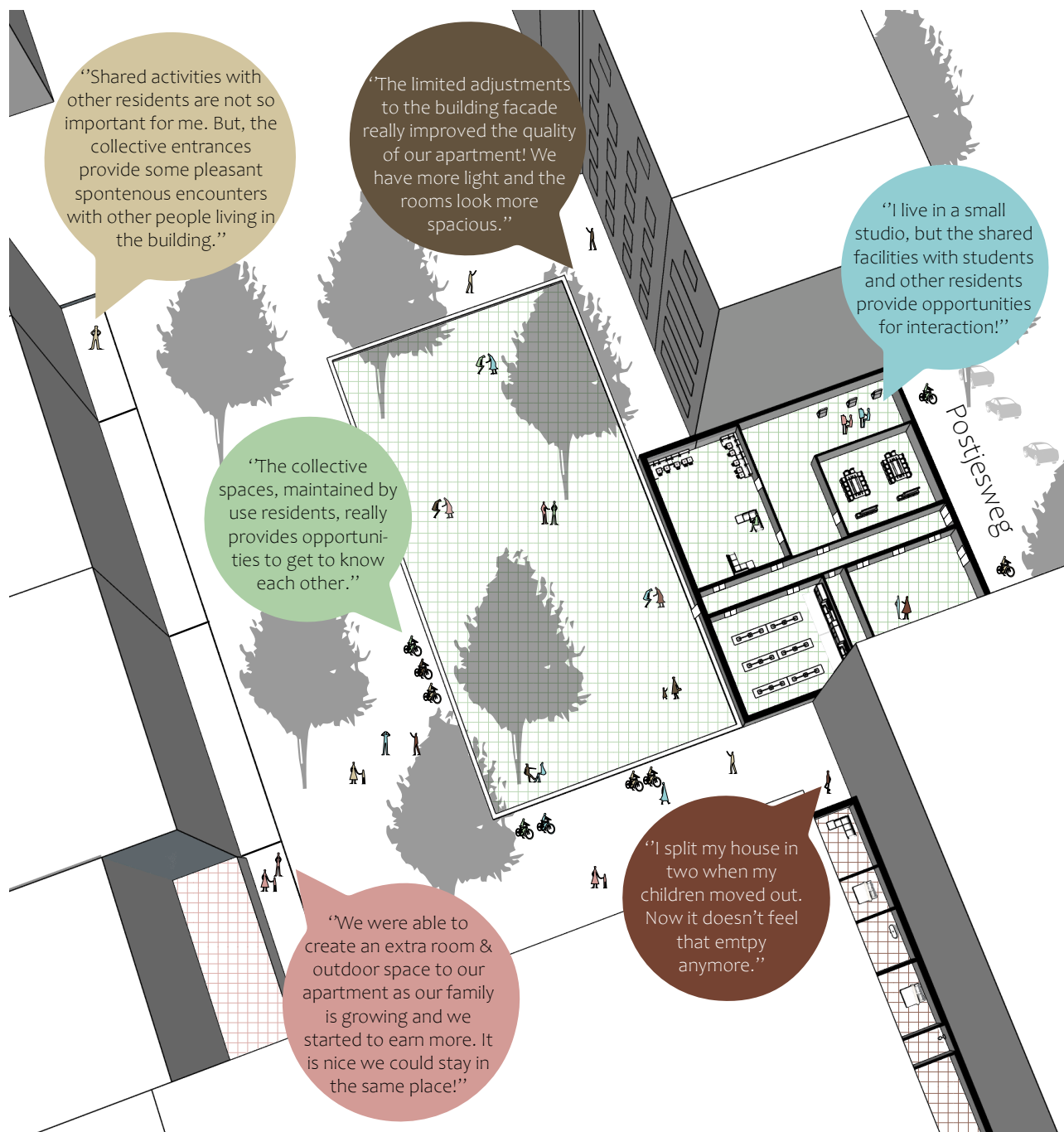


Fig. 172 Diversity of people embedded in a diversity of building types

7.2.6 Stakeholders

Diversify ownership

As this scenario is not only looking into transformation of the existing housing stock, but also into building new housing, a distinction of ownership can be made between social housing corporations, co-housing, developers and CPO.

Social housing corporations

In this scenario there will be a lot of involvement of social housing corporations, compared to the role of private developers. As existing housing in the neighborhood will be transformed and infill development will take place, no large profit can be made. As corporations do not make profit, and there is a clear need for social housing, looking at the existing and future residents, corporations play an important role.

Co-housing

Co-housing is introduced as an example where a group of residents make use of multiple communal facilities. As a large percentage of students indicated they are sharing facilities with roommates, co-housing can be a suitable solution in Overtoomse Veld. On top of this, students function as easy connectors between people. However, as there will be limited adjustments to existing housing, the amount of co-housing will be constrained.

Developers

Developers are mainly building and transforming homes in the more expensive segment in order to gain more profit out of the developments. They are therefore probably most interested in the new housing which needs to be built in the park. The power of these developers needs to be contained in order to prevent the whole neighborhood being gentrified.

CPC (collective private commissioning)

CPC is a type of development where a group of private individuals (collectively) retains full control over the homes which are being built in the neighborhood. Pros of this type of ownership is that it is possible to create more affordable housing and social cohesion can be improved as residents are working together in creating their future homes. Cons are that students often have a short-term stay. The current residents do often not have the financial means to agree to this kind of commitment.

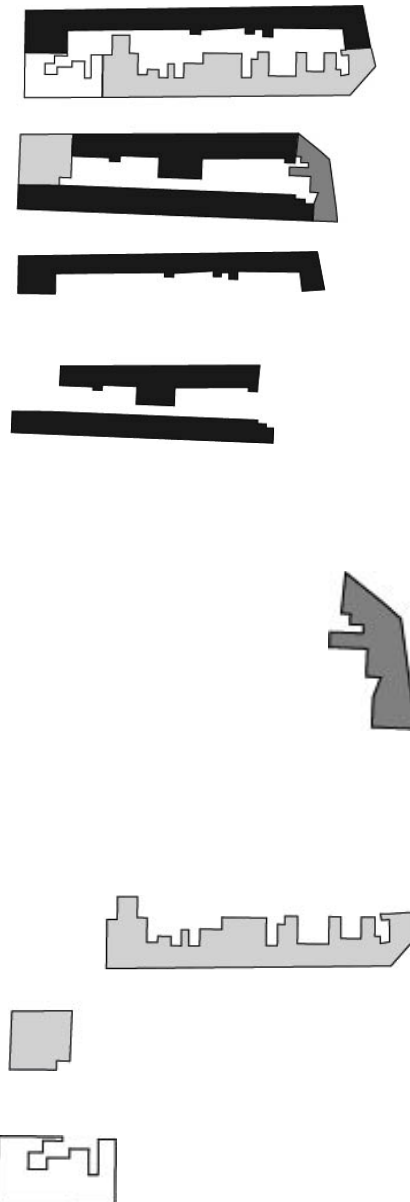


Fig. 173 Diversification of ownership in housing blocks on Postjesweg

Stakeholder relations

Figure 174 shows the overall scheme of involved stakeholders in this scenario. As discussed before, especially social housing corporations play an important role in building and adjusting housing in the neighborhood. On top of this, the municipality is related to a lot of different stakeholders as public investment is probably needed in order to foresee in the financial means for the needed changes.

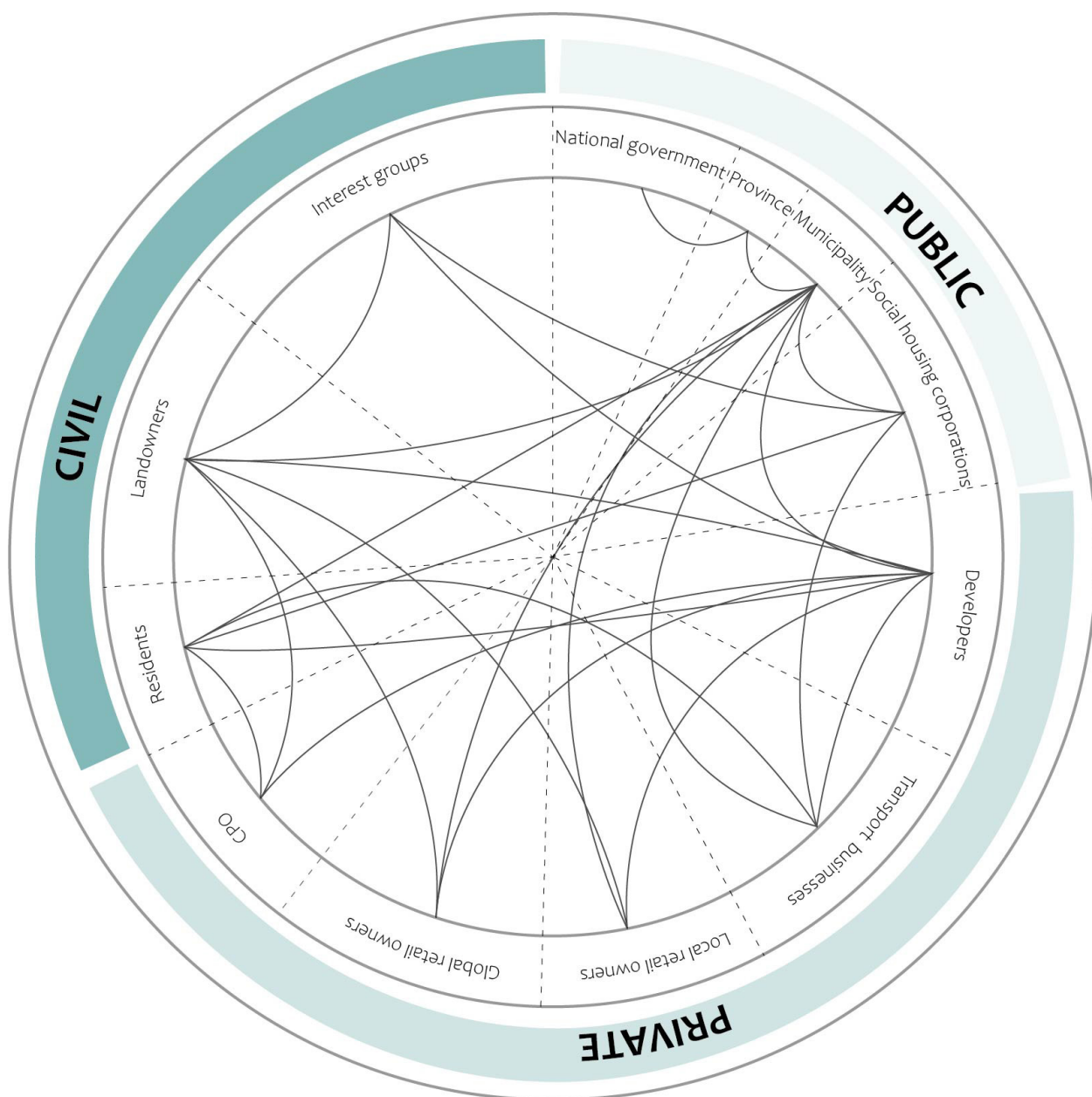


Fig. 174 Relations between different stakeholders

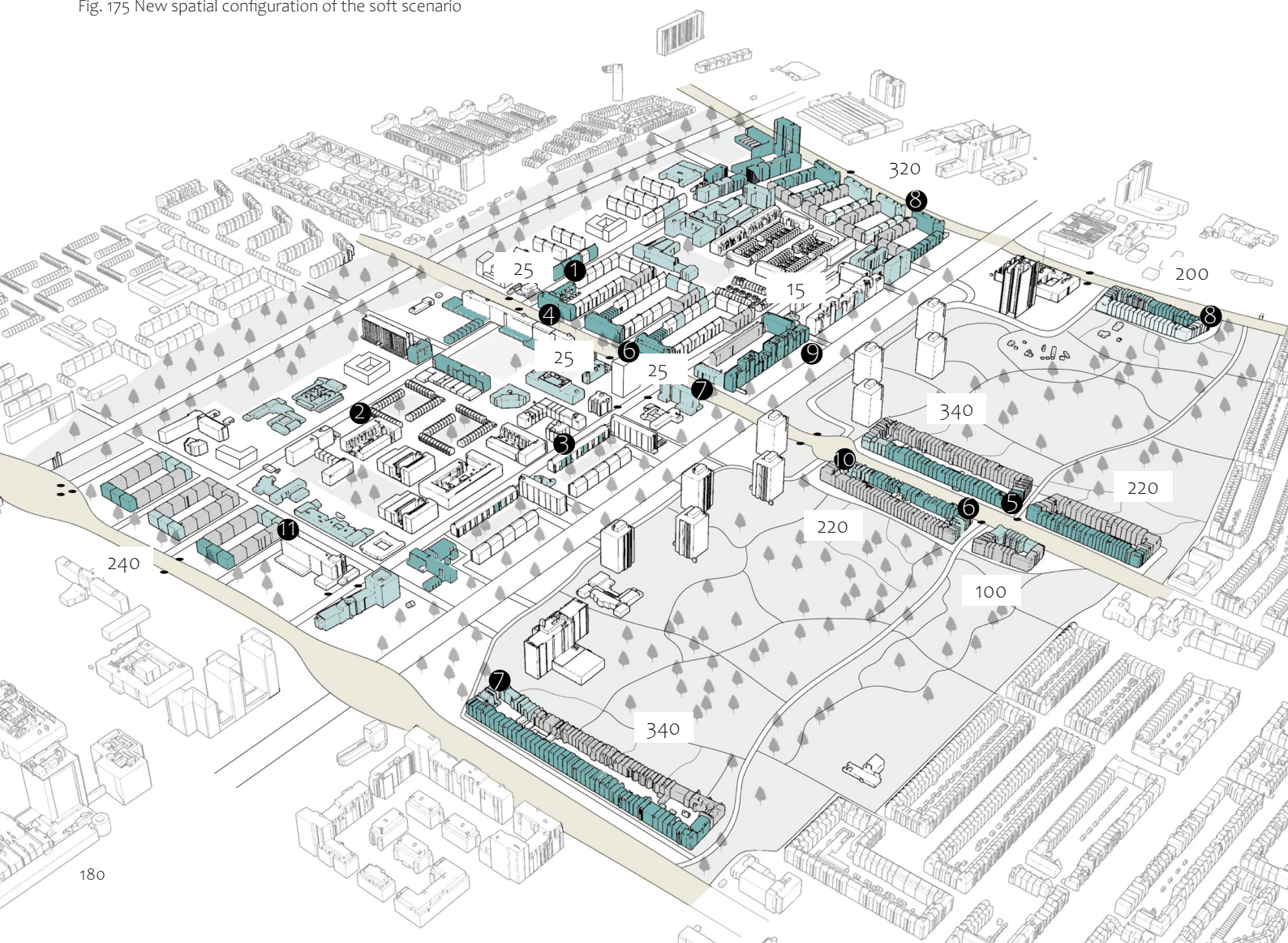
7.2.7 Reflection

Spatial configuration

Figure 175 shows the overall spatial configuration of this scenario. Existing buildings will be transformed and new housing in the park is built. Using this approach, a total of 2070 apartment can be added in Overtroomse Veld. The new buildings have an average of 105 dwelling per hectare. This is, not yet, enough to foresee in the expected growth of 66% which would mean an increase of 4600 apartments. Appendix D zooms in to the governance issues and investigated who is involved in what redevelopment.

Comparing figure 144 and figure 175 shows the application of different streettypes and functions relates to the achievement and clarification of different zones. Public zones are mainly located on and around the main street, where public functions are located, while the more private zones are located on or close to neighborhood and residential streets, with more shared amenities. This is also shown in figure 176.

Fig. 175 New spatial configuration of the soft scenario



Remaining functions



Removed functions



New functions



- Public transport stops
- Public functions (shops, cafes, restaurants)
- Semi-public or collective functions (workspaces, schools)
- New residential homes

Functioning of different zones

Research by design showed privacy zoning is important to achieve social cohesion and is mainly created in a horizontal way, where the different types of streets play a crucial role, as is visible in figure 176.

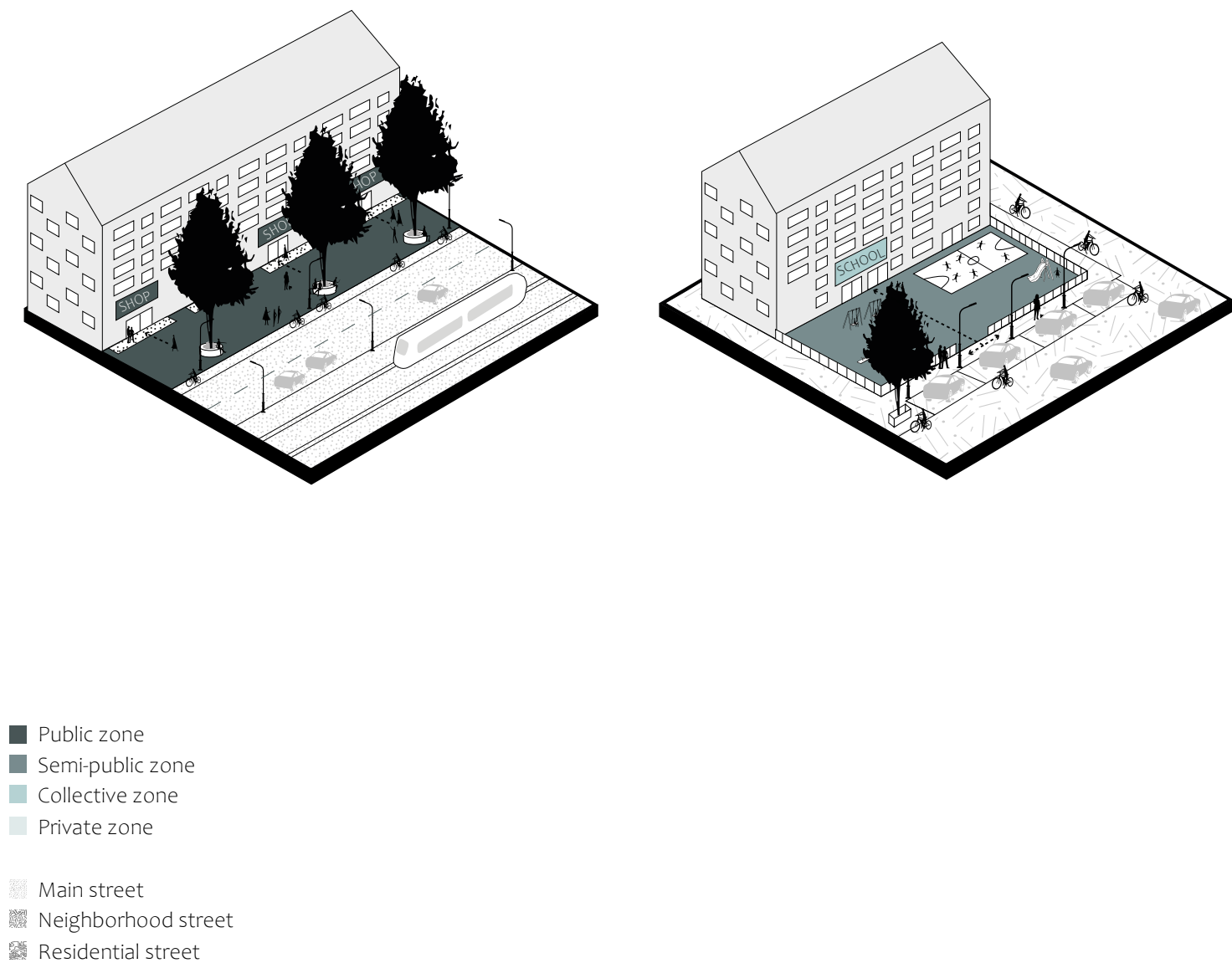
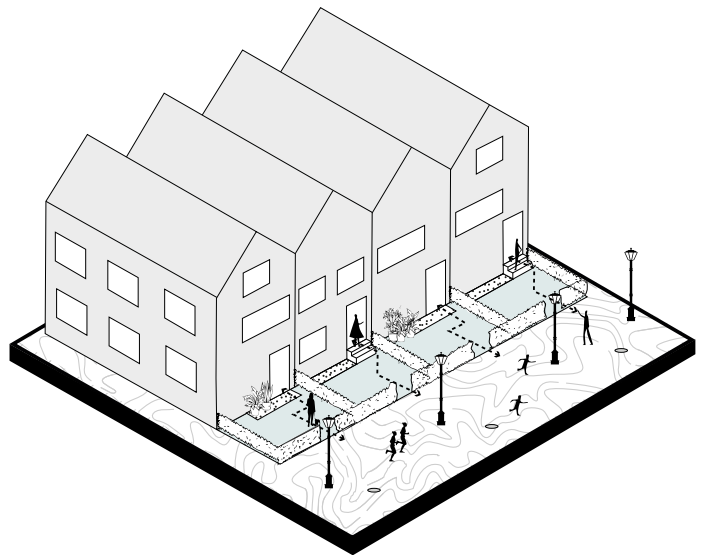
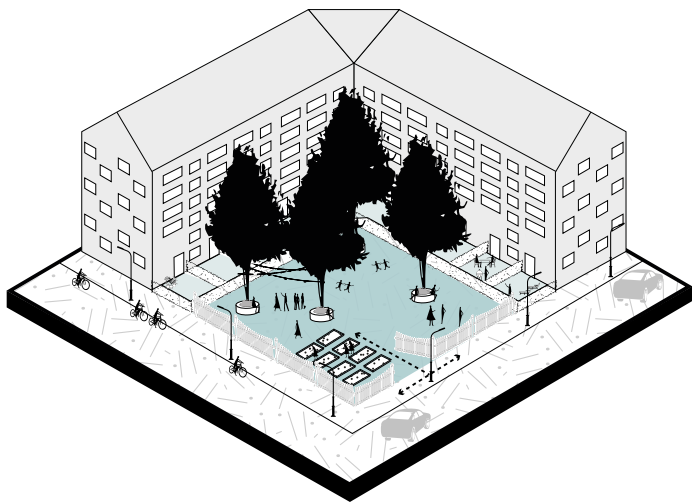


Fig. 176 Zones & streets in the soft scenario



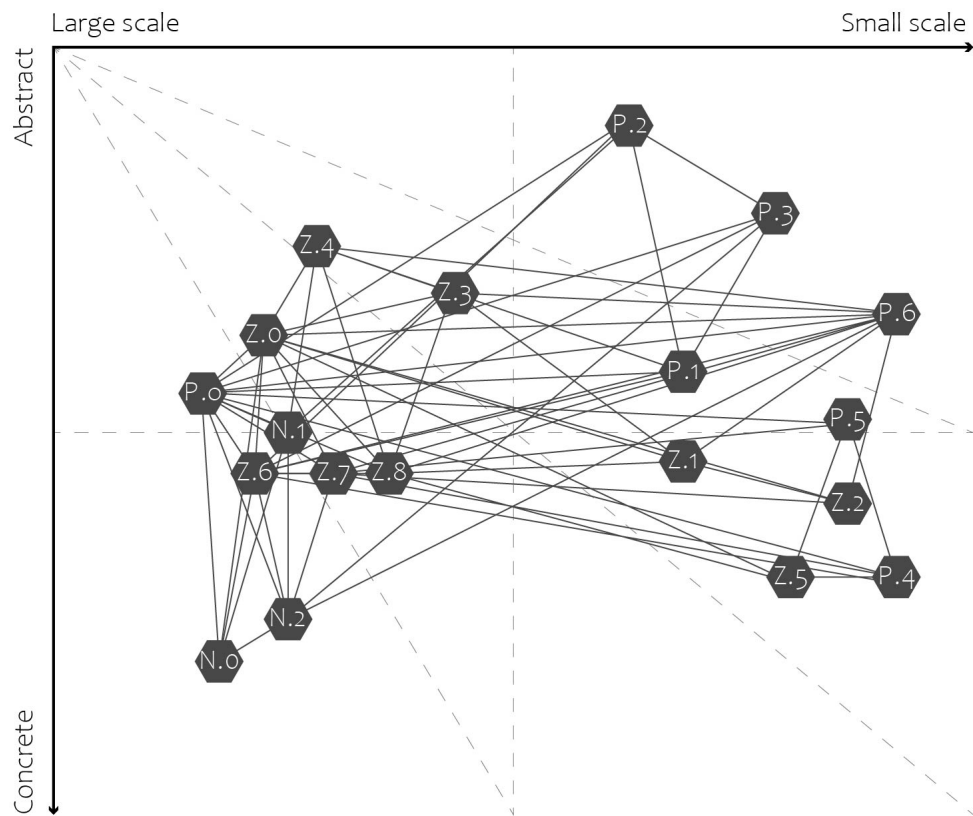


Fig. 177 Pattern relations

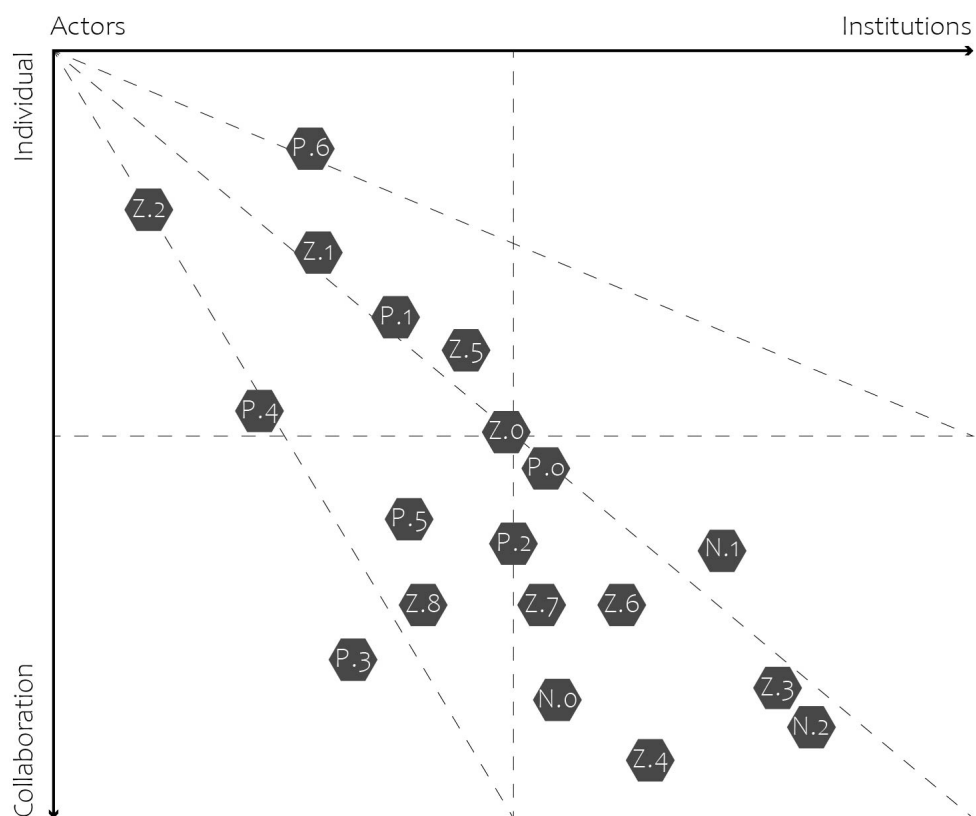


Fig. 178 Relation patterns & stakeholders

Pattern relations

Each of the patterns related to street type, pattern Z.6 (main street), Z.7 (neighborhood street) and Z.8 (residential street), link with others patterns which are specific for that type of street and these target the transitions of zones located on or close to that street. These three patterns can therefore be seen as the highly important for this scenario. On top of this, many relations are found between pattern P.6 (create transparency by eyes on the street), Z.3 (possibilities to close off spaces) and other patterns, these patterns are therefore also important in the neighborhood. Interesting to see is that these five patterns are closely linked with specific zones and are related to the topic of achieving privacy zoning and creating a clear compartmentation of space.

Relation between patterns & stakeholders

Figure 178 gives insight into the relation and control certain stakeholders have on the functioning of the different patterns. As the patterns are not only based on literature and theory, but also on the needs and demands of, among other things, current residents, new residents, shopowners and the municipality, stakeholders have, to some degree, been integrated into the design.

Developments in the neighborhood are not only influencing small interventions on streetscale, but also the relation to the surrounding city network on the larger scale. On top of this, some patterns can be handled by individuals, some require a good collaboration between residents amongst each other and others between residents and the municipality. It is therefore not surprising the figure shows patterns divided throughout the whole diagram.

7.3 the extreme strategy - influx of knowledge workers



The following pages zoom in to the details of the extreme scenario.

7.3.1 Spatial strategy

Figure 179 shows the spatial strategy of the extreme scenario. It is important in this scenario to create new building typologies for new housing and amenities which can meet the requirements of new residents. Possibilities for densification occur around the edges of the neighborhood. In this way, current residents can remain in Overtoomse Veld, but also space for new housing is created.

Influx of knowledge workers



Intensification & transformation



Global amenities



Shared courtyards & public parks



70-100m² housing

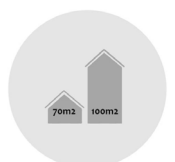
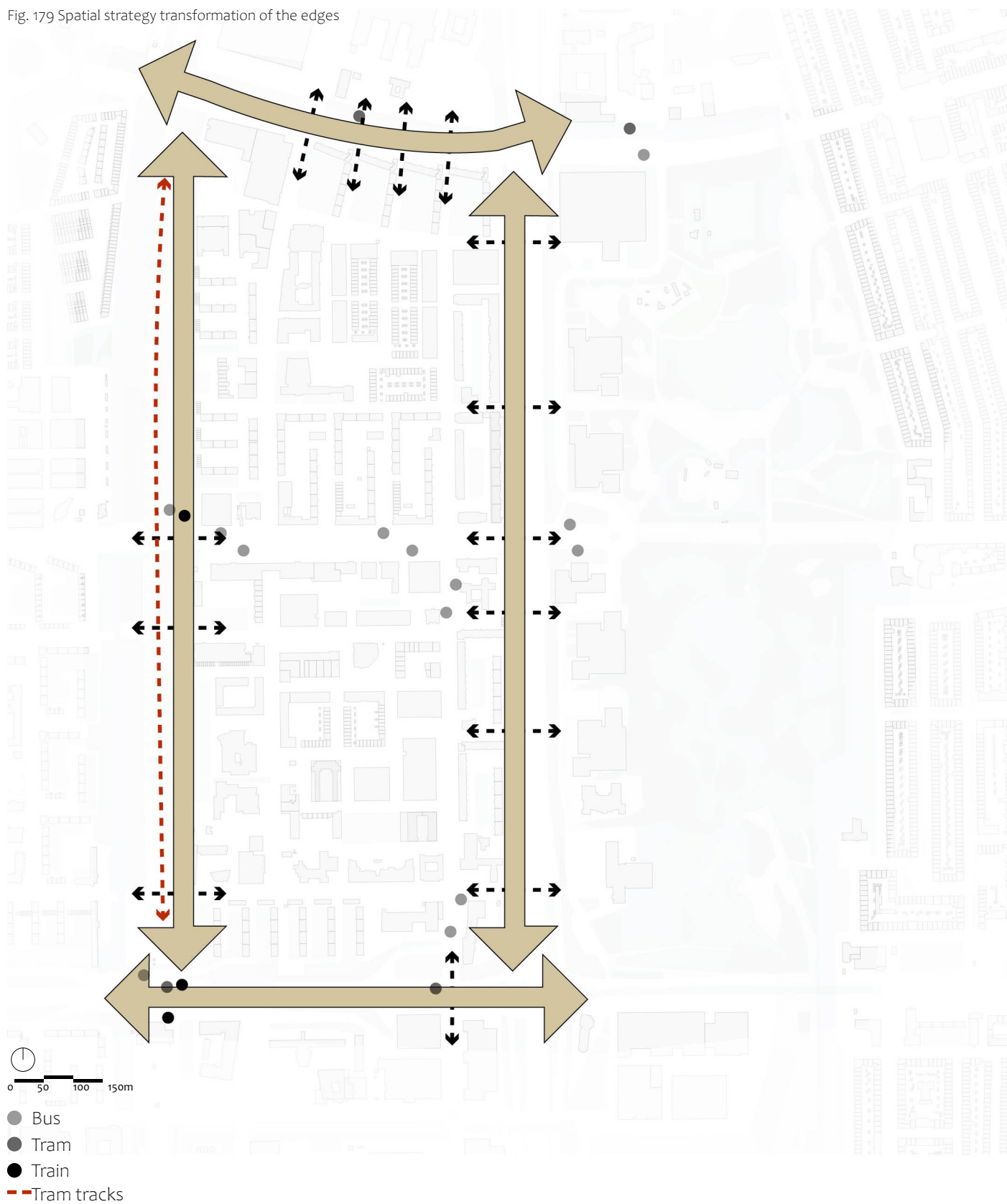


Fig. 179 Spatial strategy transformation of the edges



Detected & missing qualities

Zooming in to the edges of the neighborhood results in several detected, but also missing qualities in the existing situation. Harsh edges, due to the ringroad, tram tracks and several car lanes, are covered by abandoned (1), unused (6) and sometimes inaccessible green areas (5). As the accessibility is not always clear, ambiguity occurs in these spaces. Public spaces which are in fact present on the edges have potential (3), but are sometimes hard to reach due to long building blocks, a dead-end street (4) or a space, which feels as a collective yard, needs to be crossed (2).

Zooming out again and looking at the whole neighborhood, it is visible only a scarcity of possibilities occur to enter and leave Overtoomse Veld.

Detected qualities:



Play & sport facilities



Space for densification



Public spaces with potential

Missing qualities:



Transitions from and to the neighborhood



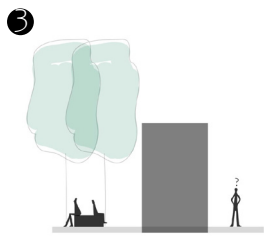
Pleasant area with functions to recreate at borders



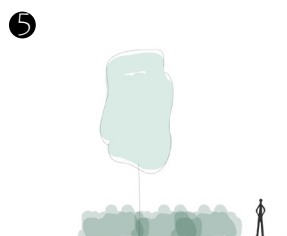
Possibilities to easily enter public spaces



Safety & eyes on the street



Buildings block access



Green space not accessible

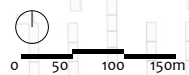
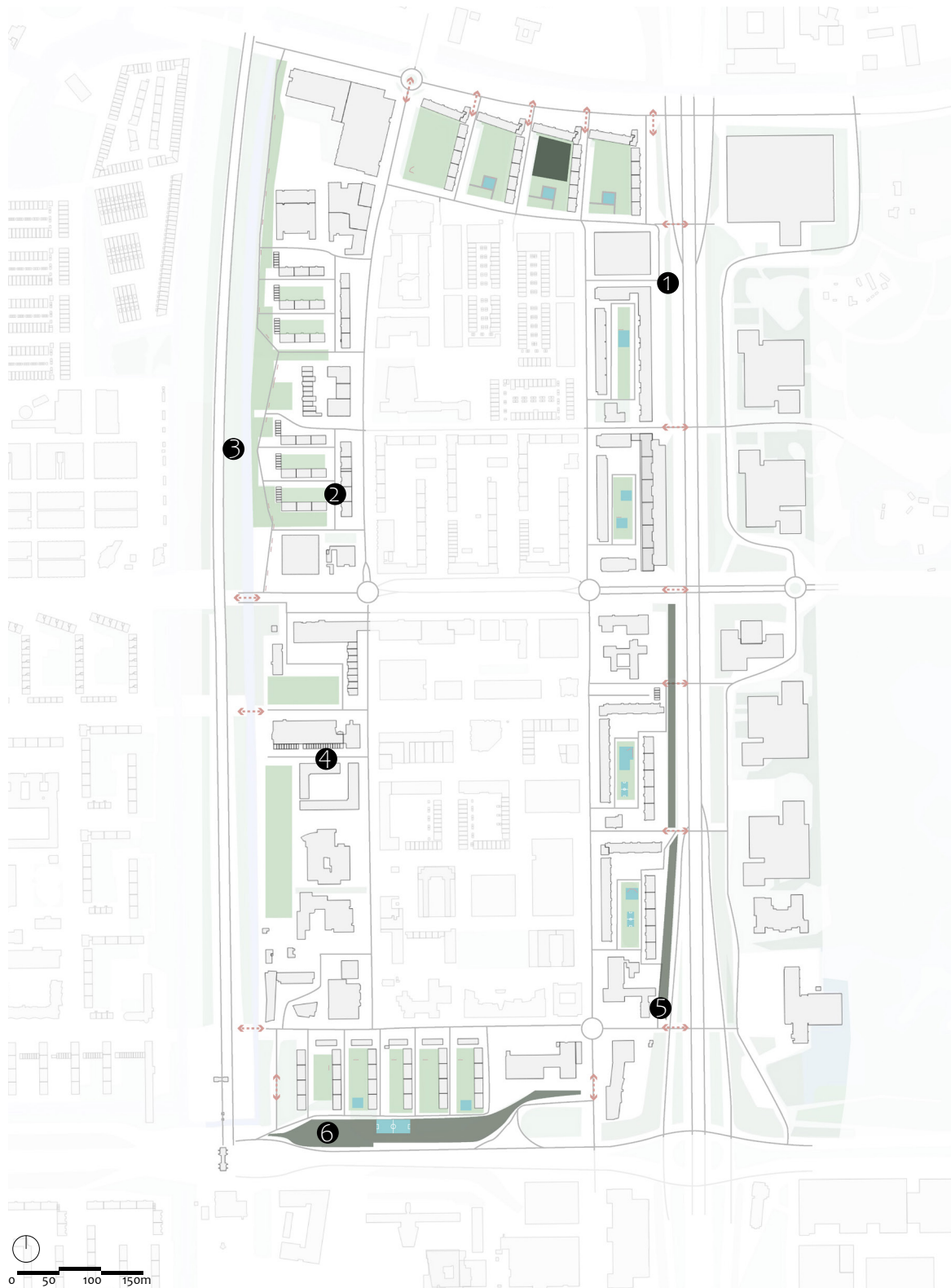


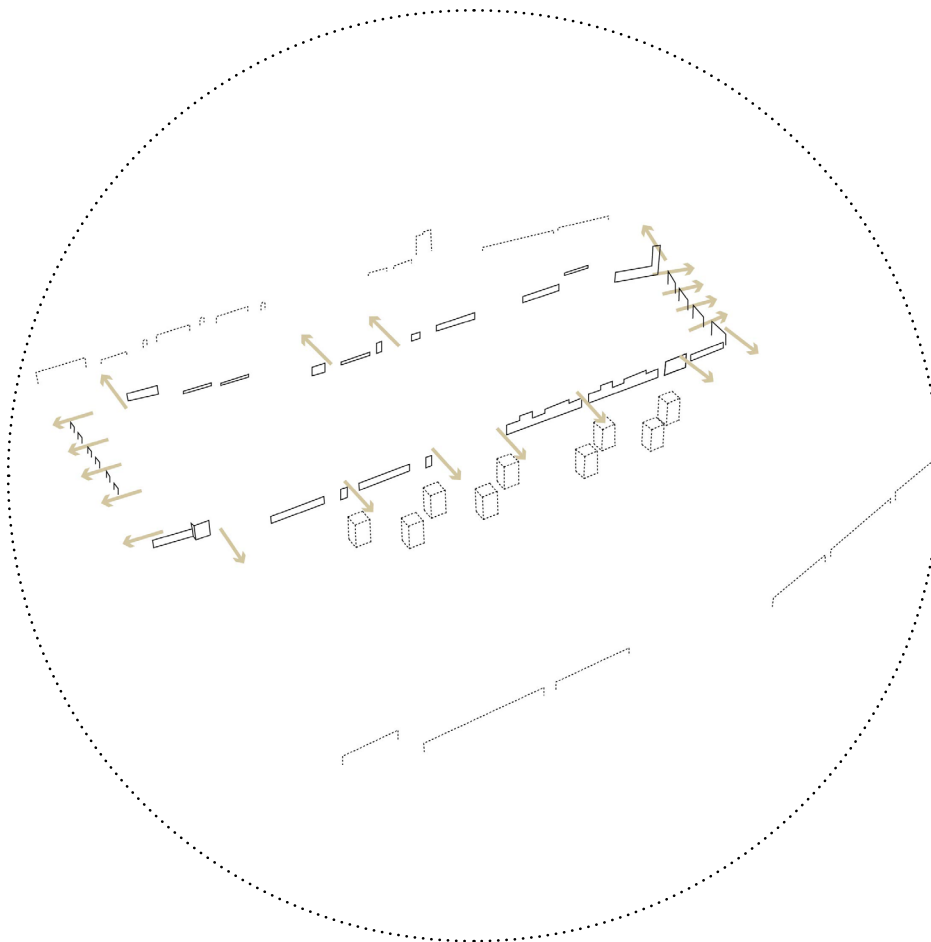
Fig. 180 Detected & missing qualities on the edges

- Seating possibilities
- Play facilities or sportsfields
- Communal/vegetable garden
- Public space accessible to all
- Abandoned, unused or inaccessible green
- Possibilities to enter/exit the neighborhood

7.3.2 Patterns

The previous analysis of ‘why’ transformation is needed and ‘what’ kind of qualities are currently present or missing results in the question of ‘how’ to deal with this. Two main needs occur in this scenario. Each of these large scale patterns link again to patterns related to the smaller scale.

T.o More transitions from & to the neighborhood

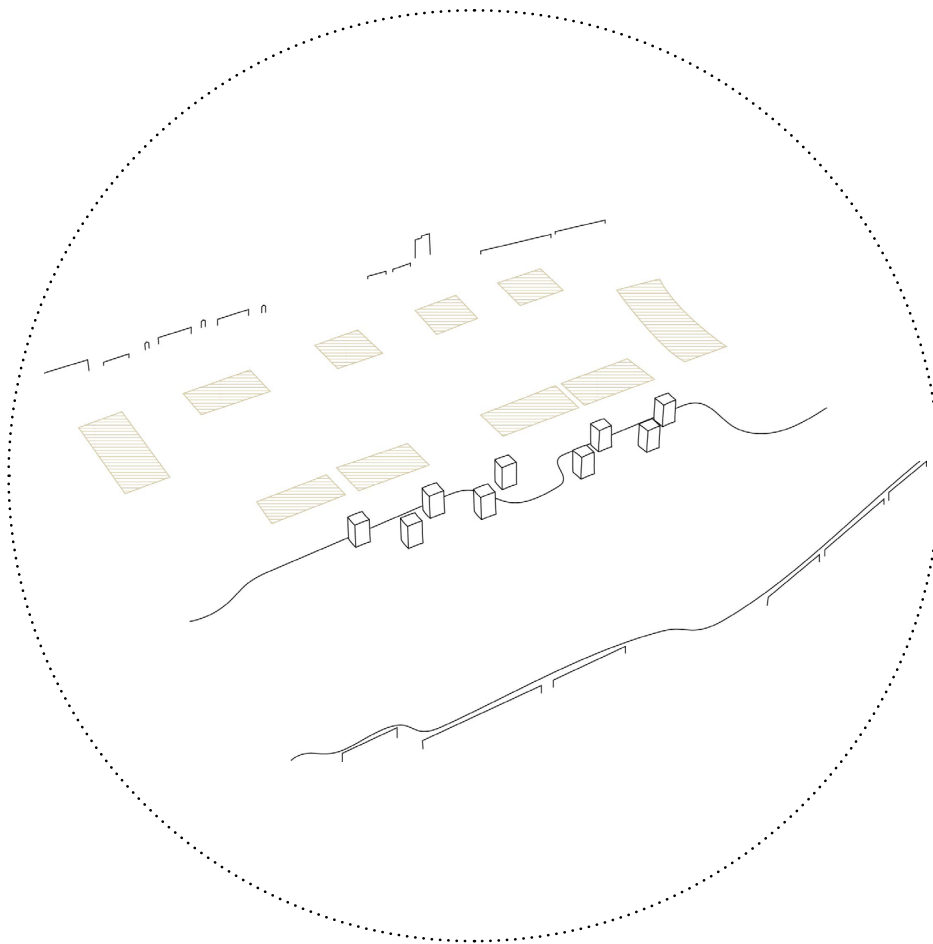


Protect residents from harsh edges by creating more possibilities of entering and leaving the neighborhood.

Relates to: T.1, T.2, T.3, T.4, T.5, T.6, T.7, G.2, G.4, G.5, G.6, G.7
Municipality, landowners

C N BS B

G.o Creating a variety of spaces

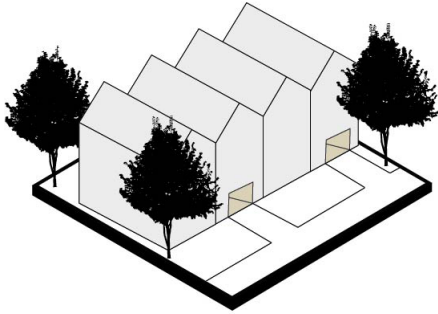


A differentiation of zones needs to be established in the neighborhood. Distinct zones can help in making the living environment more clear and readable (Van Dorst, 2005). Large differences between diverse groups asks for a variety of spaces.

Relates to: T.4, T.8, G.1, G.2, G.3, G.4, G.5, G.6, G.7
Municipality, landowners, residents, community organizations



More transitions from & to the neighborhood

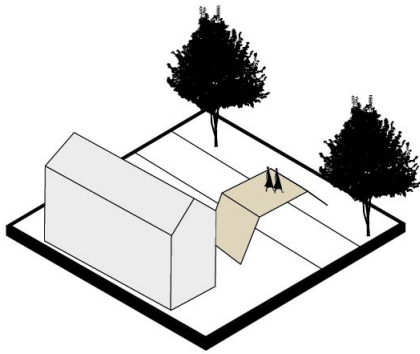


BS B

T.1 Permeable building blocks

Large building blocks, especially the ones located at the edges of the neighborhood, can be in need of a road crossing the block without interrupting the continuity. These roads will mainly be created for pedestrians and integrate the inside and outside of the neighborhood.

Relates to: T.0, G.2, G.3, G.4, G.5, G.6
Landowners

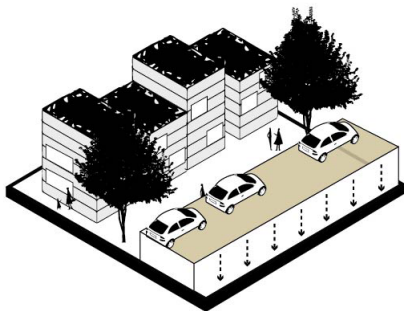


BS N I

T.2 Lifted street

Create a lifted street in order to facilitate permeability and continuity. A lifted street can aid in the transitions in and to the neighborhood by crossing harsh edges.

Relates to: T.0, T.3, T.8
Municipality, transport businesses

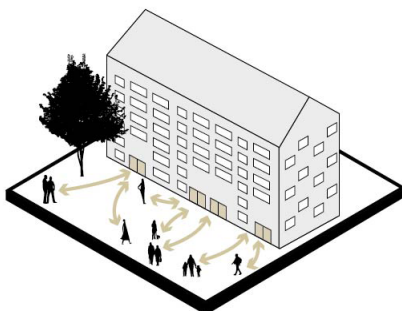


C N BS I Q

T.3 Downgrade the ringroad

Downgrade A10 ringroad to stimulate the connection with the surrounding city network. The elevation of the ringroad and scarcity of crossing underneath prevent connection with the larger network. By removing the elevation and reducing car lanes the space allows for crossings to surrounding areas while also facilitating infrastructure along the street.

Relates to: T.0, T.2, T.8, G.3, G.5
Municipality, transport businesses, landowners

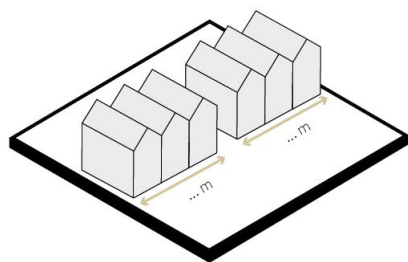


BS B D

T.4 Collective entrances

Public ground floor functions results in a need for collective entrances to enter residences on upper floors. Collective entrances can stimulate interaction and can create spontaneous encounters between the different people living in a variety of housing.

Relates to: G.0, G.2, G.4, G.5, G.6, G.7
Landowners

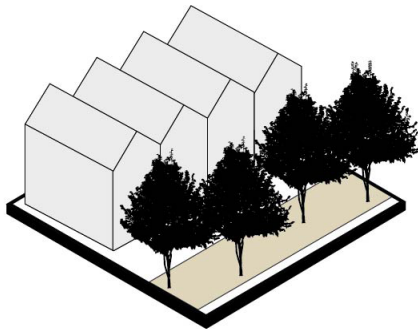


BS B J

T.5 Short blocks

Short blocks need to be created. By doing this, not only the permeability will be increased, also walkability will be stimulated which is important according to Jacobs (1961). Walkability can influence the human scale on the street positively. In the current situation several blocks are larger than 150m.

Relates to: T.0, T.1, G.2, G.3, G.5, G.6
Landowners

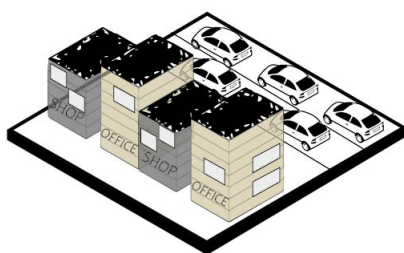


N B BS T

T.6 Buffering greenway

Residences need to be protected from harsh edge conditions. In Overtoomse Veld these harsh edges consist of tram tracks and multiple car lanes. In order to ease these edges, a buffering greenway can be created (Talen, 2008).

Relates to: T.0, T.2, T.7, G.1
Municipality



B BS J T

T.7 Resilient building types

Residences need to be protected from harsh edge conditions. In Overtoomse Veld these harsh edges consist of tram tracks and multiple car lanes. Adding resilient building types on ground floors, like offices, businesses and shops, can ease these edges (Talen, 2008).

Relates to: T.0, T.6, G.1, G.3, G.5
Municipality, landowners, retail owners, residents, community organizations



N BS

T.8 Pocket spaces

Introduce pocket parks, small public spaces or possibilities for temporary activities for residents and passers-by to meet, play or rest. The small spaces increase the amount of green and diversifies public spaces. Shops have the possibility to extend to these pocket spaces and use the space more wisely. The spaces can be implemented on leftover spaces, between blocks or on parking lots, and buffer pedestrians from cars.

Relates to: T.3, G.0, G.1, G.2, G.3, G.5, G.6
Municipality, landowners, retail owners, residents

Creating a variety of spaces

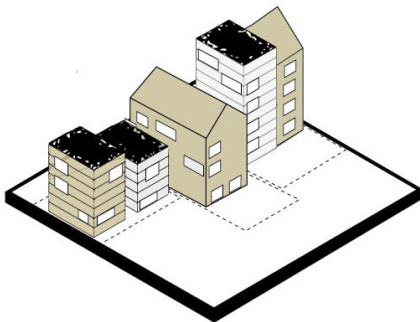


BS Q

G.1 Clustered shops, businesses & offices

Shops, businesses and offices are clustered and share public space. In this way, shops use the outdoor space, but also shopping people and employees can enjoy it, while they are at the same time promoting life on the street.

Relates to: T.6, T.7, T.8, G.0, G.2, G.5
Municipality, landowners, retail owners

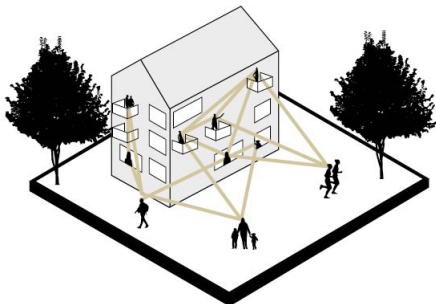


B BS J

G.2 Diverse plots & volumes

Providing a diversity of building plots, blocks and housing results in a variety of costs, styles and uses. In this way, flexibility is created within a certain area which can foresee in a diversity of residents living in the neighborhood, but also a diversity of visitors and passers-by making use of the spaces.

Relates to: T.0, T.1, T.4, T.5, T.8, G.0, G.1, G.4, G.5, G.6
Municipality, landowners, residents

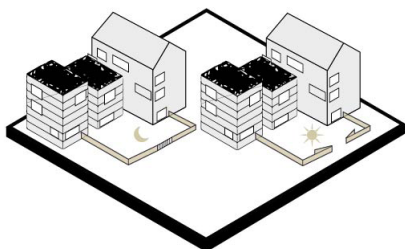


N BS B J T

G.3 Create transparency by eyes on the street

It is important that when people look out of their window, they can directly look to the public realm adjacent to them. “Natural surveillance of public places (...) is essential, especially in a socially diverse area” [p.184] (Talen, 2008) in order to create not just permeability and continuity, but also safety. This also relates to theories of Jacobs (1961) where she emphasizes the importance of eyes on the street.

Relates to: T.1, T.3, T.5, T.7, T.8, G.0, G.4, G.5, G.6, G.7
Retail owners, residents, community organizations

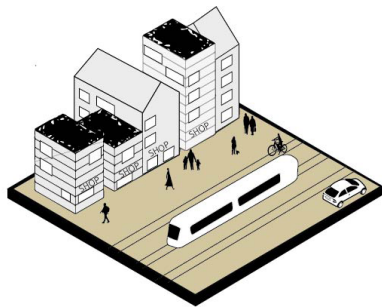


BS B T

G.4 Possibilities to close off spaces

Create possibilities to close off spaces which are dedicated to a certain group of people. For example at night, when no one makes use of the space. It provides clarity in who and when the space can be used, by preventing uninvited people making use of the space. Important for this pattern is the clarification of collaborations and responsibilities of included stakeholders.

Relates to: T.0, T.1, T.4, G.0, G.2, G.3, G.7
Municipality, landowners, retail owners, residents, community organizations



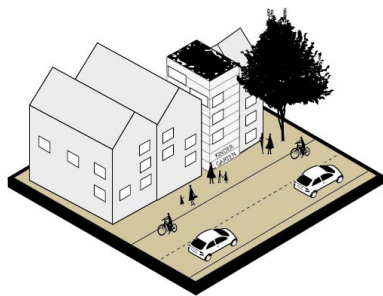
C N BS B

G.5 Main street

Main streets need to be created for the connection of the neighborhood with the surrounding areas. Streets link to highly used streets from the surrounding area and are intensely used by different people throughout the day. Street profiles are wide and give much space to pedestrians, but also space is created for public transport and cars. On top of this, public functions are located in buildings adjacent to the street.

Relates to: T.0, T.1, T.3, T.4, T.5, T.7, T.8, G.0, G.1, G.2, G.3, G.6, G.7

Municipality, landowners, retail owners, residents



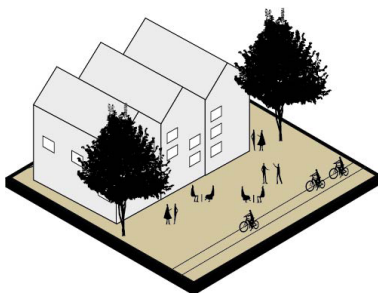
N BS B

G.6 Neighborhood street

Neighborhood streets connect the main streets to areas located more inside the neighborhood. The streets are more intensely used by traffic, compared to the residential streets. Mainly residential buildings and the more semi-public functions, as kindergartens and workspaces, are located on the neighborhood streets.

Relates to: T.0, T.1, T.4, T.5, T.8, G.0, G.2, G.3, G.5, G.7

Municipality, landowners, retail owners, residents



N BS B

G.7 Residential street

Residential streets can be seen as the most private public spaces in the neighborhood. The streets are dominated by slow traffic and contain more quality to stimulate people to stay and interact. Buildings surrounding the streets are mainly residences or collective functions shared by residents.

Relates to: T.0, T.4, G.0, G.3, G.4, G.5, G.6

Municipality, landowners, residents, community organizations

7.3.3 Exploration of densification

By looking at “which buildings can be adjusted” and “where could space for housing be maximized”, it is investigated more in detail what would and could be the most suitable places for densification on the edges of Overtoomse Veld.

Fig. 181 Which buildings can be adjusted on the edges?



Fig. 182 Where could space for housing be maximized?

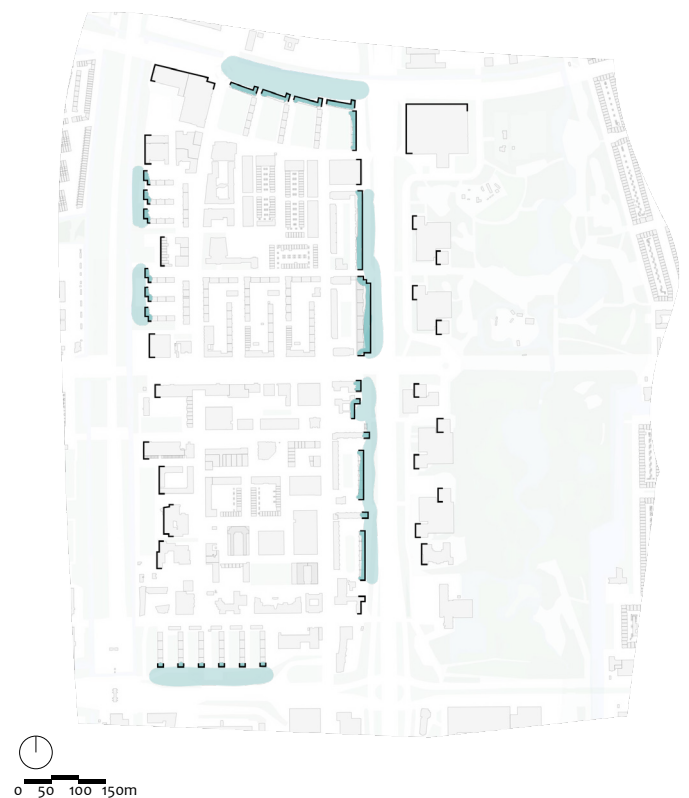
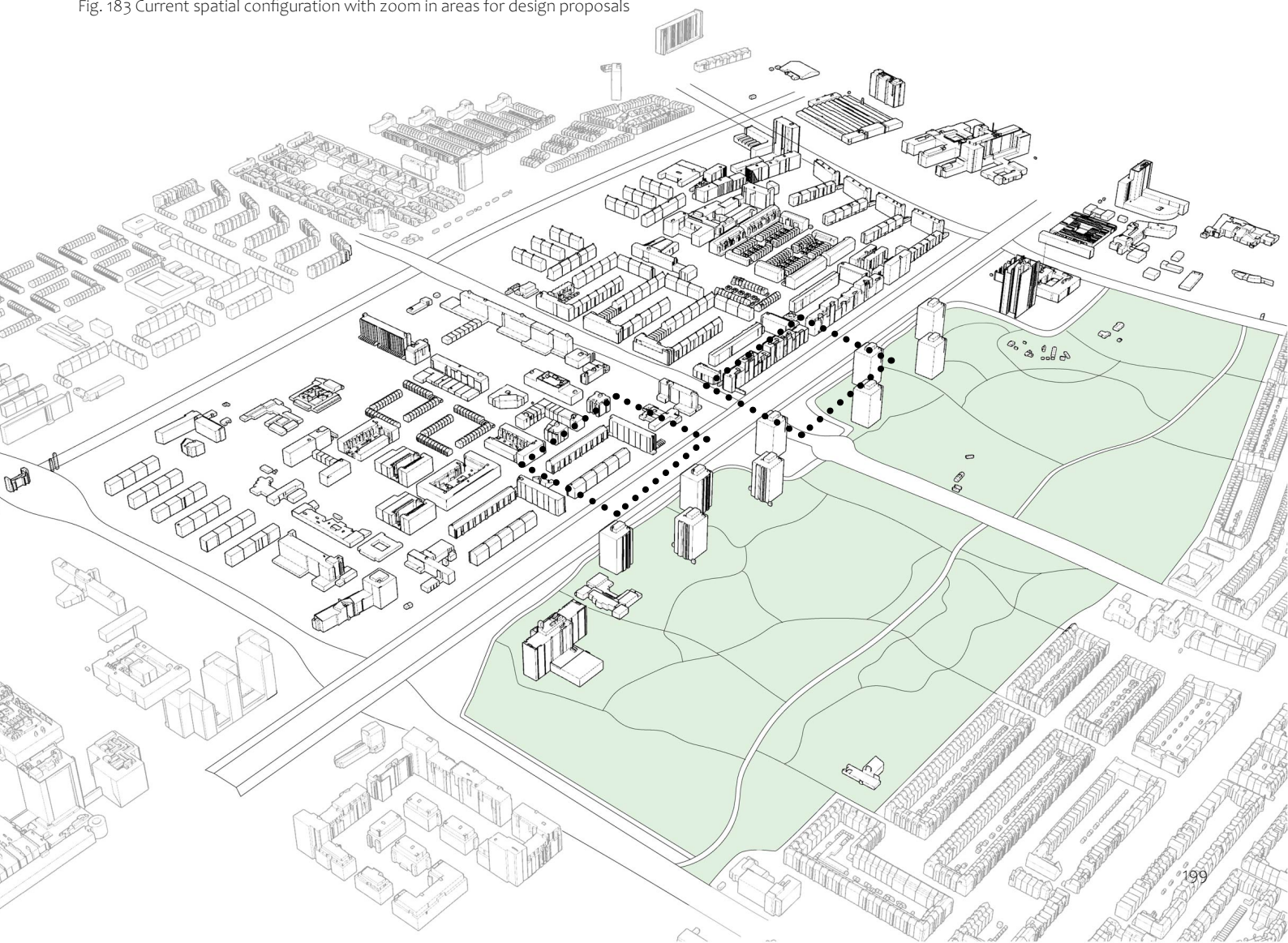


Figure 183 shows the zoom in areas of this scenario which will be used as a guideline to explain how the transformation and densification in this scenario will work and what the qualities are of these spaces.

Fig. 183 Current spatial configuration with zoom in areas for design proposals



Case studies

In order to investigate what building configuration would be most suitable to create around the edges of the neighborhood, design testing of different typologies is done, keeping in mind the requirements they must meet.

Funenpark - Amsterdam

- + Living in a park-like area
- + High quality social housing, no visual difference between housing with different prices
- Building block prevents transitions to and from the neighborhood, would be suitable if ringroad would not be downgraded
- Uncertainty in privacy zoning

The typology of Funenpark would not be suitable as there is uncertainty concerning different territories and the large block prevents transitions to the neighborhood. It would be suitable when the ringroad will not be downgraded and a buffer needs to be created between traffic and housing.

Fig. 184 Funenpark (source: Google Earth (12.04.2021))

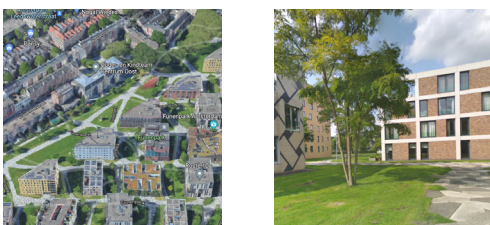


Fig. 185 Funenpark next to downgraded A10



Fig. 186 Transition street-block

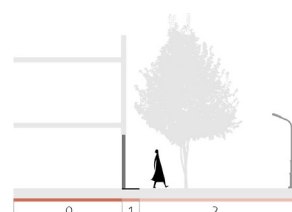
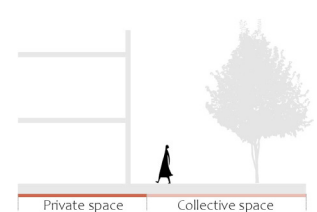


Fig. 187 Transition block-yard



De Pijp - Amsterdam

- + Many entrances from the street into the building blocks
- + High density
- + Diverse facades with groundfloor functions
- Low permeability and no transitions possible through the building blocks

The building configuration of the Pijp would be suitable as a high density will be achieved with varying facades and ground floor functions. However, the low permeability and lack of possibilities for creating different types of outdoor spaces results in the Massena being more suitable to apply in this scenario.

Fig. 188 De Pijp (source: Google Earth (08.04.2021))

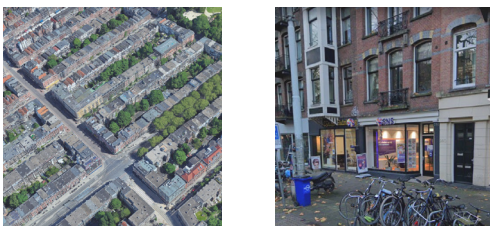


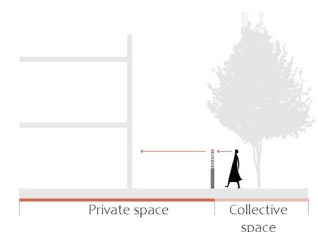
Fig. 189 De Pijp next to downgraded A10



Fig. 190 Transition street-block



Fig. 191 Transition block-yard



Massena - Paris

- + Different types of open spaces
- + Many public functions on the ground floor
- + Short, permeable building blocks create easy transitions to and from the neighborhood

The building configuration of the Massena in Paris is very suitable to apply in this scenario. The diversity of blocks and public spaces create easy transitions to and from the neighborhood. And the different functions and type of residences create a variety of spaces for a variety of residents living in the neighborhood.

Fig. 192 Massena (source: Google Earth (08.04.2021))



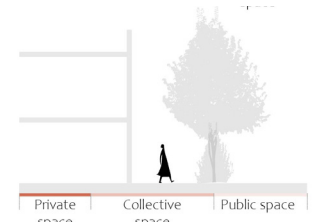
Fig. 193 Massena next to downgraded A10



Fig. 194 Transition street-block



Fig. 195 Transition block-yard



Needed qualities building configuration

By doing case studies and looking at references, it is investigated what qualities are important for the buildings in this scenario. These qualities are visualized in figure 196.

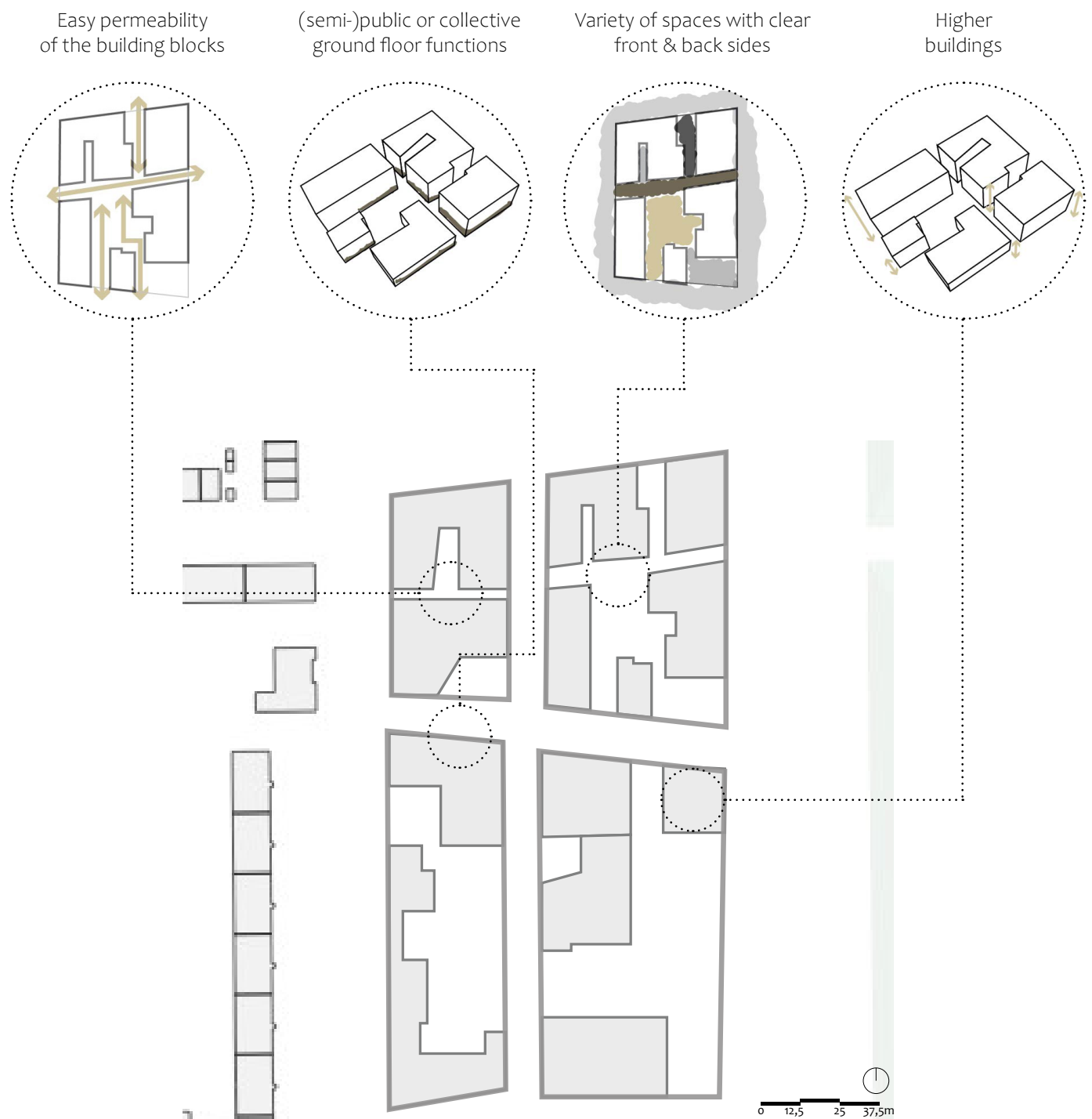


Fig. 196 Needed qualities building configuration

7.3.4 Where to implement the patterns

Figure 197 shows where all the different patterns can be implemented in the neighborhood. As certain patterns are linked with specific zones, but others just target the transition, figures 198-201 show the domination of (certain) groups in Overtoomse Veld and figure 204 thereafter how this relates to the publicness, different types of streets, and zones.

Thereafter, the pages zoom in to the newly built blocks around the edges in order to clarify how the differentiation of the zones work in this scenario.

-  T.0 More transitions from & to the neighborhood
-  T.1 Permeable building blocks
-  T.2 Lifted street
-  T.3 Downgrade the ringroad
-  T.4 Collective entrances
-  T.5 Short blocks
-  T.6 Buffering greenway
-  T.7 Resilient building types
-  T.8 Pocket spaces
-  G.0 Creating a variety of spaces
-  G.1 Clustered shops, businesses & offices
-  G.2 Diverse plots & volumes
-  G.3 Create transparency by eyes on the street
-  G.4 Possibilities to close of spaces
-  G.5 Main street
-  G.6 Neighborhood street
-  G.7 Residential street

Fig. 197 Implementation of the patterns



Domination

The application of patterns results in changes in the neighborhood which influence the domination in spaces. By overlaying these maps, spaces occur with a high degree of publicness,

Fig. 198 Space dominated by cultural clusters



Fig. 200 Space dominated by businesses & offices



where multiple groups of people come, or spaces which are more private, where only a certain group comes.

Fig. 199 Space dominated by children, families & residents of the block



Fig. 201 Different actors with the spaces they dominate



Fig. 202 The public zones: the front side



Fig. 203 The more private zones: the back side

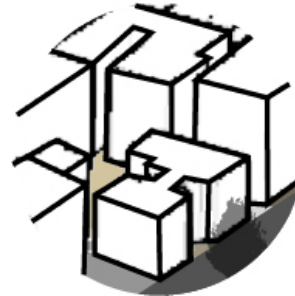
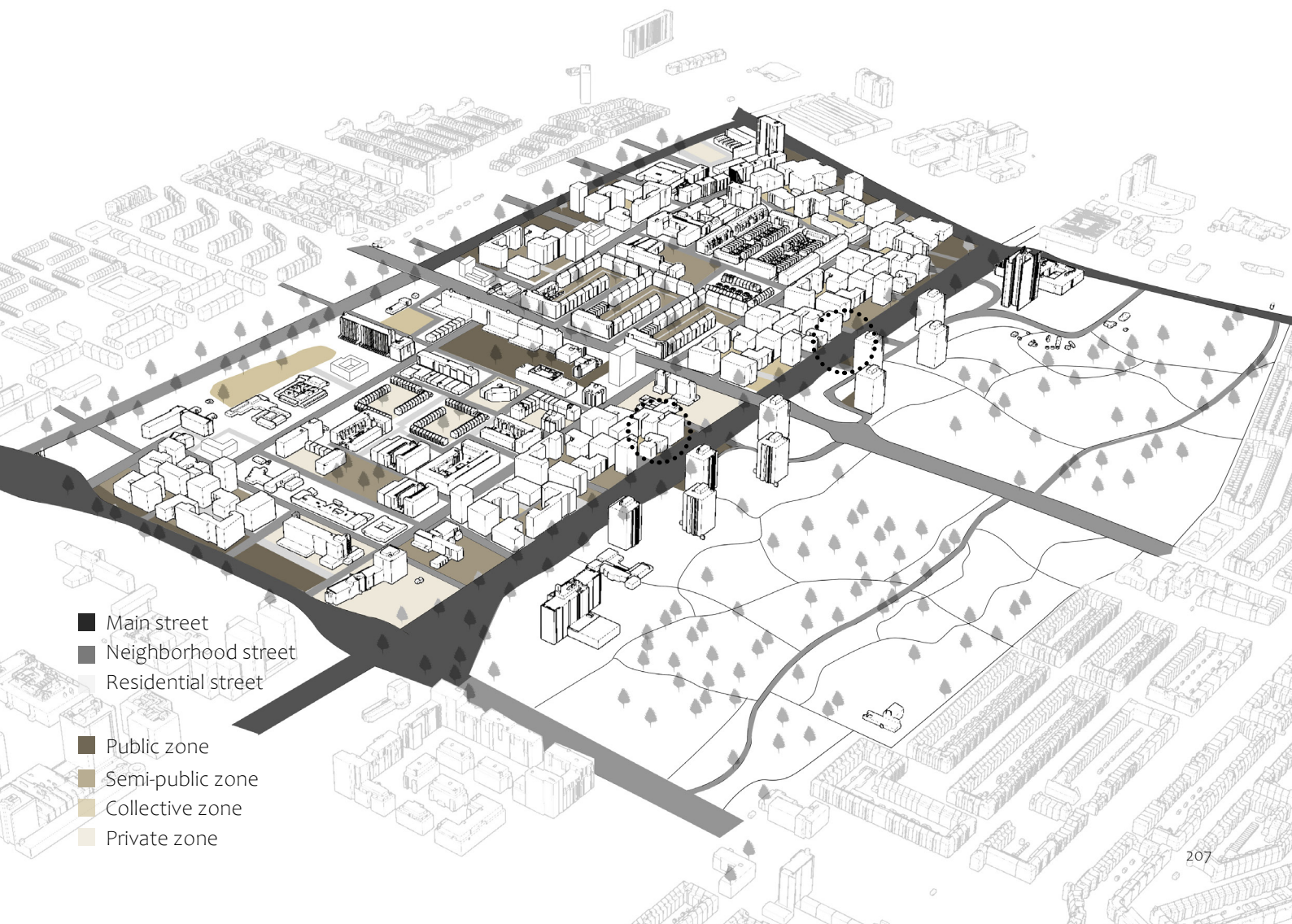


Fig. 204 Zones & different streets





THE DOWNGRADE OF THE RINGROAD

the public zones – the front side



Fig. 205 Visualisation of the downgraded ringroad with new buildings

Fig. 206 A10 ringroad (source: Google Earth (03.06.2021))

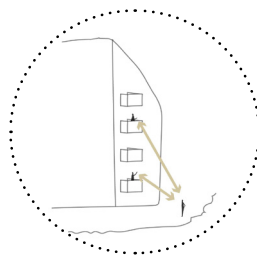


The existing A10 ringroad will be downgraded into an urban city boulevard. As this scenario has different realms for a variety of people, it is important the public zones are really accessible for, and used by, everyone. The transformation of the ringroad creates easier transitions from and to the neighborhood. Public transport is introduced, there are several car lanes, but also enough space is given to pedestrians. Due to the application of groundfloor functions, in new buildings and in the plinth of existing towers, activity, interaction and movement are created.

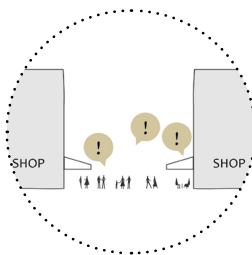
Space for pedestrians, cars and public transport



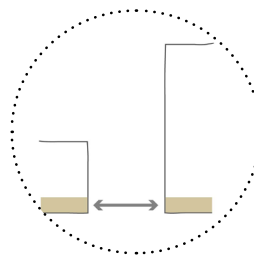
Windows & balconies create eyes on the street



Public ground floor functions create active streets



New active plinths in existing towers stimulate interaction and movement



No visible stigmatization of different housing prizes & sizes

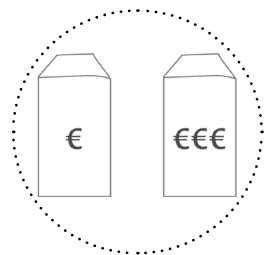


Fig. 207 Achieved qualities downgraded ringroad



Fig. 208 Section G-G' current situation

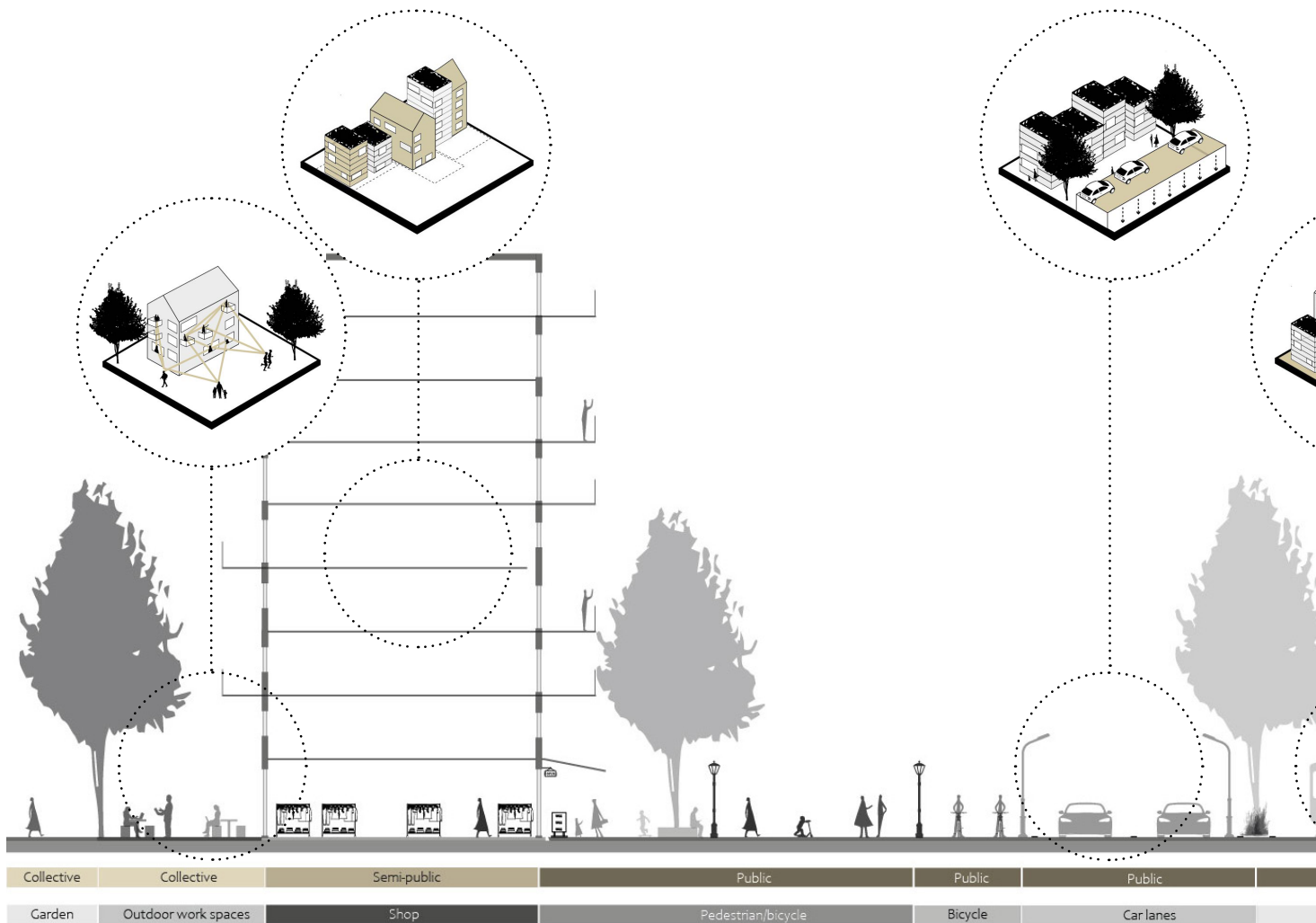
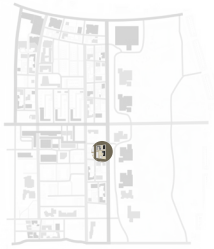


Fig. 209 Section G-G' new situation. Certain patterns link to specific zones





REALMS FOR CERTAIN GROUPS

the more private zones - the back side

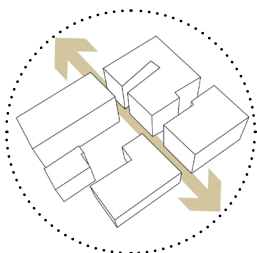


Fig. 210 Visualisation of courtyard surrounded by new housing

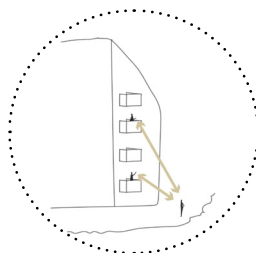


A variety of people asks for a variety of spaces. The blocks, typologies and outdoor spaces should foresee in this need. People who are more in need of shared activities and communal spaces will live in close proximity of collective zones, while residents with a more individual lifestyle will live in more public areas which are maintained by the municipality. Different zones and housing typologies are therefore related. The visualisation of the Anton Waldorpstraat shows possibilities occur for collective activities, but also for outdoor working spaces. Windows and balconies create eyes on the public realm and there is no visible stigmatization of different housing prizes and sizes in order to prevent enclaves of certain groups, and to provide high quality housing for everyone. As the road crossing the block is always accessible, clear zones are needed which are created by the application of more wild, higher green and fences. The transition to private zones happens indoors as the ground floor of the new buildings always has a (semi-)public or collective function. Therefore, privacy zoning is also created in a vertical manner.

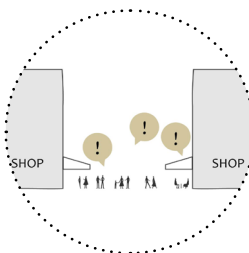
Street crossing the block always accessible



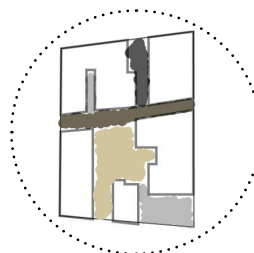
Windows & balconies create eyes on the street



Public & semi-public ground floor functions create active streets



Spaces dedicated to certain groups



No visible stigmatization of different housing prizes & sizes

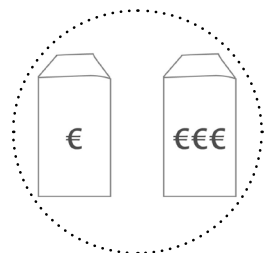


Fig. 212 Achieved qualities Anton Waldorpstraat

Fig. 213 Street crossing the block which is always accessible



Fig. 214 Neighborhood street between blocks



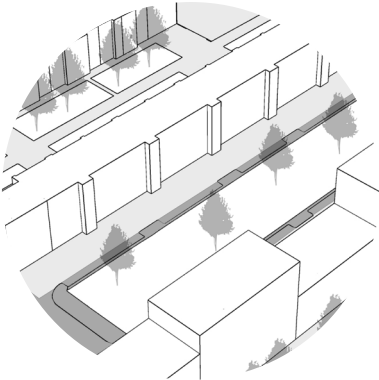


Fig. 215 Current situation
Anton Waldorpstraat

- ① Street crossing the block *always accessible*, inner courtyard only for residents
- ② Privacy zoning also achieved in a *vertical manner*
- ③ Involvement of *private developers* for the creation of new buildings

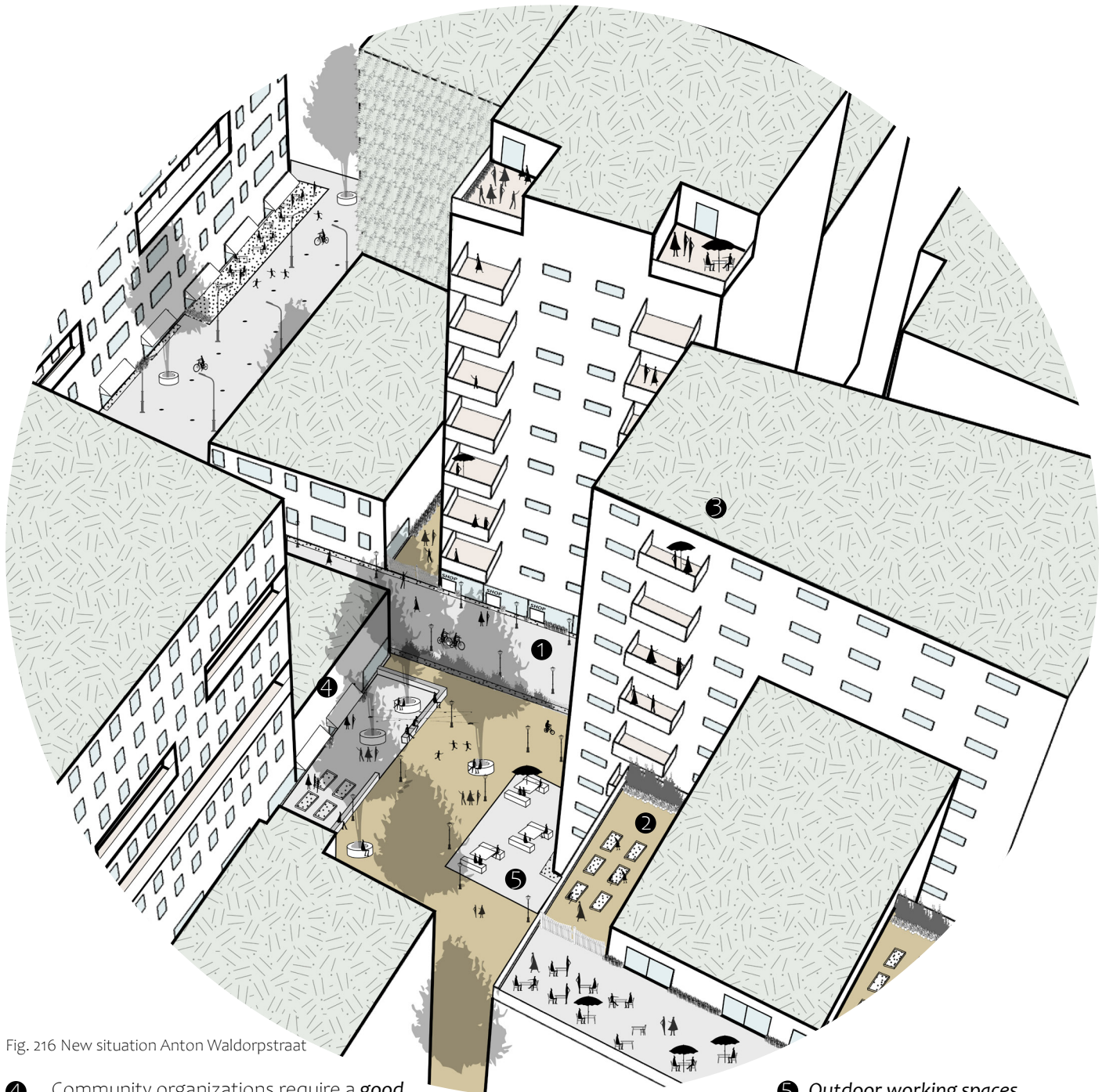


Fig. 216 New situation Anton Waldorpstraat

- ④ Community organizations require a *good collaboration* with the *municipality* about who owns and maintains the space
- ⑤ Outdoor working spaces accessible for residents

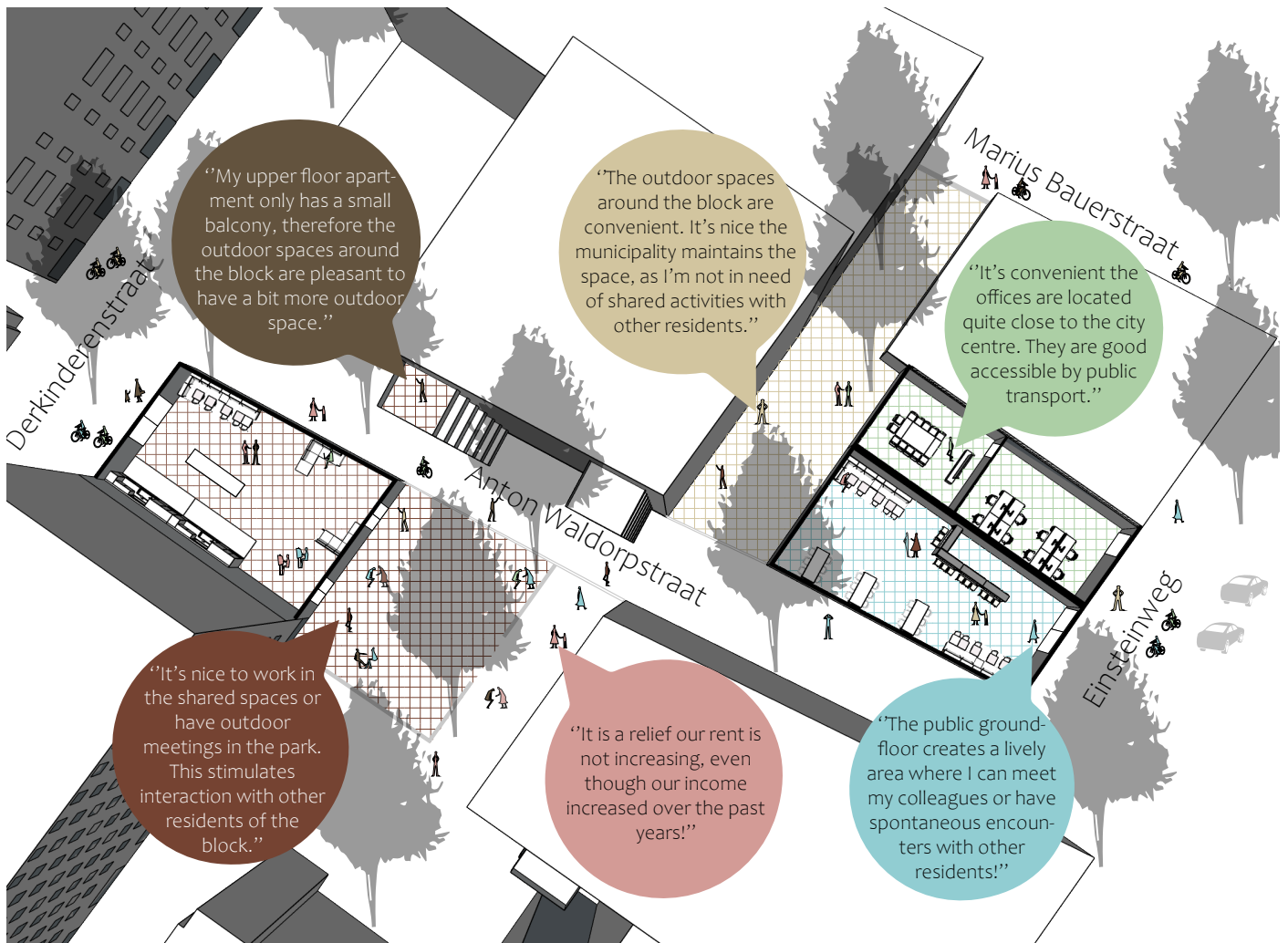
7.3.5 Relation diversity of people & building types

Again, the diversity of people needs to be embedded in the diversity of building types and typologies. This enables residents to move in the neighborhood and adjust homes to their wishes (fig. 217). This can influence residents to stay in the neighborhood. On top of this, it is of crucial importance that segregation is prevented. New housing plays an important role in this and the application of the Vienna model can foresee in solutions. The Office of Policy Development and Research (n.d.) explains how this model works:

1. The city buys land which is suitable for development and invites proposals of private developers
2. A jury evaluates the proposals on 4 criteria:
 - Architectural quality
 - Environmental performance
 - Social sustainability
 - Economic parameters related to rent and costs
3. The jury chooses a developer and the city sells the land, under good conditions, to the developer
4. The developer must agree to rent half of the apartments to lower-income residents
5. The rent is regulated and can not exceed 20-25% of people's household income. An important aspect is that income restrictions only apply when people first move in. Residents are not required to move out, even when their income increases.

When plenty of affordable housing is present, higher-incomes do not crowd out lower-incomes and no enclaves will occur of higher-income groups or concentrations of lower-incomes. Therefore, the Vienna model influences social integration (Förster & Menking, 2019).

On top of this, high architectural standards are important which draw minimal attention to material differences. In this way, visible stigmatization of residents can be prevented which results in high quality housing which can benefit all.



- Existing residents: small family, low-middle income
- Existing resident: oneperson household, middle income
- Existing resident: oneperson household
- New residents: works in the neighborhood
- New resident: foreign knowledge worker
- New resident: Dutch knowledge worker

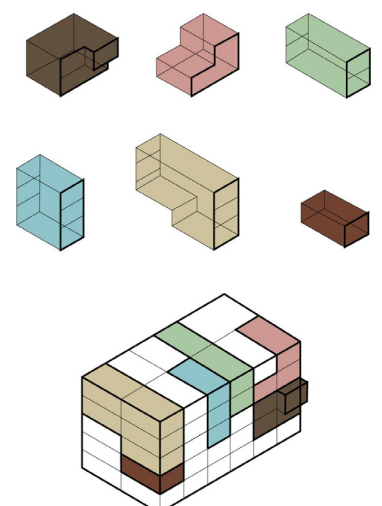


Fig. 217 Diversity of people embedded in a diversity of building types

7.3.6 Stakeholders

Diversify ownership

Diversification of ownership is, especially in this scenario, an important topic.

Social housing corporations

As they earn relatively more, the amount of knowledge workers living in social housing might be less compared to the average of residents living in social housing in the neighborhood currently. However, as current residents are in need of social housing, and it is important to mix diverse groups of people, social housing corporations play also a role in this scenario. On top of this, the current the plan of the municipality to reduce the amount of social housing to attract more middle incomes can be counterproductive for non-knowledge workers in Overtoomse Veld.

Co-housing

Co-housing creates opportunities for residents to share communal spaces with others. It is important people living in co-housing have similar lifestyles, needs and demands, concerning the shared activities.

Developers

The need for new housing typologies create opportunities for developers who are building and transforming homes in the more expensive segment, in order to gain more profit out of the developments. The power of these developers needs to be contained in order to prevent the whole neighborhood of being gentrified.

CPC (collective private commissioning)

CPC is a type of development where a group of private individuals (collectively) retains full control over the final homes which are being built in the neighborhood. Pros of this type of ownership is that it is possible to create more affordable housing and social cohesion can be improved as residents are working together in creating their future homes. Cons are that a large percentage foreign knowledge workers are leaving again after a few years and probably do not want to be tied to this kind of contract.

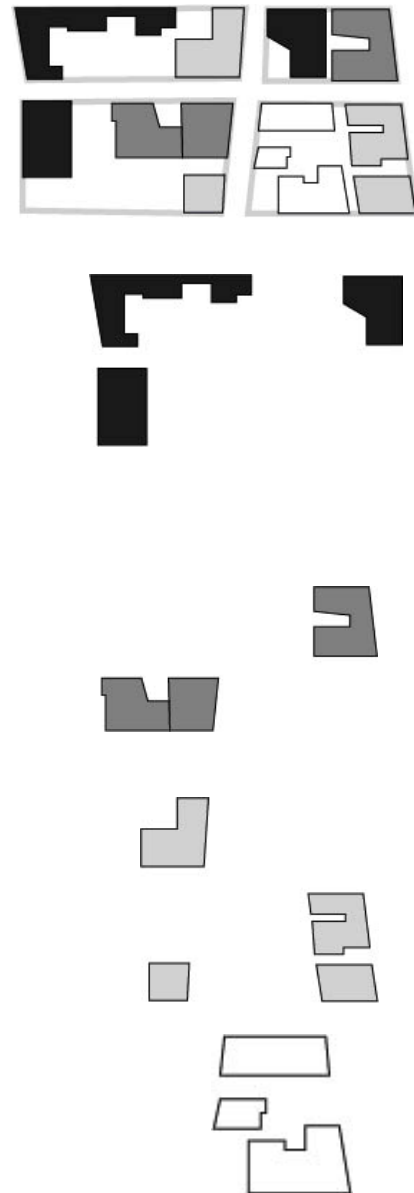


Fig. 218 Diversification of ownership in housing blocks next to downgraded A10

Stakeholder relations

Figure 219 shows the overall scheme of involved stakeholders in this scenario. As explained before, this scenario includes more involvement of private developers due to the creation of new buildings on the edges.

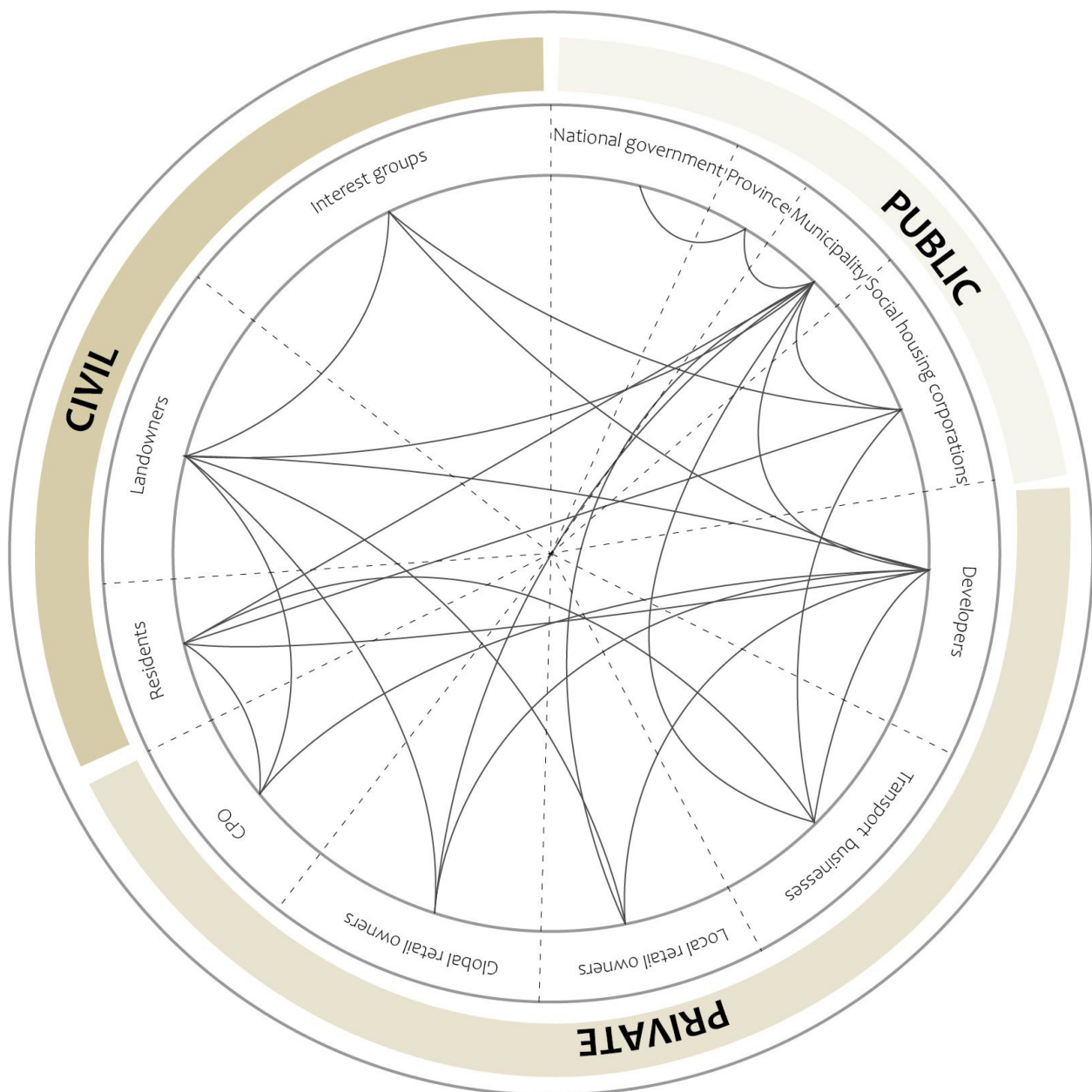


Fig. 219 Relations between different stakeholders

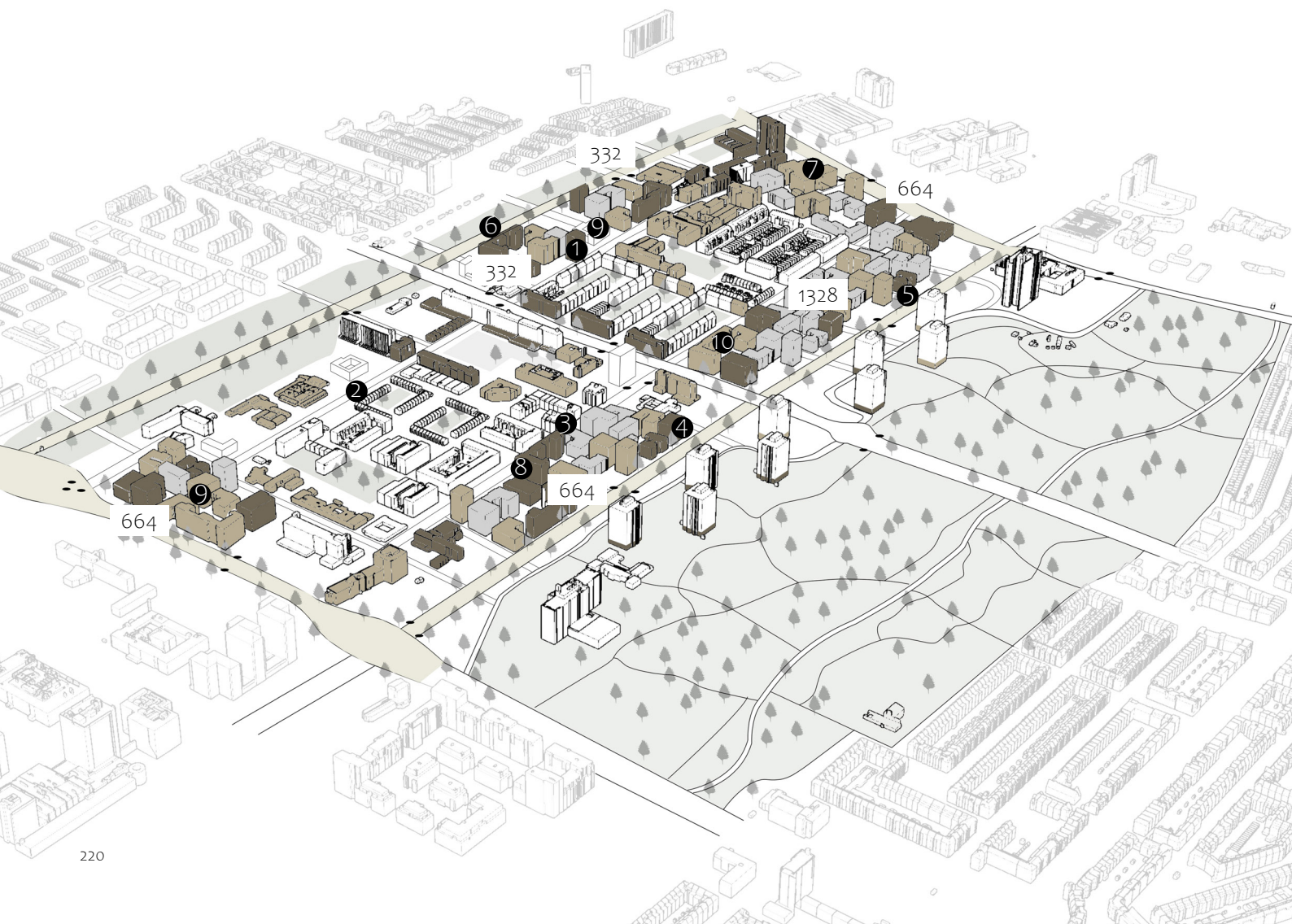
7.3.7 Reflection

Spatial configuration

Figure 220 shows the new configuration of this scenario. Existing building blocks on the edges are partly demolished and new housing is built. In this way, 3152 apartments can be added. Even though the buildings are higher and more apartments can be located, proportionately less people can be accommodated compared to the soft scenario, due to apartments being larger. The new housing has an average of 143 dwellings per hectare. Appendix D zooms in to the governance issues and investigated who is involved in what redevelopment.

Comparing figure 204 and figure 220 shows again the application of different streettypes and functions relates to the achievement and clarification of different zones. Public zones are mainly located on and around the main street, where public functions are located, while the more private zones are located on or close to neighborhood and residential streets, with more shared amenities. On top of this, the achievement of privacy zoning is also regulated in a vertical manner inside buildings (fig. 221).

Fig. 220 New spatial configuration of the extreme scenario



Remaining functions



Removed functions



New functions



- Public transport stops
- Public functions (shops, cafes, restaurants)
- Semi-public or collective functions (workspaces, schools, offices)
- New residential homes

Functioning of different zones

Research by design showed privacy zoning is, besides horizontally, also needed and achieved in a vertical manner (inside buildings), and is crucial to achieve social cohesion. As there is a variety of spaces in this scenario, it is important the public space is really accessible and used by everyone. Therefore a clear front and back side is needed. On top of this, the different types of street aid again in the transition to, and clarification of, certain zones.

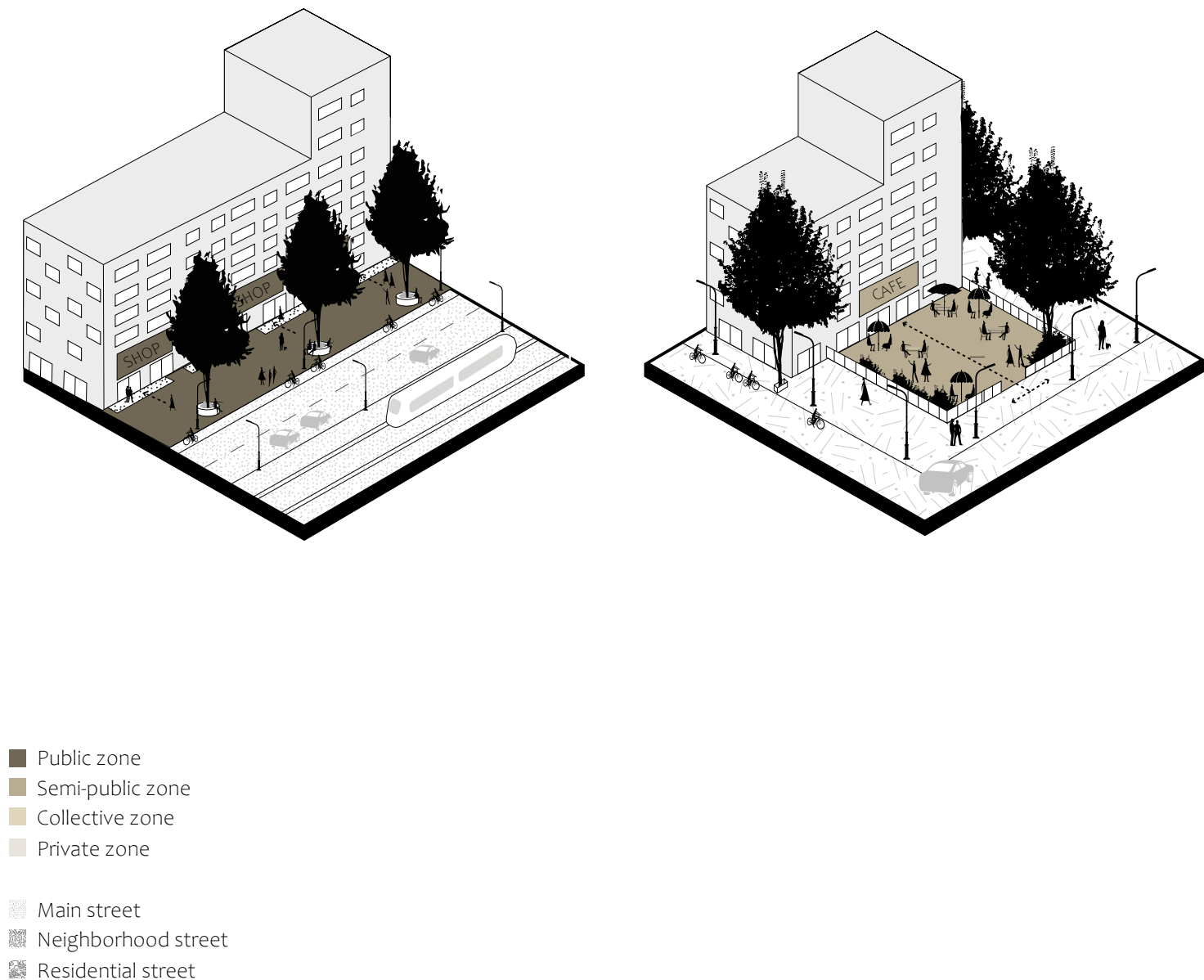
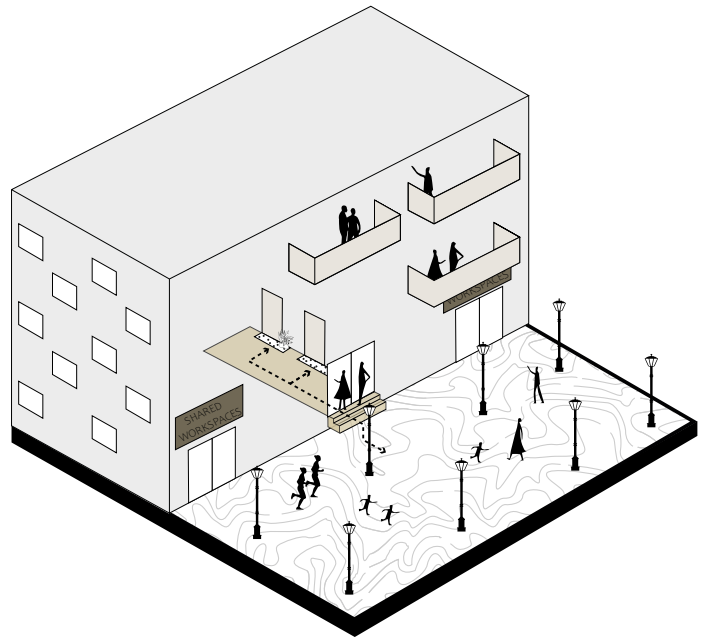
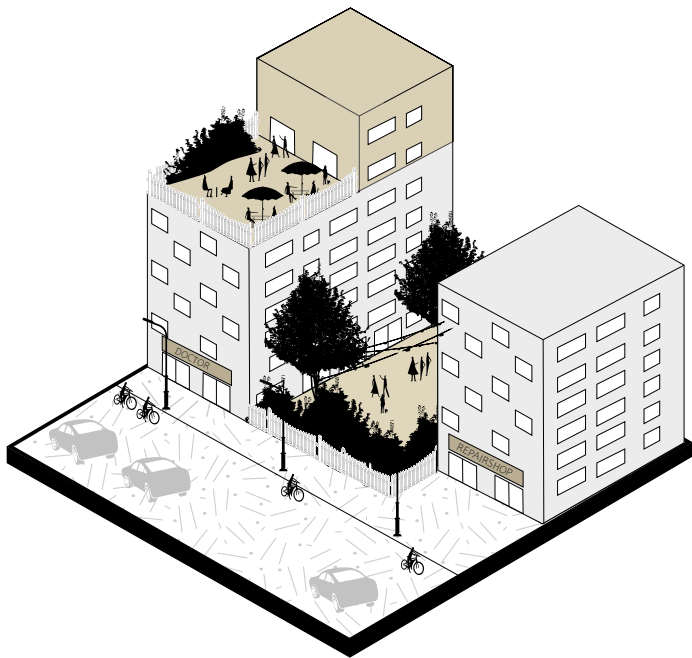


Fig. 221 Zones & streets in the extreme scenario



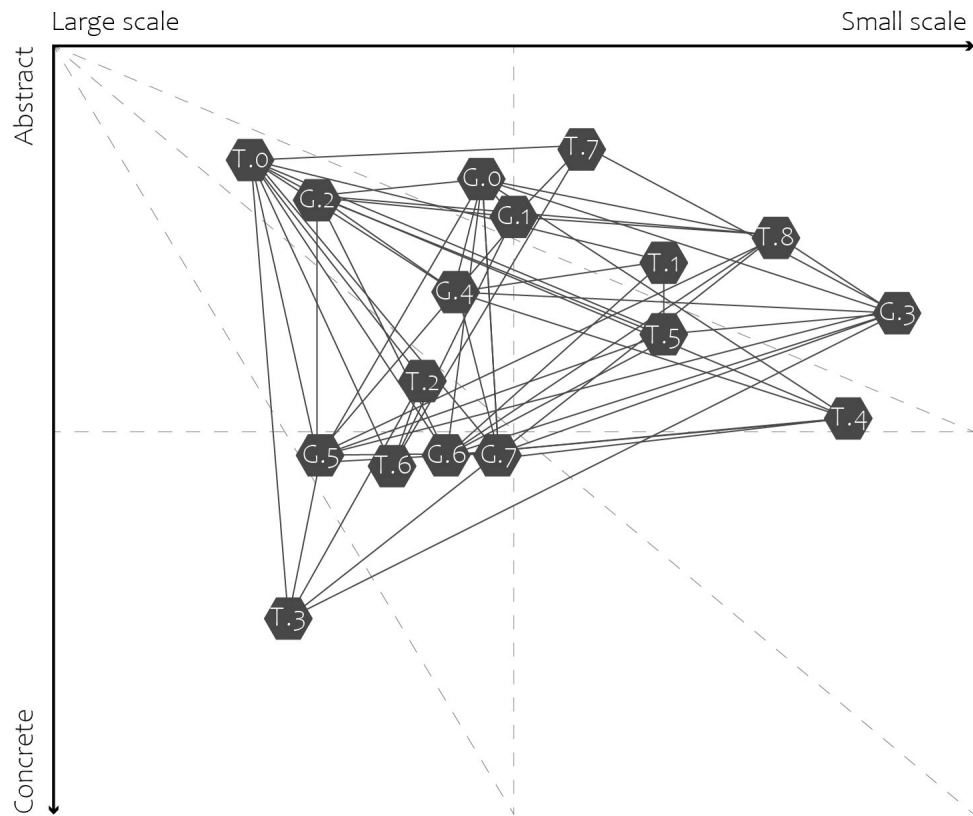


Fig. 222 Pattern relations

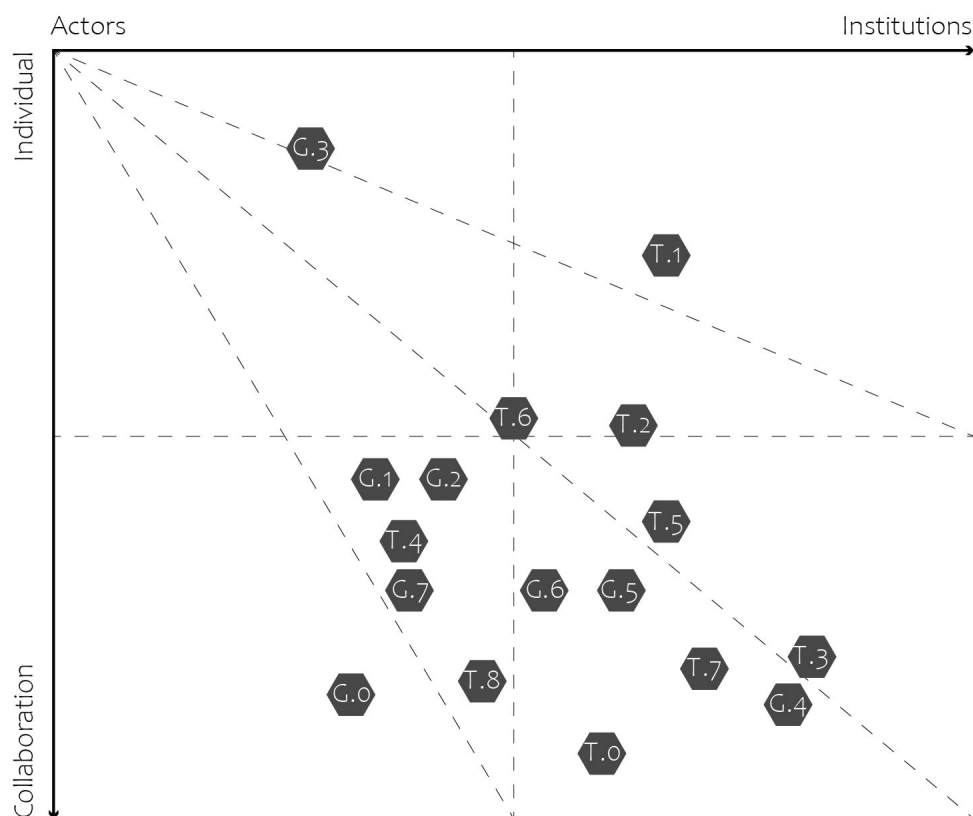


Fig. 223 Relation patterns & stakeholders

Pattern relation

Patterns G.5 (main street), G.6 (neighborhood street) and G.7 (residential street) pop out as main patterns, as they have many relations to other patterns which aid in the transition between zones. Moreover, pattern G.1 (clustered shops, businesses & offices), G.2 (diverse plots & volumes) and G.4 (possibilities to close off spaces) are related to many other patterns as they target the diversification of the building configuration and creating a variety of spaces. This shows, patterns which aid in the clarification of zones are again important.

Relation between patterns & stakeholders

It is visible the patterns are divided throughout the diagram, however a cluster is visible at the bottom. Many patterns are in need of collaboration between different stakeholders. This has probably to do with the fact that the groundfloor mainly consists of public or shared spaces. The more private spaces, which are often controlled by individuals, are mainly located inside the buildings.

7.4 design reflection

Soft strategy

New residents *partly similar* to current residents (*students*). This results in a *lower variety* of *spaces* than scenario 2.

Local & global shops. This results in a variety of shop sizes.

Moderate diversity of block types. New buildings in the park, limited adjustments to existing buildings.

Stakeholders

Current residents can be *included* in the transformation of the existing spaces.

Involves probably *more public investment* as private developers cannot build large new, expensive housing in the neighborhood and existing housing will mainly be adjusted.

Much *involvement of social housing corporations* as their main goal is not to make profit. On top of this, a clear need of social housing is present in this scenario.

Zones

The creation of different zones of privacy will mainly happen in a *horizontal* way. Besides public and shared outdoor spaces, (front) *gardens as private outdoor spaces* are present in the neighborhood.

Density

Softer adaptations: mainly focusing on which *buildings* can be *densified*.

2070 apartments added, mainly oneperson (studios) and family (shared facilities) housing. 4600 are needed for 9400 people.

Patterns

3 patterns related to *streettype* have many relations to other patterns which target the clarification and transition to specific zones.

Therefore, patterns related to *achieving privacy zoning* and creating a *clear compartmentation of space* are important.

Extreme strategy

New residents mainly *different* than current residents (*knowledge workers*). *Higher variety* of *spaces* and *clarity* needed between the *front* and *back sides* of *buildings*.

Mainly *global* shops to create a more international environment. These shops require larger spaces.

High diversity of block types. Transformation to mid-high rise blocks. Moderate diversity between the new blocks.

Stakeholders

Current residents will probably have less to say in the decision making process, as the focus is on building new housing. However, gentrification needs to be prevented as there is a risk of only building for new high-income, high educated.

More involvement of private developers. Their main goal is making profit, which is probably easier in this scenario as larger, more expensive, new housing can be built.

Higher *diversification* of *stakeholders* due to new housing.

Zones

The creation of different zones is, besides horizontally, also created in a *vertical manner*. The application of mid-high rise blocks and (semi-)public or collective functions on ground-floors, leads to apartments which are located on upper floors. The *transition to private zones* therefore happens *indoors*, which also asks for *clear transitions inside buildings*.

Therefore, a variety of spaces is needed where the *public zones* are really *accessible* and *readable* to all, so *everyone uses it*.

Density

Structural changes: focus on *block & areas* in the neighborhood which can be *densified*.

3152 apartments added, mainly oneperson houses with varying (larger) sizes. 4600 are needed for 9400 people. Proportionately, density of residents is less compared to the soft scenario.

Patterns

Patterns related to *type of street* have many relations to other patterns which target the transition and goal of certain zones.

Patterns which aid in the *diversification of the building configuration* and creating a *variety of spaces* pop-up as having many relations to other patterns.

Patterns which aid in the *clarification of zones* are again important.

Conclusion

Looking back at the scenarios several main differences can be found relating to development strategies, diversity of people, building configuration, stakeholders and zones. It is striking to see that that, despite the differences, in each scenario the strategy of looking at:

- Where can densification and take place?
- How can social cohesion be achieved?

is crucial to create a solid base.

Investigation showed three patterns play a large role in both scenarios. The main street, neighborhood street and residential street. These patterns link again to many other patterns (related to buildings, spaces and functions) and aid in the transition between zones. Therefore, it can be said that in order to switch from one scenario to another, privacy zoning needs to be clear and the application of the street patterns can be seen as a key intervention in this. Therefore, patterns which aid in the clarification of different zones have more priority, no matter what scenario.

Patterns can thus be linked to the objectives of this thesis. The design of not only the buildings, but also streets, public and private spaces, and the application of functions, in order to achieve different zones of privacy, can aid to a certain extent in the transformation of post-war neighborhoods and achievement of social cohesion.

7.5 time horizon vision

The *Omgevingsvisie 2050* by the Gemeente Amsterdam (2021) has similar goals as this project. It focuses on five strategic points:

1. Development of multiple cores

One of the five strategic choices focuses on the development of different cores in the city. One of these cores is located in Nieuw-West and will stimulate the integration of the area with the rest of the city by having its own qualities, amenities and housing possibilities.

2. Expanding within city boundaries

Densification is an important topic within the vision of the municipality. Focus is on intensification within existing city boundaries.

3. Sustainability & health

Sustainability and health emphasizes space for pedestrians, cyclists and public transport.

4. Greening the city

The fourth goal is greening the city to create a resilient climate for all.

5. Cooperating in the city

This last strategic goal emphasizes the inclusion of residents, and stimulates cooperation between them, businesses and other stakeholders within the living environment.

Figure 224 compares the time horizon of the vision of this project and the municipality of Amsterdam. As is visible, the project relates to several points of the *Omgevingsvisie 2050*, but also promotes alternatives.

Fig. 224 Comparisons *Omgevingsvisie 2050* (Gemeente Amsterdam, 2021) & this project

Gemeente Amsterdam

Large project-related investments in accessibility, green and public spaces

Investing in station Lelylaan

Car as guest in city centre

2021-2030

This project

Downgrading ringroad

Where possible, adjustment & transformation of different roads in the neighborhood

S1: Infill development & transformation of existing housing

S1: New functions in buildings which will not be transformed or demolished

S2: Demolishment of poor quality housing and start of building new

ing developments station Lelylaan

Car as guest in post-war city districts

2031-2040

2041-2050

creation of new public transport
stops in the neighborhood

art building new housing in the park

continuation of building new housing

Transformation & upgrading of (existing) public spaces which will now be
surrounded by new and transformed buildings

This chapter will answer the main research question and its subquestions. On top of this, a reflection is given.

8.1 conclusions

Main research question

“How can the *monofunctional post-war* neighborhood Overtoomse Veld be *transformed* into a more *socially cohesive mixed-use* area?”

Research aim

To explore how to densify the city, but continuously achieve social cohesion in neighborhoods. This research therefore aims for two main interventions which are multi-scalar and interrelated.

Design interventions in terms of catering the housing need, preventing segregation & exclusion, and providing a suitable mix of program which stimulates social cohesion in post-war neighborhoods. Subsequently, this project aims to discover how stakeholders can be included more in the process of development in order to create approaches which are more location specific and consider different social groups, places and times instead of implementing standardized programs to different neighborhoods.

Conclusion

This project shows the complexity Amsterdam is dealing with at the moment. There is a tremendous need for densification to accommodate current and new residents, which are becoming more and more diverse. This need is accompanied by the challenges of who the scarcity of space in the city belongs to and how this space can be divided. A shift is needed which aims to capitalize on the potential of existing neighborhoods and their residents instead of applying systematic development processes aimed towards economic prosperity, and which mainly result in high-rise blocks, only dedicated to new, high-income, high educated residents. There is a risk in these transformations of increasing forms of spatial segregation between people. In other words, instead of creating an environment which allows the coexistence of current and new residents, which can possibly also evolve in opportunities for social cohesion, the developments are contributing to the anonymity of the area and segregation between people. Worst case scenario is the complete replacement of existing residents because of these ongoing developments.

The scenarios have shown that rethinking densification proposals and including the social aspects in these, can increase the liveability, and therefore achievement of social cohesion, in the neighborhood. It became clear that choosing a softer strategy showed the potentials of the existing neighborhood in how new homes can be accommodated in Overtoomse Veld, but also how existing buildings and spaces can be enhanced. The soft scenario therefore also foresees in solutions in case the densification need stagnates.

The extreme strategy, which focused on the need of new building typologies and amenities, resulted in the application of densification around the edges of the neighborhood. This created possibilities to foresee in the needed growth and creation of different realms for a variety of people, but still takes the existing neighborhood structure and its residents into consideration.

Striking is the fact that the scenarios showed privacy zoning is necessary in all situations, in order to achieve social cohesion, no matter who will be the future residents of the neighborhood or what spatial strategy will be applied. This zoning can be expressed in different ways, but is always of crucial importance. For example, the extreme strategy will result in more mid-highrise buildings with (semi-)public groundfloor functions. This requires that the application of privacy zoning also happens in a vertical manner inside buildings. While on the other hand, looking at the soft strategy of enhancing the existing, privacy zoning will happen more horizontally between spaces. Nevertheless, the importance of privacy zoning is clearly evident when trying to achieve social cohesion between current and new residents, regardless of who these new residents might be.

It is noted that the variety of zones, where people can meet in public spaces, undertake activities in collective zones, or withdraw and seek privacy in private areas, are therefore of crucial importance where the relation to a diversity of streets, different functions, housing typologies, lifestyles and willingness of different people to make contact plays an important role. Physically mixing of people does not automatically lead to social cohesion. Therefore, the social-cultural aspects need to be taken into consideration as well.

In conclusion, the project is multi-scalar as it concerns challenges the city is dealing with as housing shortage, liveability, segregation and connectivity. It shows the possibilities of densification, but simultaneously achieving social cohesion, by focusing on the potentials of the existing structure of the neighborhood and taking into consideration the current residents. On top of this, the project recognizes the importance and role different stakeholders play in these developments. A crucial aspect in this, is the role of the municipality in what they can, and want to do in practice, in order to safeguard the social aspects in densification proposals.

SQ1

“What are the spatial aspects of a socially cohesive neighborhood?”

It is emphasized physical form can contribute to social cohesion, but social cohesion cannot be achieved solely through physical interventions. Research suggested that social cohesion between residents can be supported by planning and design which is focusing on the physical characteristics of a place e.g., the design and physical form of a neighborhood, in order to promote its distinctiveness and character. However, a variety of different aspects, which depend on perception of the built environment, is necessary to affect social cohesion as a whole. Therefore, physical and non-physical characteristics influence liveability, and therefore social cohesion, in neighborhoods. Focus should therefore be on physical interventions which support the social environment, in order to create a more socially cohesive neighborhood.

SQ2

“How is mixed-use development related to social cohesion between residents and how does it create opportunities in Overtoomse Veld?”

Mixed-use is often positively related to achieving social cohesion between residents. It is important to realize that probably not every mix of function will work. Functions should be related and be open and accessible during different times and days. An initial assessment is needed which investigates what functions the neighborhood already has and what mix of functions can meet the needs and demands of the residents. This can prevent situations where implementation of new mixed-use functions leads to segregation between residents. Thereafter, it is emphasized to investigate where areas are located which have a high diversity of residents and implement non-residential functions and well-served public spaces in order to support social cohesion between a diversity of residents. Well-functioning public spaces can increase the interaction, connectivity and mixture of different people, which are all important factors of a cohesive area. This creates opportunities in Overtoomse Veld. Currently, a large amount of available functions can only be used during daytime on weekdays, there is a lack of available amenities and functions during the evening and night on weekends. Applying a mix of functions, active during different times, can therefore aid in creating well-functioning spaces and stimulate social cohesion.

SQ3

“In what way is the spatial configuration challenging the quality of social life in Overtoomse Veld?”

Investigation showed Overtoomse Veld is difficult to reach compared to the surrounding area, which is striking as it is located quite close to the inner city centre. Only a few roads give access to the neighborhood. This, in combination with closed facades, a lack of entrances and high buildings on the edges can strengthen the feeling of a secluded isolated place which affects social life. However, even though the neighborhood is hard to reach from the surrounding area, once you have entered the neighborhood, different streets have a high probability of being used and a diversity of shops and amenities can actually be found inside Overtoomse Veld. As a high probability of a street being used, does not necessarily relate to social cohesion in an area, is visible when looking at the negatively rated social cohesion in Overtoomse Veld. The current situation can therefore actually increase the feeling of a secluded place where people outside the neighborhood are not entering, and residents of Overtoomse Veld are just living there, but are not interacting with each other.

SQ4

“What are the possibilities for densification in the city and its neighborhoods?”

Looking at ‘where is space to densify’, by looking at the FSI and GSI, ‘where does it make sense to densify’, by looking at centralities, and ‘which buildings have the potential to be densified’, by looking at parcellation and ownership, results in several areas which have possibilities for densification. In Overtoomse Veld, these areas are mainly located on the edges and around the three main central streets.

SQ5

“What spatial measures can be applied in order to transform Overtoomse Veld into a more socially cohesive neighborhood?”

Scenario testing is used in the project to investigate alternatives of the urban fabric, and the application of different types of densities in the neighborhood. Thereafter, the necessity and suitability of altering the urban configuration is evaluated, in order to achieve social cohesion. Two scenarios are created: a soft and an extreme one. Different groups of people are used as a starting point for these investigations. It turned out these groups differ in needs and demands concerning housing prizes and sizes, and amenities. However, the achievement of social cohesion functions the same in both scenarios. Investigation showed that social cohesion needs social control and social control is achieved by privacy zoning and different territories. Each of these zones are recognizable by different borders, transition spaces and the behaviour of people. The use of a pattern language, which creates clarity in the (transition towards) zones, is applied. This is done by focusing on the design of buildings, with suitable apartment sizes for different residents, streets, with a variety of infrastructure and furnishment, public and private spaces, and the application of mixed-use functions, and therefore aid in the transformation of post-war neighborhoods and achieving social cohesion between residents. It is found that the application of privacy zoning can differ per scenario, but especially patterns related to type of street have more priority, no matter what situation. These patterns link again to many other patterns which aid in the transition between zones. Therefore, to stimulate the achievement of a socially cohesive neighborhood, independent from types of building configuration or people, privacy zoning needs to be clear and the application of street patterns can be seen as a key intervention in this.

SQ6

“What institutional change is required in order to allow and strengthen the positive effects of the interventions?”

Currently, standardized programs are implemented to different neighborhoods which are mainly geared towards economic growth. Visible in both scenarios is the importance of creating location specific approaches which consider the existing neighborhood structure, different social groups, places and times. The involvement of stakeholders plays a crucial role in this. By engaging residents in the development processes of the neighborhood, interest can be aroused and participation and interaction between people can be stimulated. This can aid in the achievement of social cohesion between residents in the neighborhood. On top of that, the cooperation between stakeholders in certain zones is of crucial importance in order to create clarity in the living environment. Uncertainty about who owns or maintains the space can result in anonymity and underutilized areas.

SQ7

“To what extent are the interventions in Overtoomse Veld transferable to other post-war neighborhoods?”

Even though the context of Overtoomse Veld is unique, and design is always specific to its context, a framework of transformation is created which can foresee in possibilities for other post-war neighborhoods in the city. For example, looking at the Western Garden Cities, similar challenges, but also potentials as in Overtoomse Veld can be found. The structure of open building blocks and abundance of (undefined) green are challenges visible throughout the whole area. However, the project showed possibilities can be found in the structure and interplay of these buildings and green, where the application of patterns to create privacy zoning and different territories foresees in opportunities for making the first steps in achieving a socially cohesive mixed-use neighborhood. The project opted for an approach which aimed to capitalize on the potential of different zones which, regardless of the people and type of neighborhood, need to be present. The method of applying a pattern language can be universal to a certain extent, but social-cultural aspects and economic prosperity impact the transferability of certain patterns. The project showed patterns related to different streets can be prioritized and used to develop a framework based on the existing position of the area in the city and its network, and function as a first step in creating different zones of privacy. While patterns related to different typologies and building characteristics are more tied to the context and used to guide the infill of the framework. Therefore, the project approach can be deployed as a work of reference and ensures a certain degree of transferability.

8.2 reflection

Societal relevance

Contemporary cities are under pressure as a high need for densification occurs, clearly visible in Amsterdam. As densification has the possibility to bring high concentrations of resources, capital, data and talent over a small geographic territory, it is favoured (Ellen MacArthur Foundation, 2017). However, problems as gentrification and segregation occur more often. Spatial injustice occurs which results in the neglectance of lower educated, lower-incomes in the densification zones of the city, and social cohesion is at stake. This is especially of great importance when looking at the increasing gap between rich and poor (Milikowski, 2018) and the plans for the expansion of the city centre of Amsterdam. By focusing on the case of Overtoomse Veld, this project sought to explore potentials for both urban design as for development strategies in order to provide a framework towards development. This framework is meant as a guide for change that aims to find solutions to transform and densify the city and its neighborhoods via design interventions and involvement of stakeholders, in order to create a place that aids in the social cohesion between a diverse group of residents. The project aimed to go beyond the fact of solely spatial urbanization, but to also guard local cultural and social values as crucial aspects which need to be taken into consideration in order to create a long-term solution.

Ethical issues

The neighborhood Overtoomse Veld offers on the one hand possibilities for urban regeneration, but is also home to a part of the economically weaker inhabitants of the city of Amsterdam. Clearly visible in the report of *Wonen in Amsterdam* [Living in Amsterdam], by the Gemeente Amsterdam (2020b), are the differences between Overtoomse Veld and the more prosperous neighborhoods in the city. Dealing with the more underprivileged people in society required a way of handling people with respect, without judging them regarding the challenges in the neighborhood. Besides this, the city and its neighborhoods are home to a diversity of cultures, religions, incomes and communities. Each group has its own characteristics and identities in how they live, work and move through the city. In order to create an inclusive project, an understanding of all the different groups was necessary. However, due to the limited amount of time, this might have led to certain generalizations regarding the needs and demands of people when creating social profiles for the scenario testing. In my opinion, this was necessary in order to frame the project in some way and create a more concise research by design chapter.

The relationship between research and design

The method of doing research by design is an important aspect in this project. As one of the main goals was to investigate how social cohesion can be achieved in neighborhoods, but simultaneously densification can take place, scenarios have been created. These scenarios functioned as a main guide to test alternatives of the urban fabric through design by application of a pattern language and evaluating the necessity and suitability of altering the urban configuration in order to achieve social cohesion. As developments need to be flexible and adapt to changing circumstances, it is therefore part of research by design.

Roggema (2016) emphasizes two arguments, which are highly related to this research, of why research by design is a crucial method to use for complex challenges, in order to make plans for future scenarios. Firstly, it is emphasized the certainty of programs and conditions can be no longer the base for creating future proposals. Nowadays, conditions and programs are always changing. It is therefore important to have iterative processes which reflect on the results of certain interventions. Secondly, many problems are complex in current times, and do not have one final solution, as is also readable in the theoretical underpinning of this research. Therefore, counterintuitive thinking is necessary. As it is possible to make creative jumps in thinking and solving problems, research by design is an applicable method for the problems addressed in this research. In this way, plans do not only seek to investigate possible future outcomes, but also create a spatial strategy for the city and its neighborhoods by linking them with different activities and interventions.

Methodology reflection, limitations & problems during data collection

The chosen methodology has shown advantages, as well as limitations during the process of this graduation project. From the beginning on, there was an emphasis on the current residents of Overtoomse Veld, as they are often forgotten or neglected in densification and transformation proposals. However, the Covid-19 pandemic created some difficulties relating to only a scarcity of people being on the street which made it harder to conduct surveys and investigate the actual movement, interaction and other aspects happening in Overtoomse Veld on a daily basis. For this reason, an online survey was created. In retrospect, some of the questions did not provide as relevant feedback as initially hoped. Moreover, the length of the survey could have been shortened in order to provide a clear focus point of the subject. Despite the fact that the methods separately contributed less than expected, a combination of the three, the interviews, questionnaires and fieldwork, did provide a large scope of useful information regarding the needs and demands of current residents in relation to the functioning of Overtoomse Veld in contemporary society.

A second limitation concerns the scenarios. I now used students and knowledge workers as a base to investigate different spatial strategies in the scenarios. This created difficulties as housing size and income of people might be similar, but lifestyle, behaviour and needs of individuals varies incredible, which plays a large role in the achievement of social cohesion. Therefore, the current approach led to certain limitations. It would never be the case that in the future of Overtoomse Veld only students or only knowledge workers will come to the neighborhood.

However, despite the limitations, this approach of looking at the two created scenarios, did provide useful information regarding how differently people can use the neighborhood and how social cohesion can be achieved. It showed that, regardless who will be the new residents in the neighborhood, social control between residents is needed to achieve social cohesion and the application of privacy zoning can be realised in different ways, but always plays a crucial role in this.

Relationship between graduation topic, Urban Fabrics studio, Urbanism and master programme (MSc AUBS)

This graduation project tries to encompass the relationship between qualities of the urban environment, in combination with social and economic performances of societies and the wellbeing of citizens. This is done by not only focusing on the contribution to the urban development and densification of the city of Amsterdam and its neighborhoods, but also being sensitive to local conditions and cultures in order to enhance social cohesion between residents. The project therefore refers to the physical urban environment, but also to the psychological and socio-cultural structures related to this, and fits well within the Urban Fabrics graduation studio of the department of Urbanism. Besides this, also the relation between the graduation project and the master programme in general is clearly evident as the MSc Architecture, Urbanism and Building Sciences blends knowledge and skills from design practice, including physical and social sciences, which relates to the aim of this graduation project.

Generalizing the results & potential applications in practice

This project contributes to the ongoing developments in the city of Amsterdam due to an influx of population, by focusing on the neighborhood Overtoomse Veld. Research indicated different initiatives and processes over the last years to expand the city and enhance the liveability in its neighborhoods. However, time has shown the injustice accompanying these proposals and the situation in several neighborhoods even worsened over the last years. The project's intended aim of proposing spatial and organizational interventions, could be used as guidelines when transforming and upgrading the neighborhood of Overtoomse Veld. As the analysis is based on socio-spatial and socio-economic structures, it could also provide a useful source of knowledge for other monofunctional post-war neighborhoods in the city of Amsterdam which are dealing with similar challenges and potentials as Overtoomse Veld. Even though the context of the neighborhood Overtoomse Veld is unique, and design is always specific to its context, important elements of the strategy, have potential to be used in different settings and are therefore likely to be transferable to other post-war neighborhoods in Amsterdam (see also subquestion 7). Furthermore, this project can function as a valuable contribution to shortcomings in current developments due to the investigation which consists of fieldwork, linked with practice and theory. It offers a perspective on how to deal with the issue of densification by catering the social aspect in the process.

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B. questionnaire

Waardoor voel jij je thuis in de wijk?

Deze enquête is onderdeel van een afstudeeronderzoek binnen de faculteit Bouwkunde van de TU Delft. Het invullen van de vragenlijst duurt ongeveer 10 minuten.

Hierbij een korte achtergrond van het onderzoek:

Uit plannen van de gemeente blijkt dat het centrum van Amsterdam wordt uitgebreid. Aangezien uw wijk in deze uitbreidingszone ligt, zijn we benieuwd hoe u dit ervaart en willen graag onderzoeken wat de behoeftes en eisen zijn van de bewoners in Overtoomse Veld.

We hopen dat u mee wilt werken aan dit onderzoek. Alvast bedankt voor uw tijd!

Sectie

Uw deelname aan dit onderzoek is geheel vrijblijvend. U kunt elk moment stoppen en u bent vrij om vragen niet in te vullen. In deze vragenlijst worden enkele basis vragen gesteld over uw achtergrond, maar individuele informatie wordt niet gepubliceerd in het onderzoek, u blijft geheel anoniem. Gaat u akkoord met het invullen van deze vragenlijst en het delen van de gevraagde informatie?

1. Gaat u akkoord met het invullen van deze vragenlijst en het delen van de gevraagde informatie?

*

☐ Ja

☐ Nee

Algemene vragen

De volgende vragen geven achtergrondinformatie over de uitkomst van deze vragenlijst.

2. In welke wijk woont u? *

3. In welke straat woont u?

4. Wat is uw leeftijd? *

- ☐ <15 jaar
- ☐ 15-25 jaar
- ☐ 25-45 jaar
- ☐ 45-65 jaar
- ☐ > 65 jaar

5. Geslacht *

- ☐ Vrouw
- ☐ Man
- ☐ Anders

6. Werkt u in dezelfde wijk als waar u woont? *

- ☐ Ja
- ☐ Nee
- ☐ Nu wel omdat ik thuis werk vanwege Corona
- ☐

Leefbaarheid algemeen

Kies in hoeverre u het eens bent met deze stelling.

7. Ik woon hier naar mijn zin *

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

mee oneens mee eens

8. Als je in deze wijk woont heb je het goed getroffen *

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

mee oneens mee eens

9. Hoe tevreden bent u met uw wijk? *

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

erg ontevreden erg tevreden

10. Ik voel me veilig in de wijk *

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

mee oneens mee eens

11. Indien u zich wel eens onveilig voelt, op welk moment is dit dan?

- ☐ Ochtend
- ☐ Middag
- ☐ Avond
- ☐ Nacht
- ☐ Doordeweeks
- ☐ In het weekend

12. Indien u zich wel eens onveilig voelt, op wat voor plek in de wijk is dit dan?

Woonkenmerken

13. Met hoeveel personen deelt u uw woning? *

- ☐ 1 (ik woon alleen)
- ☐ 2 (ik woon met iemand anders)
- ☐ 3-5 (inclusief uzelf)
- ☐ meer dan 5 (inclusief uzelf)

14. Hoe groot is uw woning? *

- ☐ <50m²
- ☐ 50-100m²
- ☐ >100m²

15. Hoe tevreden bent u met uw woning? *

0	1	2	3	4	5	6	7	8	9	10
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erg ontevreden erg tevreden

16. Heeft u een tuin of balkon? *

- ☐ Tuin
- ☐ Balkon of dakterras
- ☐ Nee

☐

17. Hoe groot is uw buitenruimte? *

- ☐ Geen
- ☐ <5 m²
- ☐ 5-10 m²
- ☐ 10-20 m²
- ☐ >20 m²

18. Hoe tevreden bent u met uw eigen buitenruimte? (sla over indien 'geen' bij vraag 17)

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

erg ontevreden erg tevreden

19. Hoe groot is uw opslagruimte in totaal in of rondom uw woning? (bijvoorbeeld een garage, schuur, berging) *

- ☐ Geen
- ☐ <5 m2
- ☐ 5-10 m2
- ☐ 10-20 m2
- ☐ >20 m2

20. Hoe lang woont u al op uw huidige adres? *

- ☐ Minder dan 1 jaar
- ☐ Minder dan 5 jaar
- ☐ Tussen de 5 en 10 jaar
- ☐ Tussen de 10 en 20 jaar
- ☐ Meer dan 20 jaar

21. Werkt u in de wijk? *

- ☐ Ja, ik werk vanuit huis
- ☐ Ja, ik woon naast of boven mijn werk
- ☐ Ja, ik woon op loop afstand van mijn werk
- ☐ Ja, ik woon op fiets afstand van mijn werk (of klein stukje rijden met auto)
- ☐ Nee, maar wel in de stad
- ☐ Nee, buiten de stad
- ☐ Nee, ik werk niet
- ☐ Ik werk thuis vanwege de Corona maatregelen
- ☐ Ik ben gepensioneerd
- ☐

22. Over welke aspecten van uw wijk bent u tevreden? *

- ☐ Grootte van de woningen
- ☐ Kwaliteit van de woningen
- ☐ Ruimte op straat
- ☐ Kwaliteit op straat
- ☐ Groenvoorzieningen (tuinen/parken etc.)
- ☐ Openbare ruimtes (pleinen/speeltuinen etc.)
- ☐ Winkel voorzieningen
- ☐ Openbaar vervoersvoorzieningen
- ☐ Parkeer mogelijkheden
- ☐ Andere bewoners in de wijk
- ☐

23. Over welke beschikbare activiteiten in uw wijk bent u het meest tevreden? *

- ☐ Openbare ruimtes
- ☐ Detailhandel
- ☐ Supermarkten
- ☐ Restaurants en cafés
- ☐ Buurtwinkels
- ☐ Sport en recreatie
- ☐ Onderwijs
- ☐ Cultuur (theater/bioscoop etc.)
- ☐ Religieuze gebouwen
- ☐ Zorg (dokter/fysiotherapeut etc.)
- ☐ Wijk/buurt centra
- ☐ Kantoren
- ☐ Bedrijven
- ☐

24. Wat voor activiteiten wilt u kunnen doen in uw eigen wijk, die nu niet mogelijk zijn? (op loop afstand van uw huis) *

25. Op welke plekken in de wijk komt u graag/zijn belangrijk voor u? *

26. Waarom komt u hier graag? *

27. Op welke plekken in de wijk komt u niet graag? *

28. Waarom komt u hier niet graag? *

29. Op welke plekken in uw wijk ontmoet u anderen? *

30. Zou u gebruik willen maken van een gedeelde werkplek? (meerdere antwoorden mogelijk) *

- ☐ Nee
- ☐ Ja, professionele werkplek
- ☐ Ja, gedeelde workshop voor hobbyisten en/of creatievelingen
- ☐ Ja, tijdelijke werkplekken
- ☐

31. In welke mate ervaart u hinder van een van de onderstaande vormen *

	geen	weinig	neutraal	redelijk	veel
Geluid	☐	☐	☐	☐	☐
Geur	☐	☐	☐	☐	☐
Verkeer	☐	☐	☐	☐	☐
Stof	☐	☐	☐	☐	☐
Anders	☐	☐	☐	☐	☐

32. Door wie/wat ervaart u overlast *

- ☐ Geen
- ☐ Buren
- ☐ Andere bewoners in de wijk
- ☐ Bedrijven in de buurt
- ☐ Openbare inrichtingen zoals scholen
- ☐ Bouwplaats
- ☐ Horeca
- ☐ Verkeer algemeen
- ☐ Vrachtverkeer
- ☐ Scheepvaart
- ☐ Pleziervaart
- ☐

33. Wanneer ervaart u overlast? (sla over indien u geen overlast ervaart)

- ☐ Ochtend
- ☐ Middag
- ☐ Avond
- ☐ Nacht
- ☐ Doordeweeks
- ☐ In het weekend

34. Wanneer bent u over het algemeen thuis? *

- ☐ Ochtend
- ☐ Middag
- ☐ Avond
- ☐ Nacht
- ☐ Doordeweeks
- ☐ In het weekend

35. Heeft u wel eens contact met uw burens? *

- ☐ Ja, dagelijks
- ☐ Ja, wekelijks
- ☐ Ja, maandelijks
- ☐ Ja, jaarlijks
- ☐ Nee, nooit
- ☐

36. Heeft u wel eens contact met andere bewoners in de wijk (geen burens)? *

- ☐ Ja, dagelijks
- ☐ Ja, wekelijks
- ☐ Ja, maandelijks
- ☐ Ja, jaarlijks
- ☐ Nee, nooit
- ☐

37. U ervaart uw leefomgeving als ... *

	woonbuurt	tussen woonbuurt en gemengd in	gemengd	tussen gemengd en werkbuilt in	werkbuilt
	☐	☐	☐	☐	☐

38. Wat vindt u van de winkels en bedrijven (indien aanwezig) in uw leefomgeving? *

39. Mist u bepaalde winkels of bedrijven in uw leefomgeving? *

40. Mist u andere aspecten in uw leefomgeving? (bijvoorbeeld openbaar vervoersvoorzieningen) *

41. Vind u uw wijk goed bereikbaar? *

- ☐ Ja, te voet
- ☐ Ja, met de fiets
- ☐ Ja, met de auto
- ☐ Ja, met het openbaar vervoer
- ☐ Nee, met geen van bovenstaande opties

42. Vind u uw woning in de wijk goed bereikbaar? *

- ☐ Ja, te voet
- ☐ Ja, met de fiets
- ☐ Ja, met de auto
- ☐ Ja, met het openbaar vervoer
- ☐ Nee, met geen van bovenstaande opties

Bedankt voor uw deelname!

Bent u geïnteresseerd aan de resultaten van ons onderzoek? Vul dan hier beneden uw e-mailadres in:

43. Contact

44. Opmerkingen

Mixed-Use Development: a Panacea for Social Cohesion in Neighborhoods?

The contemporary planning paradigm

**AR3U023 Theories of Urbanism
MSc Urbanism, Technische Universiteit Delft**

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Abstract

Planning and design principles of post-war neighborhoods in the *Western Garden Cities* of Amsterdam are, among other things, characterized by the idea of separating the four main functions in a city. During the last decades, there has been a change in policy and design strategies of urban renewal. It shifted from creating the separated land-uses towards a more mixed-use development. This is currently the planning norm rather than the exception and is seen as a way to create a community (feeling) and improve social cohesion in neighborhoods. However, despite the widespread support of mixed-use policies, its actual influence on social cohesion in neighborhoods is difficult to determine. Investigation showed the creation of socially mixed areas and mixed-use areas can be good starting points for achieving social cohesion in neighborhoods. However, there are several requirements which need to be taken into consideration. Not only the physical environment, but also the perceived quality of the social environment plays an important role in contributing to a socially cohesive neighborhood. Besides this, having a variety of residents also leads to challenges of meeting the needs and demands of all residents in the neighborhood, as not every mix of function will work. Building up on this, an integration is needed between not only the mix of functions, but also the relation with vibrant public spaces, good accessibility to public transport and a diversity of housing in order to increase the possibilities of enhancing social cohesion in neighborhoods.

Key words

Mixed-use, social cohesion, Western Garden Cities, planning and design policies

Introduction

Contemporary cities are not only growing in population, they are also becoming more and more diverse. According to The Worldwatch Institute (2016), this twofold process poses major challenges. Besides managing the multi-faceted integration of new residents into the city and into society, there is also the challenge of ensuring continued social cohesion in neighborhoods. On top of this, there is a common perception that the quality of public and social life is deteriorating worldwide. Economic inequality increased since the 70s which have resulted in socioeconomic inequalities and spatial segregation. This development is especially visible in urban areas and has a major impact on the quality of life and social cohesion between residents (The Worldwatch Institute, 2016).

During the last decades, there has been a change in policy and design strategies of urban renewal. It shifted from creating separated land-uses, as in the *Western Garden Cities*, and is nowadays geared towards mixed-use development. This is currently the planning norm rather than the exception and is seen a way to create a community (feeling) and improve social cohesion in neighborhoods (Foord, 2010). Despite the widespread support of mixed-use policies, its actual influence on social cohesion in neighborhoods is difficult to determine and its basic concepts are neither reflected in legislation nor in impact assessment of the application (Evans et al., 2007).

This essay therefore elaborates on the development of mixed-use and the relationship with social cohesion in neighborhoods. In order to gain a deeper understanding of this topic, this essay will start with explaining the emergence of the *Western Garden Cities* as example of an area which origin can be found in approaches which were contradictory to the characteristics of mixed-use approaches, but which was created from a sociological point of view. Thereafter, the relationship between social cohesion, physical form and social sameness is investigated in order to finally investigate the relationship between mixed-use development and social cohesion in neighborhoods.

It is important for this essay to first take a look at the concept of social cohesion in the contemporary urban environment, as the physical and social environment for creating a socially cohesive population has gradually changed by the emergence of a more flexible, individualized way of life (Lloyd et al., 2016). In this essay, social cohesion is viewed as a characteristic of society which deals with the interrelationship of societal units e.g., individuals and groups, and territorial units (McCracken in Berger-Schmitt, 2002). It is based on the notion of community building, cooperation, shared values, equal opportunity and social relations among persons of different socioeconomic and ethnic backgrounds, different ages or household types (The Worldwatch Institute, 2016).

Western Garden Cities

The post-war neighborhoods in the *Western Garden Cities* are part of the *Algemeen Uitbreidingsplan* [general expansion plan] designed by Van Eesteren and Van Lohuizen in 1935 for the municipality of Amsterdam which needed to foresee in the housing need of Amsterdam till the year 2000. During the 1920s and 1930s, urban conceptions changed. The *Garden Cities* idea from England and the United States, the *Wijkgedachte* [neighborhood concept] and, to a lesser extent, the perception of *Het Nieuwe Bouwen* [new way of building] from Germany, played a role in this (Van Eesteren museum, 2017) (Havinga et al. 2019).

Ebenezer Howard introduced the *Garden Cities* as an instrument for creating complete, urban communities in a rural area and designed neighborhoods to work, shop and recreate within walking distance of each other. The idea was to include all social groups in varying degrees of physical closeness (Talen, 2008). In his vision, a maximum of 32.000 people is living together in independent areas, each with their own agriculture and industry. The large amount of public green spaces and the use of a main central park was meant for creating plenty of opportunities for recreation and social interaction (Domhardt, 2012). The *Garden City* combined the best of both worlds, according to Howard, with amenities and services from the city and the tranquillity and rhythm of the rural area (Van Eesteren museum, 2017).

The concept of the *Wijkgedachte* is based on the sociological point of view which takes family as the cornerstone of society, as cities were densely populated and a lack of social cohesion was present in neighborhoods. This manifested itself in the separation of functions, as described above, which resulted in the concept of a residential area consisting of different independent neighborhoods, each having its own amenities, schools and religious buildings (Havinga et al., 2019).

The architects of *Het Nieuwe Bouwen* believed in improving people's life by improving their homes. *Het Nieuwe Bouwen* was therefore about creating a timeless, democratic architecture which met the needs of the citizen. The designers of the neighborhoods wanted to contribute to the development of the individual, the family and the different communities. Elements of *Het Nieuwe Bouwen* were of lesser influence on the structure of the neighborhoods in the *Western Garden Cities*, but were decisive for the physical qualities of the residential building blocks (Hellinga et al., 1985). The old, chaotic city with its poor housing, closed building blocks and traditional long street walls (Nio et al., 2016) made room for light, air and space for a healthier individual and a community oriented towards development (Rijksdienst voor het Cultureel Erfgoed, n.d.). The open, homogeneous structured, building blocks are built in a green dominated environment with wide streets and a fading border between public and private space (Havinga et al., 2019) which often offered families with children enough space to play. A *hovenverkaveling* [court division] was introduced with two mirrored hooks, in low and medium high buildings (Nio et al., 2016). The blocks have right-angled corners or non-right-angled corners depending on the insolation and the street (Rijksdienst voor het Cultureel Erfgoed, n.d.).

The ideas of Howard turned out to be of great influence for the CIAM congresses [Congrès Internationaux d'Architecture Moderne], held between 1928 and 1959, and guided CIAM towards creating a comprehensive design of the modern city. The developed planning models changed from looking at the separate functional components of a city towards looking at the city as a whole. The interaction between the built environment and society, and adaptations of the functions of housing, work, recreation and transport turned out to be, just as in the ideas of the *Garden City* movement, of great importance for the members of CIAM (Domhardt, 2012).

When looking at the *Western Garden Cities* in the current situation, it might be hard for one to imagine that the post-war neighborhoods are created from a sociological point of view where the urban form of the neighborhood was designed to stimulate the interaction between the built environment and society. In the current situation, the separation of functions and the use of homogeneous building blocks result in monofunctional areas and the many green spaces, with a fading border between public and private, have an ambiguous function. In this way, ghost areas and unsafe places have occurred and there is a lack of social control (Hausleitner, 2012).

The emergence of mixed-use development

During the last decades there has been a change in policy and design strategies of urban renewal. It shifted from creating the previously mentioned separated land-uses towards a more mixed-use development nowadays. According to Foord (2010), it is currently the planning norm rather than the exception.

In the United States, mixed-use is commonly seen as part of the *New Urbanism* approach (Hoppenbrouwer et al., 2005), which is, as Passell (2017) explains, dialectically related to post-war developments, as the *Western Garden Cities*. The conditions which defined the conventional suburban development, led to conditions out of which the *New Urbanism* emerged. According to Lloyd et al. (2016) the *New Urbanism* approach is defined by two main ideas. Firstly, containing urban sprawl by the development of compact urban form. Williams et al. (2003) state that, where possible, mixed-use development should be applied. Not only by introducing different types of buildings, but also by stimulating a variety of functions and a high degree of diversity within these functions. Secondly, improving the community by increasing social interaction. Supporters of the *New Urbanism* approach therefore believe in an interrelationship between the physical space and creating a sense of community through increased social interaction (Dixon et al., in Lloyd et al., 2016). In their eyes, mixed-use can be applied to solve problems in the contemporary urban environment which are related to a lack of social cohesion.

Fainstein (2005) argues the *New Urbanism* approach is not the panacea some of its supporters assume it will be. She is rather critical towards its effects and fears the approach becoming an excuse for the demolition of social housing, which is to a large extent present in the *Western Garden Cities*. She does however emphasize that using the *New Urbanism* approach as a physical framework for in-fill

development might offer, to some extent, an increased quality of life to the inhabitants and visitors of a diverse urban environment. It is therefore important for this essay to analyze the relationship between quality of life and social cohesion in order to investigate whether mixed-use development can influence social cohesion in a neighborhood.

Berger-Schmitt (2002) emphasizes the relation between quality of life and social cohesion and states quality of life can be viewed as a broad concept which not only includes the individual characteristics of one's life, but also includes the societal qualities. This implies the degree to which societal conditions are conducive to increase the quality of life of an individual. This relates to the explanation of Van Dorst (2005) where he states quality of life concerns the interrelationship between an individual and its environment. In practice, it is the sum of different components which define the quality of life. These components may include the social environment (e.g., social cohesion, percentage of unemployed), the physical environment (e.g., litter, percentage of owner-occupied housing) or a combination of both. Social cohesion can therefore be seen as an integral component of the quality of life.

Relation between physical form and social cohesion

As mentioned in the previous chapter, supporters of the *New Urbanism* approach believe in an interrelationship between the physical and social space. In contrast to this, Ziller (2004) emphasizes the “undoubtedly unsubstantiated leap” [p. 471] in planning and design policies from face-to-face contact to community engagement and participation. She convincingly elaborates on this statement by explaining the *New Urbanism* approach is a place-based approach which is inward looking. According to Ziller (2004), trying to create elements of social cohesion by focusing on what is built inside an area is a problem in the first place. The assumption that urban form can create interaction and engagement between residents does not only assume that territory forms important connections between people, but also that the way they are designed will somehow encourage people to engage and participate with each other in this community of territory, which is an “unrealistic and mechanistic approach to social outcomes” [p. 471].

Therefore, Dempsey (2008) and Van Dorst (2005) emphasize physical form *can* contribute to social cohesion, but social cohesion cannot be achieved solely through physical interventions. Outcomes of Dempsey's (2008) research suggested that social cohesion between residents can be supported by planning and design which is focusing on the physical characteristics of a place e.g., the design and physical form of a neighborhood, in order to promote its distinctiveness and character. However, she adds to this that a combination of features, which are particularly dependent on perceptions of the built environment, is necessary to affect social cohesion as a whole. Therefore, she explains not only the physical, but also the non-physical characteristics e.g., the maintenance and management of spaces, are influencing people's perceptions of quality of life and therefore also influence social cohesion between residents. Van Dorst (2005) emphasizes on this interrelationship between the social and physical environment by explaining e.g., feelings of unsafety will not only be caused due to loitering youth on the

neighborhood square, but also by a dark, polluted area. However, there is a complexity to this topic as no single root cause has been found of the relationship between the physical interventions and the functioning of the social environment, or the other way around (Lang in Van Dorst, 2005). Van Dorst (2005) and The Worldwatch Institute (2016) therefore state the focus is on the physical interventions, which support the social environment, such as providing better social and cultural facilities and designing attractive public spaces that invite residents to stay and interact, in order to create a more socially sustainable living environment.

Social sameness and social cohesion

Until the 19th century, areas were socially mixed due to the fact that people lived where they worked. High and low incomes were only separated through vertical zoning in buildings, but shared the public realm. However, class consciousness accentuated due to industrialization and a diversity of residents in one area became scarcer (Talen, 2008). This chapter elaborates further on the previously mentioned concept of social cohesion and investigates if a diversity of residents contributes to achieving social cohesion in neighborhoods. A diversity of residents is not only focused on ethnicity or income level, but also on diversity in age or household type.

Supporters of homogeneity in neighborhoods may believe this uniformity is necessary in order to sustain group identity, ethnic heritage or preserving cultural affiliation (Glazer et al. in Talen, 2008). Alesina et al. (in Talen, 2008) contribute to this by arguing that a similarity of residents results in a similarity in demands for public goods and that a diversity of residents can result in lower levels of public goods provision. Finally, they question whether the type and location of amenities in a wealthy area meets the different needs and demands of a variety of residents. Placing low incomes in a wealthy area, not necessarily contributes to a better life, but may even isolate them in a social and functional way.

Kearns et al. (2014) also studied the relationship between social cohesion and a homogeneity of residents in an area, but came to different conclusions. They emphasized having a diverse group of residents in a neighborhood can overcome social boundaries of inequality, alter attitudes to some extent by interacting with individual characteristics and values, and increase the chances of creating more integrated, resilient and sustainable communities, which can have a positive impact on social cohesion. They elaborate on this by stating this is especially interesting for contemporary society which faces bigger problems of individualization, inequality and diversity. Gleeson (2013) elaborates on this by explaining that creating neighborhoods for a homogeneity of residents can result in exclusive communities where the location of a neighborhood can function as a symbol for social status. These neighborhoods have to face problems of isolationism, exclusivity and uneven access to resources (Talen, 2008). Having a city which then consists of socially cohesive neighborhoods in itself, but which are increasingly divided, can lead to even more inequality and less social cohesion between neighborhoods as the stronger the bonds that bind these areas, the larger the social, racial or religious conflicts can be (Forrest et al., 2001). Ziller (2004) therefore

emphasizes that nowadays sameness is sometimes mistaken for social cohesion. To conclude, the exact impact of a diversity of residents on social cohesion is, not yet, clearly determined, however there is the hypothesis that social diversity is the base for social interactions in a neighborhood (Talen, 2008).

Building up on these results, the next chapter will investigate whether a homogeneity of functions, instead of a homogeneity of residents, will influence social cohesion in neighborhoods or if a mixed-use area contributes to the possibility of having a socially cohesive neighborhood.

Relation between mixed-use and social cohesion in neighborhoods

Since the 1960s, different intellectuals advocated strategies in urban renewal which were in favor of physical and social diversity (Fainstein, 2005). But despite the widespread support of mixed-use development, its actual influence on social cohesion in neighborhoods is difficult to determine (Foord, 2010).

Foord (2010) elaborates on the negative sides of mixed land-uses by explaining her research of a neighborhood close to central London. She explains, mixed-use functions are added in the area in order to attract a diversity of residents to stimulate social cohesion. However, the replacement of local shops, and the influx of high incomes to the area, resulted in limited resources, unaffordability of the new functions and potentially a reduced quality of life for the current local residents. It turned out new residents mainly liked the area due to the benefit of the geographic location and permeability of the neighborhood, but these are characteristics which are not necessarily related to the mixed-use character of the area. This resulted in residents who still chose to go elsewhere when socializing or eating out, which was possible due to the permeability and location of the neighborhood, which was close to central London. This enabled residents to take advantage of not only the neighborhood, but also of the functions in areas close by. For those residents who were unable to travel, or for whom the central location was of no influence on their daily (quality of) life, the permeability of the neighborhood turned out to be a must. Therefore, by trying to create a diverse neighborhood with mixed functions, in order to enhance social cohesion, it unconsciously led to the opposite which turned into segregation between residents. There is again the risk of transforming neighborhoods into exclusive communities as Gleeson (2013) emphasized before. Foord (2010) thus concludes her research by stating that “The dynamic processes that generate diversity and mixed-use neighborhoods, can also destabilize them.” [p. 60]. Therefore, there might be the risk of changing mixed-use neighborhoods from potential areas for social cohesion, into areas which are actually undermining it.

In reaction to this, it is important to realize that probably not every mix of function will work. Functions should complement each other and be active during different parts of a day. This relates to Jacobs' (1961) work where she stands at the root of promoting cities which house multiple uses in order to make a city more attractive, promote economic productivity and stimulate social diversity. She relies on the need of a “close-grained diversity of uses” [p. 14] in a city where the different functions are constantly interrelated

and supportive to each other. Jacobs (1961) elaborates on this by claiming non-useful places in a city are places where this interrelated support between uses is not taking place. Diversity is therefore seen as the main factor of urban vitality as it stimulates the interrelationship between urban components. Mumford (in Talen, 2008) emphasizes this by stating the separation of land-uses leads to the so called “anti-city” [p. 35].

Before implementing mixed functions, Talen (2008) emphasizes the need of an initial assessment which investigates what functions the neighborhood already has and what mix of functions can meet the needs and demands of the residents. This can prevent situations like in the case study of Foord (2010) where implementation of new mixed-use functions led to segregation between current and new residents. Thereafter, Talen (2008) emphasizes to investigate where areas are located which have a high diversity of residents and implement commercial functions, other types of non-residential functions and well-served public spaces in order to support social cohesion between a diversity of residents. The Worldwatch Institute (2016) elaborates on this by explaining well-functioning public spaces can increase the interaction, connectivity and mixture of different people, which are all important factors of a cohesive area. They go deeper into this by explaining the integration of mixed-use areas with these vibrant public spaces, good accessibility to public transport and a diversity of housing can increase the possibility of social cohesion in a neighborhood. *Transit Oriented Development* (TOD) plays an important role in this. The idea of TOD's focusses on the development of mixed-use areas which are located around transit stations in order to improve the accessibility of public transport and the creation of a more pleasant environment for walking and cycling. These pleasant walking and cycling environments are characterized by increasing levels of interaction between people. The Worldwatch Institute (2016) mentions, in order to increase social cohesion, the different functions and services should cater the needs and demands of different social groups, as also explained before by Talen (2008) and therefore state, TOD's should be designed in such a way that they allow for a diversity in housing, land-use, and employment in order to contribute to a socially cohesive neighborhood.

Conclusion

Urban planners and designers cannot solely solve the problems of social exclusion and segregation. However, they have the tools at hand to aid in creating neighborhoods where the chances of social cohesion between residents are increased. The creation of socially mixed areas and mixed-use areas can be good starting points for achieving this social cohesion. However, there are some requirements which need to be taken into consideration.

Investigation shows different features are of influence when looking at improving social cohesion in neighborhoods. Not only the physical quality of the neighborhood, but also the perceived quality of the social environment plays an important role. Therefore, it can be argued that neighborhood renewal, urban planning and design policies should focus on a combination of different features in order to contribute to a socially cohesive neighborhood.

When looking at mixed-use areas, it is important to notice that probably not every mix of function will work. Functions should complement each other during different parts of a day and it is therefore important to assess what functions are present in a neighborhood and what functions are needed in order to meet the needs and demands of all residents when starting with the urban renewal of a neighborhood. Then, the integration of these mixed-use areas with vibrant public spaces, good accessibility to public transport and a diversity of housing are good ingredients to create possibilities for social cohesion between residents in a neighborhood.

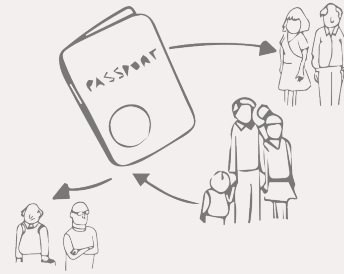
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D. background research

Social profile current residents Overtoomse Veld



Personal characteristics

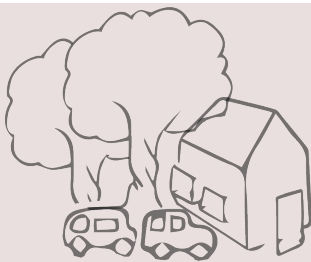
Mainly oneperson households & families

Native Dutch, Moroccan, Turkish, Surinamese and
Netherlands Antilles & Aruba

Depending on ethnicity:
Value high sense of community

Prefer living with other cultures

(Planbureau voor de Leefomgeving, 2014)



Living environment

Value accessibility by car

Privacy in and around the house is important
(e.g. kitchen at street side)

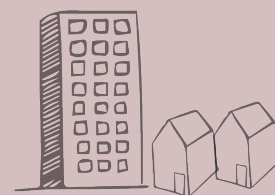
Prefer having a private garden

Value the presence of their local shops

Presence of religious buildings is important

Value storage spaces & parking spots close to their home

(Planbureau voor de Leefomgeving, 2014)



Housing

Oneperson households likely to live in apartments ranging
from 50 - 60m²

Families prefer housing of around 100m²

(Planbureau voor de Leefomgeving, 2014)
(Decisio, 2019)

More extensive investigation current residents Overtoomse Veld

General:

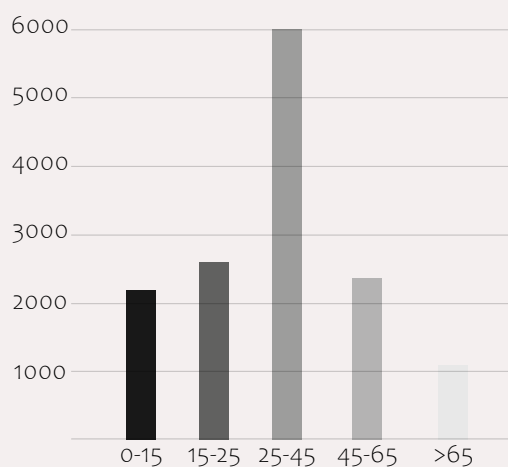
- Multiple rooms in the house (bedrooms, guestroom, entrance)
- Privacy in and around the house (kitchen at street, own garden)
- Storage space
- Parking spots

Native Dutch:

- Native Dutch people prefer having an own garden
- Park for being outside for a moment, relax and recreate

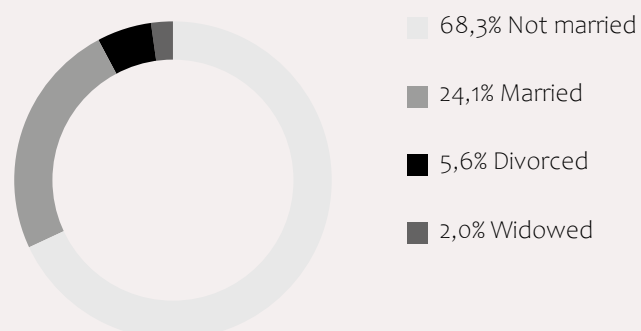
(Planbureau voor de Leefomgeving, 2014)
(Sohilait & Schmitz, 2006)

Age:



(Alle cijfers, 2021a)

Marital status:



(Alle cijfers, 2021a)

Moroccan:

- High sense of community
- Preference for multi-family housing
- Preference of living in and around city centre
- Focused on living with other cultures
- Value the presence of own cultural elements in the neighborhood
- Presence of a mosque is important
- Park is more used for social gatherings: to see family and friends and meet new people. Liveliness in the park is important. The design of contemporary parks are not functionally designed and not stimulating social interaction

(Sohilait & Schmitz, 2006)

Turkish:

- Most focused on buying a home
- Most focused on living with households of 'own culture'
- Preference of living in and around the city centre
- Value the presence of own cultural elements in the neighborhood
- Value the presence of recreational amenities (as parks) and the presence of a mosque is important
- Park is more used for social gatherings: to see family and friends and meet new people. Liveliness in the park is important. The design of contemporary parks are not functionally designed and not stimulating social interaction

(Sohilait & Schmitz, 2006)

Surinamese:

- Prefer to live outside the city centre/in suburbs
- Place least value on living with people of own culture
- Mostly value the presence of 'entertainment facilities', and less on practical facilities as supermarkets and public transport

(Sohilait & Schmitz, 2006)

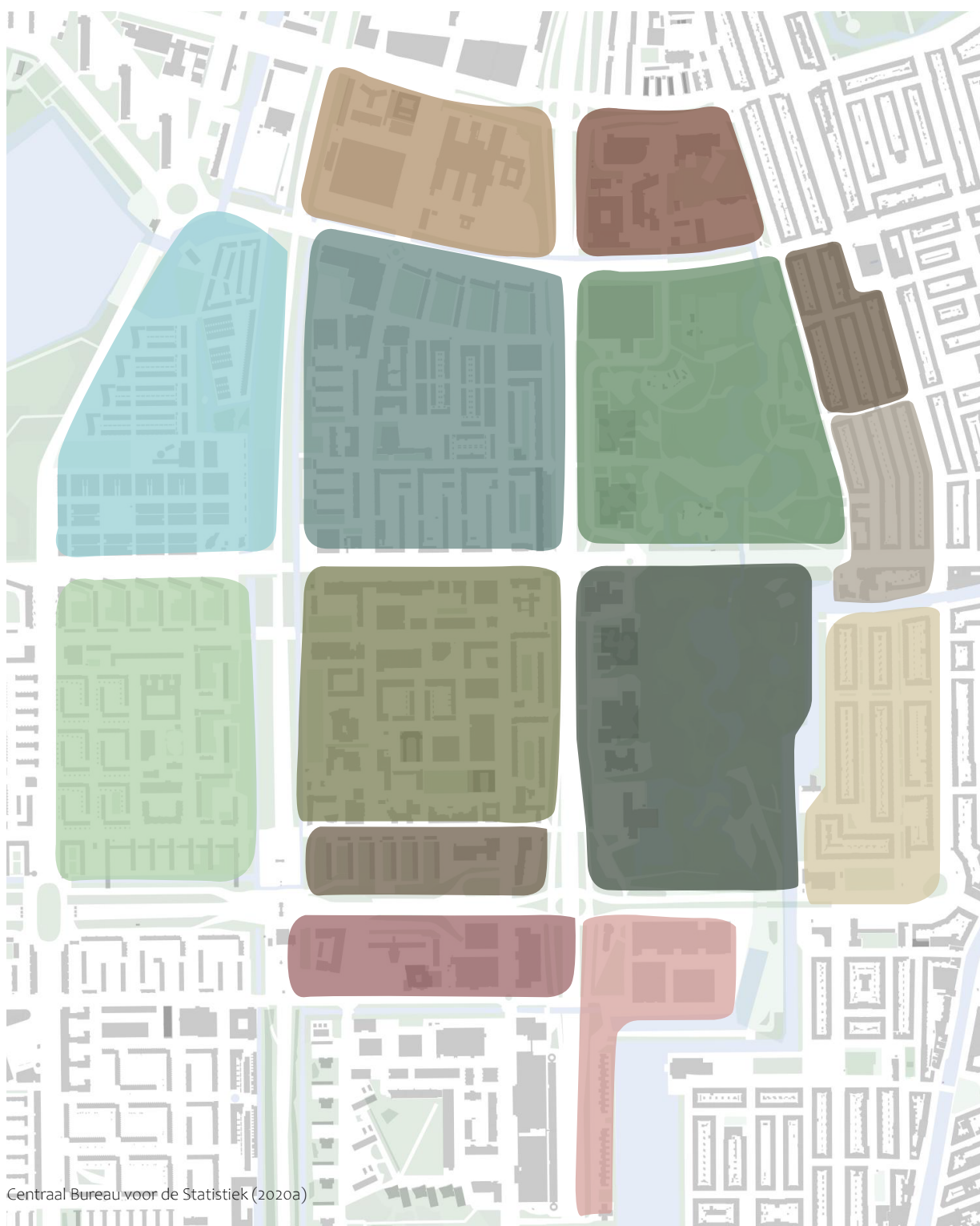
Netherlands Antilles and Aruba:

- Mostly unmarried give the lowest preference to being married to one's own culture (CBS, 2010)
- From the 'classic migrants groups' (Moroccans, Turks, Surinamese and Antilleans) they have the smallest family size. Where 85% of Moroccan mothers, 75% of Turkish mothers and 50% of Surinamese mothers have more than 3 children, this is only 25% when looking at Antillean mothers (Dagevos et al., 2003)

(Sohilait & Schmitz, 2006)

*In all cases it should be emphasized there is a difference between the 1st, 2nd and later generations of immigrants, where the later generations are less strict concerning the preferences of religious buildings and living with their own culture.

Sociodemographic map residents current situation



Overtoomse Veld Noord

- * 30,9% married
- * 19,8% children
- * 78,9% immigrants of which:
 - 85,6% non-Western
 - . 56,5% Moroccan
 - . 21,3% Turks
 - . 6,4% Surinamees
 - . 1,0% Netherlands Antilles & Aruba
 - 14,4% Western

Overtoomse Veld Zuid

- * 22,6% married
- * 15,0% children
- * 64,2% immigrants of which:
 - 75,9% non-Western
 - . 48,7% Moroccan
 - . 12,6% Turks
 - . 11,9% Surinamees
 - . 2,9% Netherlands Antilles & Aruba
 - 24,1% Western

Johan Jongkindbuurt

- * 26,3% married
- * 17,8% children
- * 82,9% immigrants of which:
 - 91,3% non-Western
 - . 44,3% Moroccan
 - . 29,6% Turks
 - . 7,8% Surinamees
 - . 1,7% Netherlands Antilles & Aruba
 - 8,7% Western

Orteliusbuurt zuid

- * 17,4% married
- * 9,8% children
- * 49,3% immigrants of which:
 - 53,5% non-Western
 - . 22,0% Moroccan
 - . 17,0% Turks
 - . 19,0% Surinamees
 - . 5,0% Netherlands Antilles & Aruba
 - 46,5% Western

Postjeskade & omgeving

- * 17,8% married
- * 12,0% children
- * 40,0% immigrants of which:
 - 47,5% non-Western
 - . 15,7% Moroccan
 - . 15,7% Turks
 - . 17,4% Surinamees
 - . 4,3% Netherlands Antilles & Aruba
 - 52,5% Western

Oostoever Sloterplas

- * 39,1% married
- * 13,8% children
- * 47,0% immigrants of which:
 - 63,4% non-Western
 - . 20,8% Moroccan
 - . 24,2% Turks
 - . 26,2% Surinamees
 - . 2,0% Netherlands Antilles & Aruba
 - 36,6% Western

Schipluidenbuurt

- * 6,4% married
- * 1,7% children
- * 66,2% immigrants of which:
 - 45,2% non-Western
 - . 5,7% Moroccan
 - . 8,6% Turks
 - . 7,1% Surinamees
 - . 11,4% Netherlands Antilles & Aruba
 - 54,8% Western

Rembrandtpark Noord

- * 10,7% married
- * 7,0% children
- * 49,2% immigrants of which:
 - 30,4% non-Western
 - . 17,9% Moroccan
 - . 3,6% Turks
 - . 10,7% Surinamees
 - . 10,7% Netherlands Antilles & Aruba
 - 69,6% Western

Rembrandtpark Zuid

- * 23,7% married
- * 8,9% children
- * 51,5% immigrants of which:
 - 37,9% non-Western
 - . 6,1% Moroccan
 - . 9,1% Turks
 - . 12,1% Surinamees
 - . 6,1% Netherlands Antilles & Aruba
 - 62,1% Western

Orteliusbuurt midden

- * 18,1% married
- * 11,6% children
- * 50,6% immigrants of which:
 - 55,1% non-Western
 - . 31,5% Moroccan
 - . 10,7% Turks
 - . 13,9% Surinamees
 - . 4,4% Netherlands Antilles & Aruba
 - 44,9% Western

Lucas Andreas ziekenhuis & omgeving

- * 2,7% married
- * 1,2% children
- * 76,3% immigrants of which:
 - 41,3% non-Western
 - . 7,2% Moroccan
 - . 5,8% Turks
 - . 4,3% Surinamees
 - . 2,9% Netherlands Antilles & Aruba
 - 58,7% Western

Mercatorpark

- * 6,6% married
- * 16,5% children
- * 84,4% immigrants of which:
 - 88,2% non-Western
 - . 24,8% Moroccan
 - . 5,6% Turks
 - . 28,1% Surinamees
 - . 7,2% Netherlands Antilles & Aruba
 - 11,8% Western

Jacob Geelbuurt

- * 27,2% married
- * 21,3% children
- * 80,2% immigrants of which:
 - 84,0% non-Western
 - . 45,3% Moroccan
 - . 24,3% Turks
 - . 8,4% Surinamees
 - . 1,5% Netherlands Antilles & Aruba
 - 16,0% Western

Andreasterrein

- * 32,6% married
- * 21,3% children
- * 60,0% immigrants of which:
 - 58,7% non-Western
 - . 40,7% Moroccan
 - . 16,5% Turks
 - . 11,0% Surinamees
 - . 2,2% Netherlands Antilles & Aruba
 - 41,3% Western

Current size, price & ownership neighborhood centre

Many housing has an average of 75-80m². As there are a lot of one-person households and a lot of families, this size does not make sense. 80m² is rather small for one family, but is too large, and therefore often too expensive, for one-person households.

Investigation showed 25% of social housing is built for families, with housing over 75m², while 75% of social housing is smaller than 75m² (Gemeente Amsterdam, 2020c).

Wijnand Nijenstraat
- 1750€/month
- 3 rooms
- 70m²

Willem Nakkenstraat
- 1375€/month
- 3 rooms
- 70m²

or
- 315.000€
- 3 rooms
- 70m²

Public or private?

Jan Mankesstraat
- 1500€/month
- 3 rooms
- 71m²

Postjesweg (change)
- 644-672€/month
- studio
- 28m²
- students & expats

Postjesweg
- 1395€/month
- 2 rooms
- 80m²

Unused grey square
surrounded by daily
facilities

Nachtwachtlaan
- 330.000€
- 2 rooms
- 55m²

or
- 430.000€
- 4 rooms
- 98m²

Local amenities on
Derkinderenstraat

Nachtwachtlaan
- 2520€/month
- 3 rooms
- 106m²

Derkinderenstraat
- 347.000-368.000€
- 3 rooms
- 78-81m²

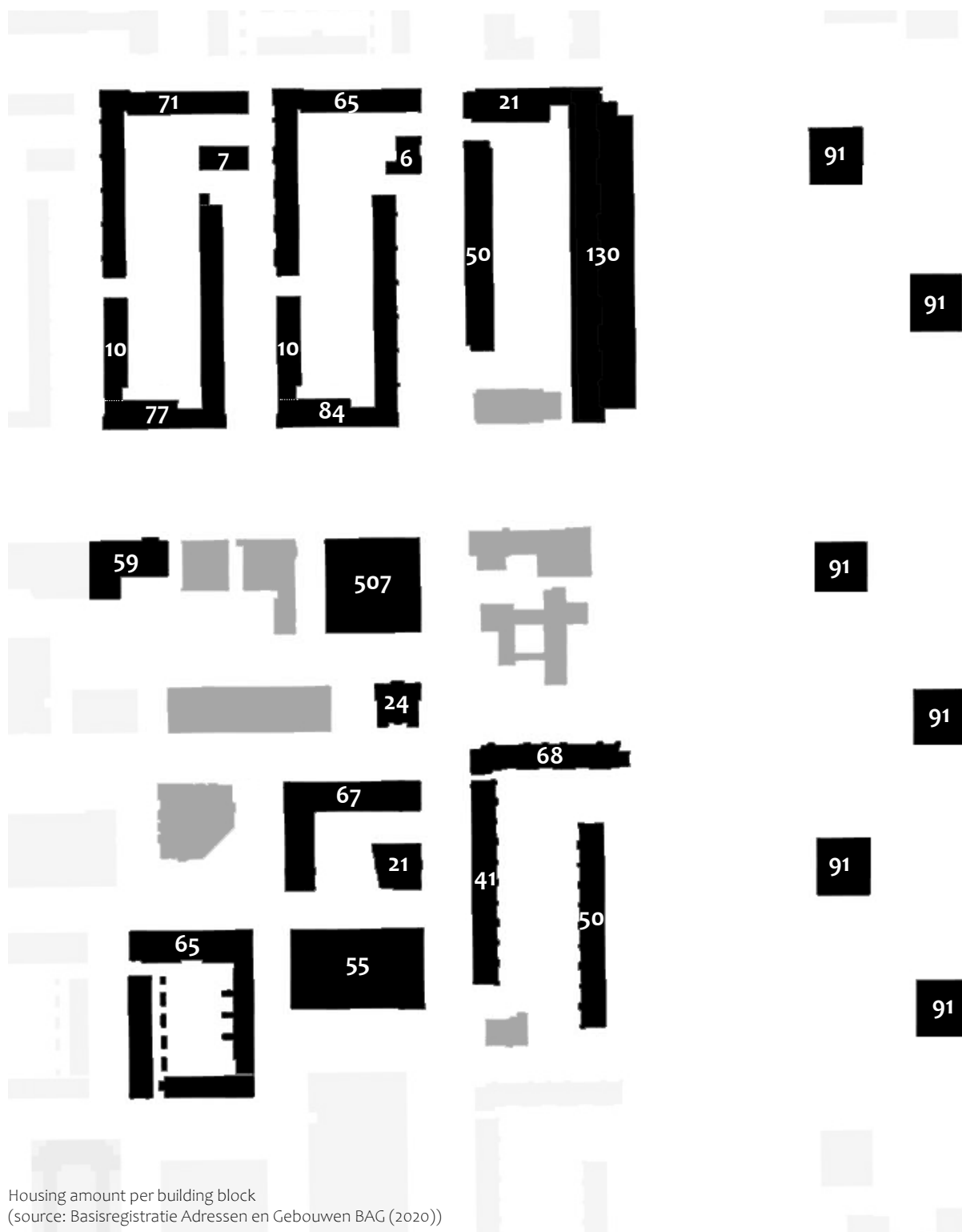
Derkinderenstraat
- 752,33€/month (limit social housing)
- 4 rooms
- 89m²

Theodoor van Hoytemastraat
- 435.000€
- 3 rooms
- 80m²

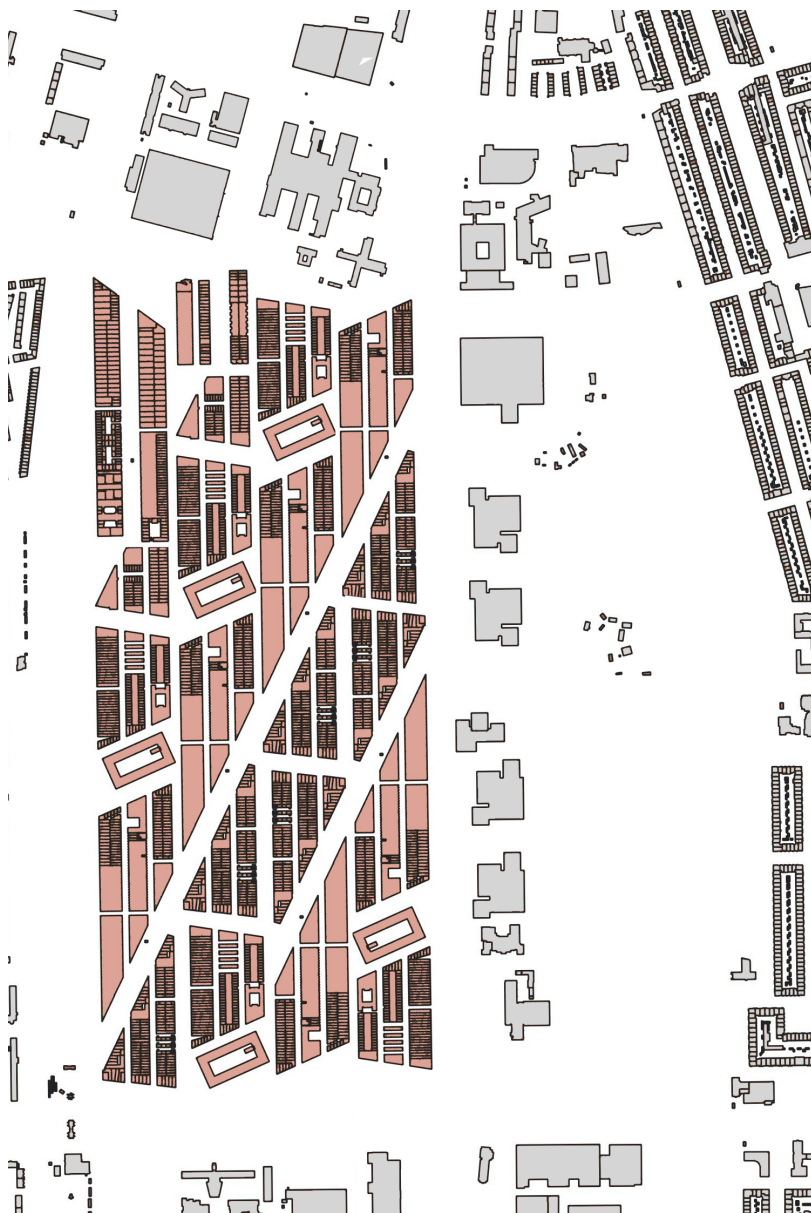
Public courtyard



Existing housing amount neighborhood centre



Investigation borneo sporenburg densification in Overtoomse Veld



Borneo Sporenburg fits 5,6 times in Overtoomse Veld. This equals 5,58 times the housing amount of Borneo Sporenburg which is $2500 \times 5,58 = 13950$ homes.

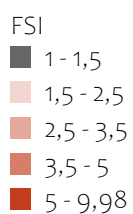
- FSI
- 1 - 1,5
 - 1,5 - 2,5
 - 2,5 - 3,5
 - 3,5 - 5
 - 5 - 9,98



Investigation Ijburg densification in Overtoomse Veld



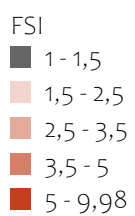
Approximately 2/3 of Ijburg can be placed in the neighborhood. In the beginning of 2018 10.000 homes were present in Ijburg. This means 6.666 homes could be placed in Overtoomse Veld. However, with the expected density of 25.000 homes in 2036, 16.666 homes could be placed in Overtoomse Veld.



Investigation amstel 3 densification in Overtoomse Veld



1/3 of Amstel 3 can fit within the neighborhood.



Governance issues: stakeholders

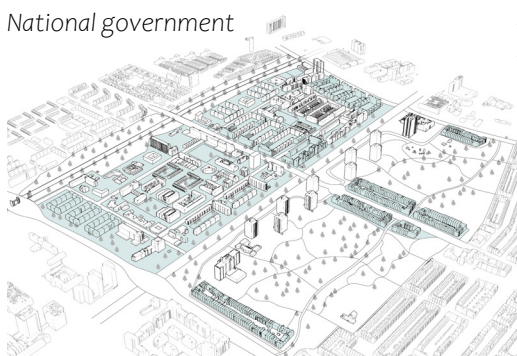
WHO	ROLE	INTEREST	POWER	TYPE
National government [Rijksoverheid]	The main role of the Rijksoverheid is investing in building new housing.	The interests of the Rijksoverheid is not as large as other stakeholders in the proces.	The Rijksoverheid has very high power as they are funding large parts of the projects to build new housing.	Deciders/experts. The Rijksoverheid has knowledge, but will not execute the plans.
Province of Noord-Holland	The province removes, together with different municipalities, the AMA and Bouwend Nederland, bottlenecks and achieves production of new housing. They focus on construction projects that are in need, especially living in cities is important nowadays.	The interests of the province of North-Holland are quite big. Their main concern is helping the municipality in achieving the goal of creating more affordable and sustainable housing in the province the coming years.	The province has a lot of power in the realisation of new housing as they are involved in the process from the beginning till end.	Deciders/experts/executors. The province is not only decider and experts but also executor of the initiated projects.
Municipality of Amsterdam	The municipality must grant permits relating to transformation of existing building blocks. Also the adjustments of land-use plans [bestemmingsplannen] is done by the municipality.	One of the main interests of the municipality is creating a liveable city while at the same time realising a large amount of new housing.	The municipality of Amsterdam has a very high power in these developments as all plans, decisions and changes needs be approved by them.	Experts/executors. They do not only have a lot of knowledge which can contribute to the project, they are also executing it.
Social housing corporations	Building and renting homes within the liberalization limit of social housing.	The main interest of social housing corporations is to create enough social housing for those in need.	The corporations have quite some power as there is currently a lot of social housing in this scenario, and also needed in the future.	Executors. They are the ones who will eventually execute the plans of new housing.
Developers	Building and renting homes in Overtoomse Veld.	The main interest of private developers is to make profit.	The power of developers depends on how much space there is for them to built.	Executors. They are the ones who will eventually execute the plans of new housing.

WHO	ROLE	INTEREST	POWER	TYPE
Local retail owners, cafes & restaurants	The primary function of the shops in the neighborhood is to profit from selling goods.	The development of new functions in the neighborhood will compete with the existing amenities. It is important for local shops to keep existing customers and not lose profit.	Individually they do not have much power. However, together they have a bit of saying.	User. They are, just like the residents in Overtoomse Veld, endusers of the project.
Owners global functions	The primary function of the new global functions in Overtoomse Veld is the same as the local shops: profit from selling goods.	New global functions will have to compete with existing local functions and it is therefore important that both shop types keep existing. Global functions need to attract a bigger audience by stimulating people from outside the neighborhood to come here.	Individually they do not have much power. However, together they have a bit of saying.	User. They are, just like the residents in Overtoomse Veld, endusers of the project.
Residents (new/current)	This concerns the current and future residents of Overtoomse Veld.	Current residents are highly interested as they want to keep living at/close to their current location. New residents are interested as they are searching for a new home.	The power of residents differs. They have a lot more saying in scenario 1 as the neighborhood will be transformed. However, in scenario 2, where mainly new housing will be built, they mainly have to watch from the sideline and have very limited power.	User/executors. CPO has power as they are not only users but also executors as they are involved in the project. In the other cases residents are just the endusers of the project, but sometimes have saying in transformation of the existing.
Transport businesses	The transport businesses provide opportunities for the transportation in Overtoomse Veld.	The stakeholders are interested in the new developments as the increasing walkability of the Postjesweg influences the use of public transport in the area and downgrading the A10 increases public transport.	The probably have quite some power as their influence for transportation in the neighborhood, and therefore the connection to surrounding areas, will be quite big. Especially with the downgrade of the ringroad.	Deciders/experts. They have a lot of knowledge of public transport and are deciders in plans related to this.

Scenario 1: Who is involved in what redevelopment?

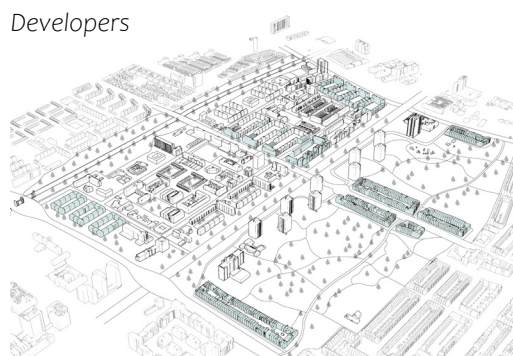
National government

- parcels
- new buildings



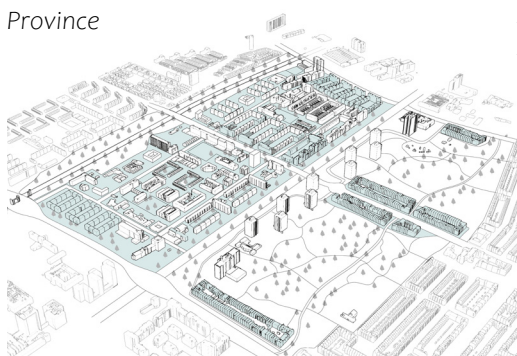
Developers

- new housing



Province

- parcels
- new buildings



Local/global retail owners, cafes & restaurants

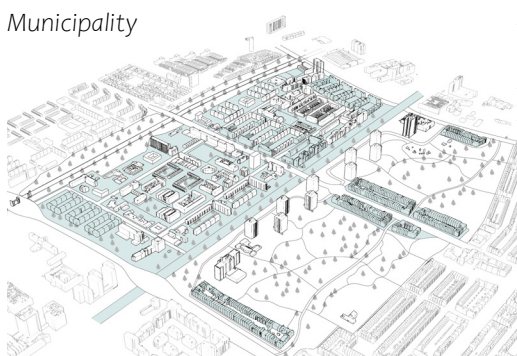
- new functions
- public spaces
- infrastructure & roads



They are mainly interested. Together they can have some saying in the transformation, but it is limited.

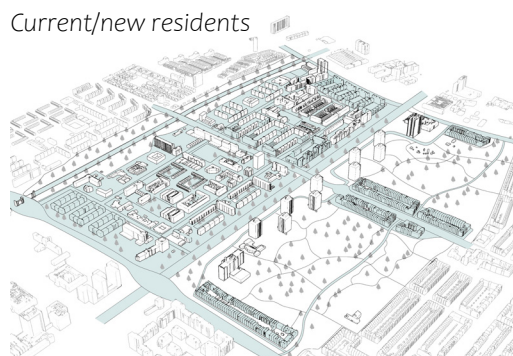
Municipality

- parcels/public spaces
- new buildings
- downgrade A10



Current/new residents

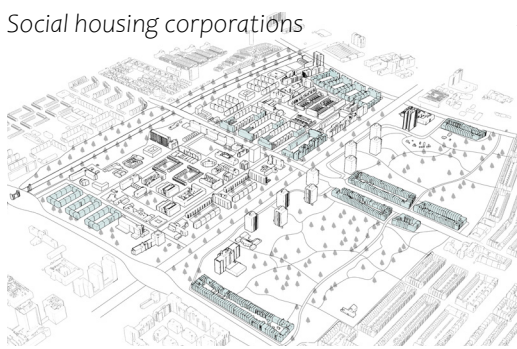
- new housing
- new functions
- public spaces
- infrastructure & roads



Residents are mainly interested, but they can have a saying in the transformation of spaces in this scenario.

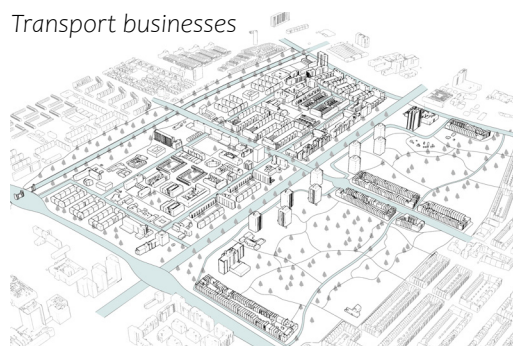
Social housing corporations

- social housing in new buildings



Transport businesses

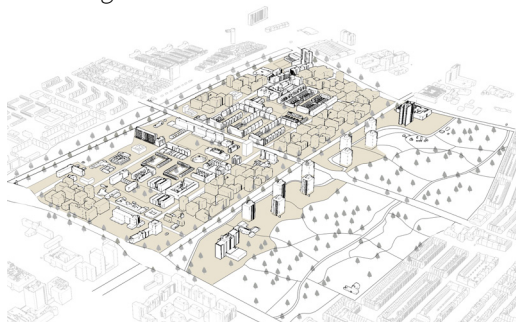
- downgrade A10
- infrastructure & roads



Scenario 2: Who is involved in what redevelopment?

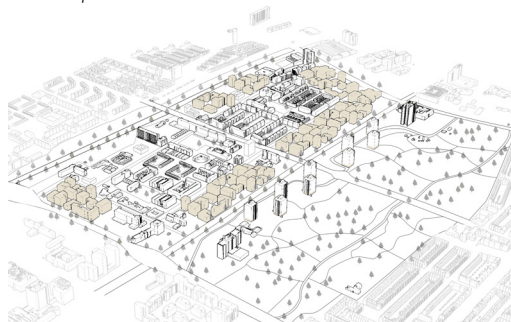
National government

- parcels
- new buildings



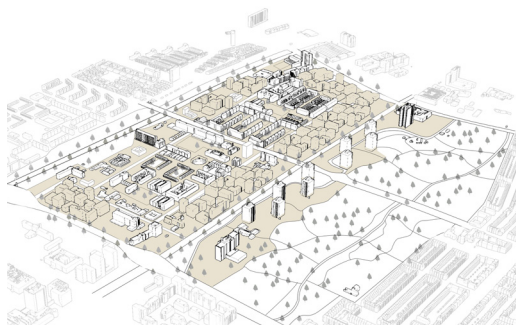
Developers

- new housing



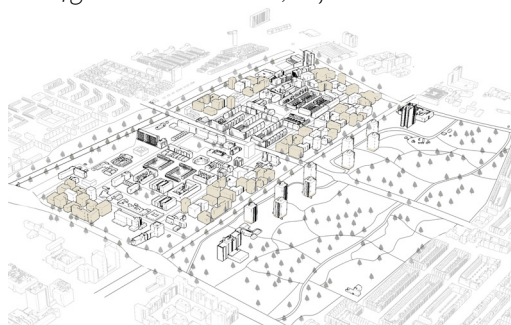
Province

- parcels
- new buildings



Local/global retail owners, cafes & restaurants

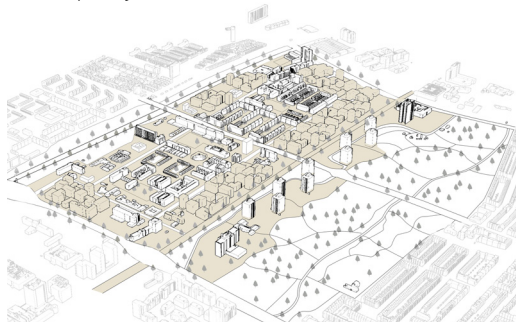
- new functions
- public spaces
- infrastructure & roads



They are mainly interested. Together they can have some saying in the transformation, but it is limited.

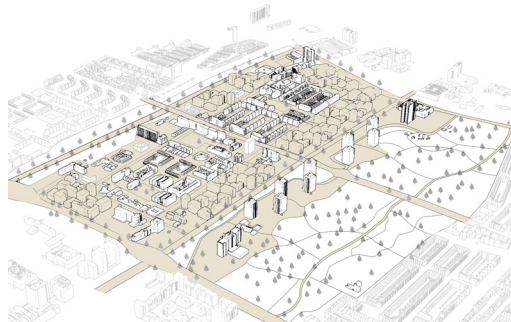
Municipality

- parcels/public spaces
- new buildings
- downgrade A10



Current/new residents

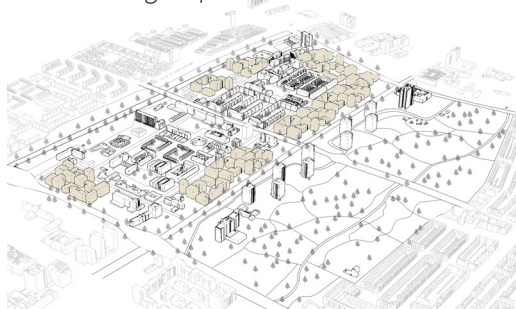
- new housing
- new functions
- public spaces
- infrastructure & roads



Residents are mainly interested. Their power is very limited in this scenario.

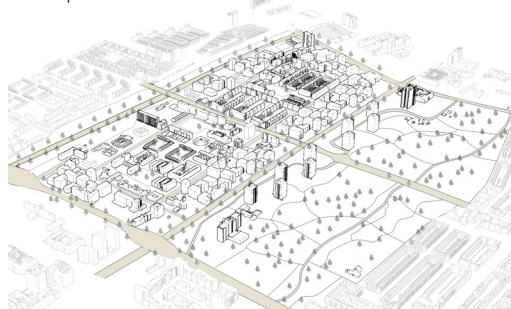
Social housing corporations

- social housing in new buildings



Transport businesses

- downgrade A10
- infrastructure & roads



June, 2021.