The inclusive city:
The public space of the public

Exploring the inclusivity and exclusivity in the South of Rotterdam

Petros Christou

Final report

Cross Domain City of the future

Preface

This document contains the final report written for the project regarding the Inclusive city. This report has been dramarically altered from the final version submitted and graded in December 2019. The reason for that is the dramatic change in both the research and the final result presented in May 2021. After a lot of reflection, even though the inclusive city was researched regarding the South of Rotterdam once more, it was expanded to be regarding public spaces as the solution, instead of Hybrid buildings. The reason for that is the impact that hybridity could have in undeveloped areas leading to gentrification contrary to neighbourhood based approaches and policies that the public spaces bring, that can ultimately better affect certain areas of the South. This final report is a tribute to what I have achieved in an entirely separate project that I had not originally anticipated and the research behind it is presented in this final report.
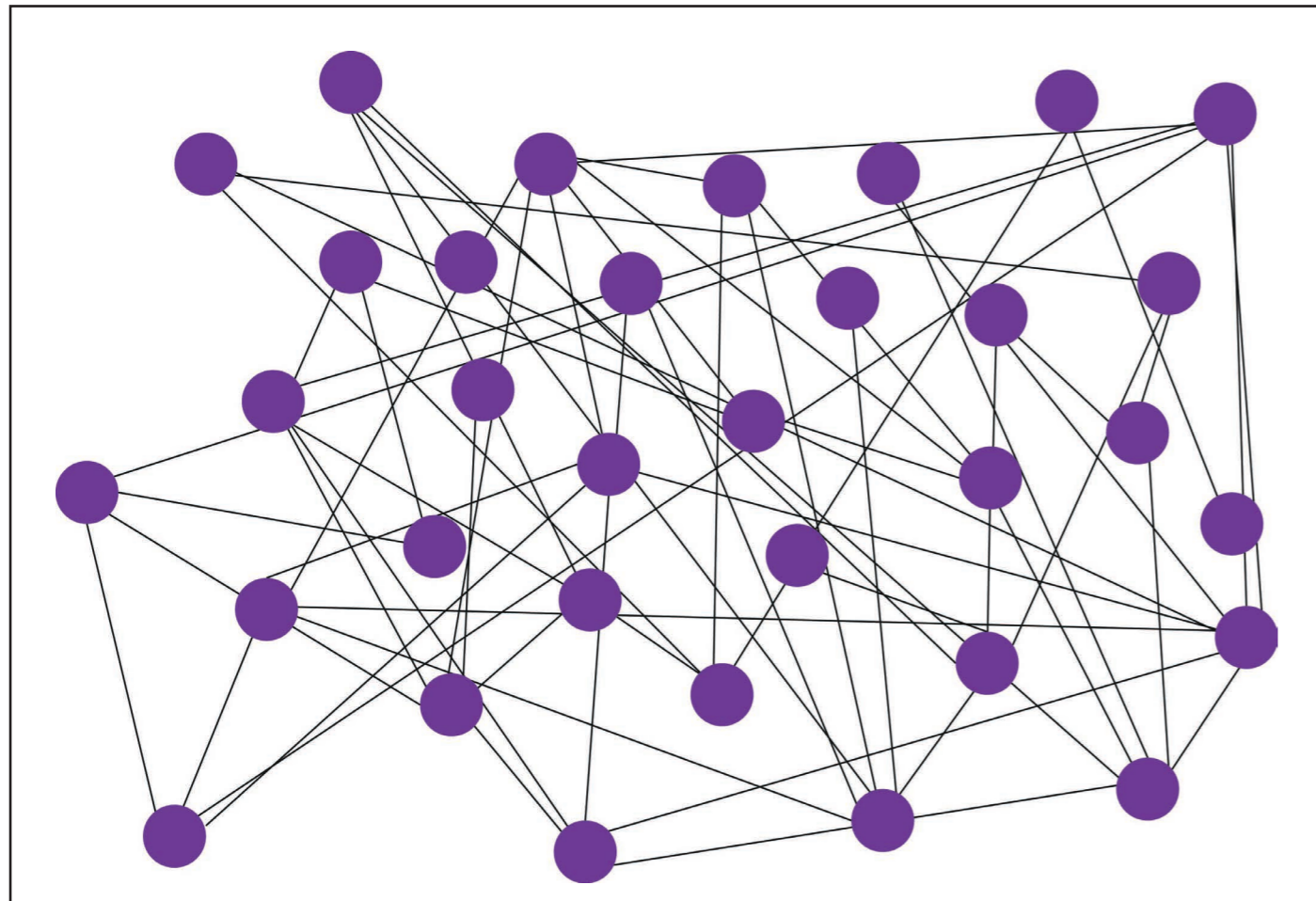
Introduction

Figure 1: The concept of the people as an abstraction in space according to Henri Lefebvre's 'The production of space'.

As per the title, the aim of this report is to talk about the inclusive city. What makes it inclusive? How is inclusivity implemented and what, by definition is "the inclusive city?" With these questions in mind and to attempt to find an answer, we can start by looking at two different books and their theories on socialisation by Marxist sociologist, Henri Lefebvre. Socialisation by extension to the inclusive city, is important to implement social cohesion[1]. The inclusive city needs to be a city where people can socialise but also have the same rights in said city. Inclusivity is eventually brought down to specific subjects that it is viewed upon regarding our subject matter which is the South of Rotterdam.

The two books by Henri Lefebvre are "Le Droit à la Ville"[2] or in English "The right to the city" and "La production de l'espace"[3](The production of space). In the first book, Lefebvre takes a position on the Urban context of the city as expected from the title stating that the city should belong and is the right of the people. In the second book, he takes a position on what he calls the "social space", stating that a social space is an abstraction of spaces formed by the people themselves and once again that, said spaces belong to the people. In both books, he seems to be heavily influenced by the theories of Karl Marx, who was a philosopher and political figure, with socialist theories about everything belonging to the people, usually in a political context about power. Even though these theories worked for social equality and cohesion, they are heavily based on his time where technological advancements were not in full effect as they are written in a time where the economy was factory based, where the people were the hard-working factory employees, and automation or technology had no effect on the economy yet.[4]

Therefore, Lefebvre's theories can be seen with some bias. However, there is a base on his theories in today's situations. The NPRZ (National Programma Rotterdam Zuid), an organisation mainly focused on helping the people of the South of Rotterdam in various ways has the exact same principles as the ones in "The right to the city". As stated in their Implementation plan for 2019-2022[4], everyone in Rotterdam should have the same rights and proximity to amenities as everyone else in the city to call themselves 'proud' Rotterdammers. The same implementation plan also declares the differences that the South has compared to the national average regarding certain demographics. These demographics present an exclusionary situation for the people of the South, showing them to have a lower-than-average disposable income, lower levels of education and higher levels of unemployment.

The problems in the South do not stop there, as per the implementation plan, the South has proven have insufficient proximity to amenities as well. This is shown in Figure 2 where the following maps illustrate how the areas in purple are the ones with lesser proximity to amenities. The amenities chosen to create these maps are following BREEAM[5] standards, for amenities that, need to be as close as 1km2 for every housing unit.

With these exclusionary situations detected in the South of Rotterdam the following things will be considered in the following chapters of this report. The first thing is the exclusive city, going deeper into the situations of the South of Rotterdam with some added examples of what defines exclusivity. In another chapter inclusivity will be clearly defined along with some design principles to help propose change for any area that wants to implement it. Through these chapters, a defining characteristic for implementation is defined according to theories by William Whyte, Victor Mehta, and others to examine a potential solution.
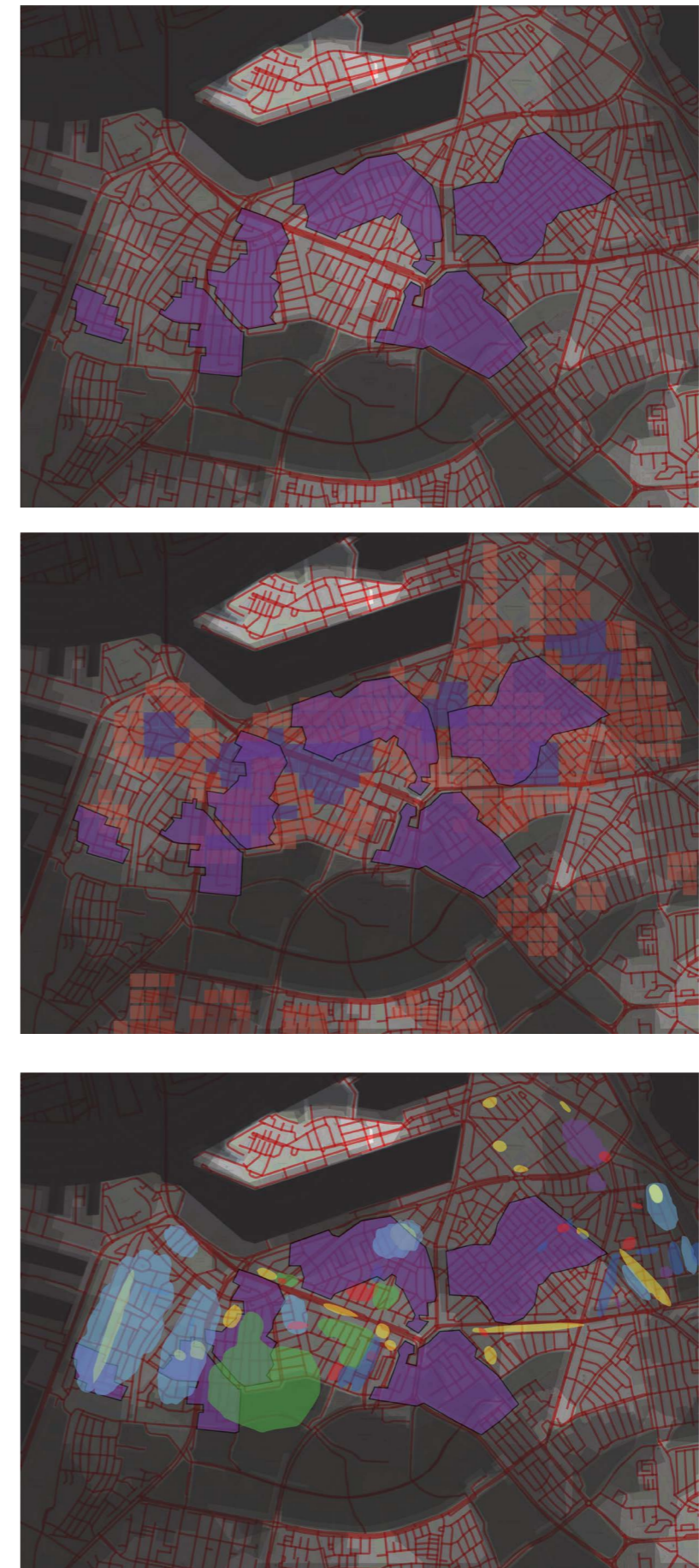

Figure 2: Maps presenting the lack of connectivity to amenities in the South along with other variables

The Exclusive City
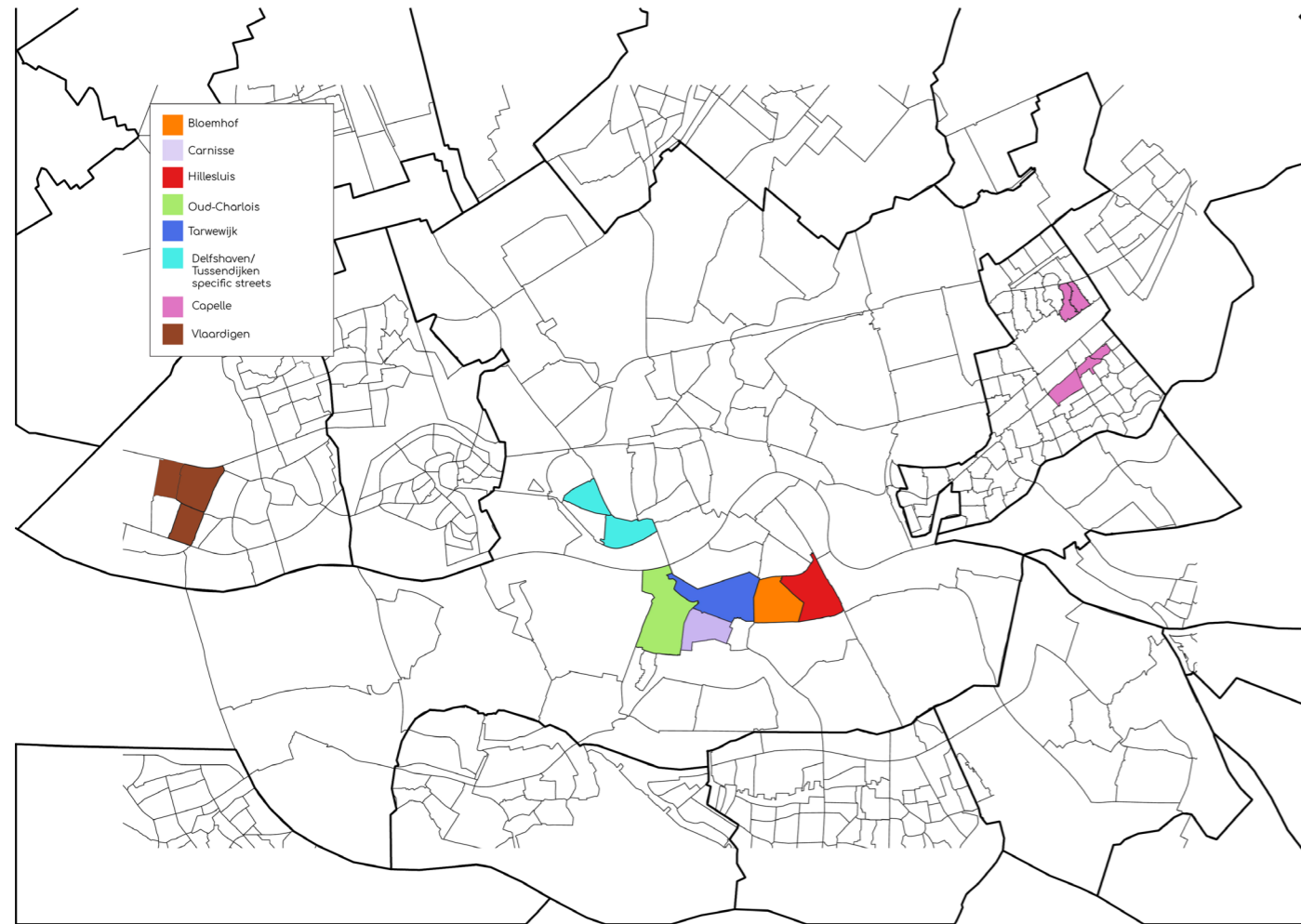

Figure 3: A map of the Rotterdam Act, including the areas affected in Rottedam and even the ones in other cities as the Act expands.
Information found in:
Uitermark, J., Hochstenbach, C. and van Gent, W. (2017). The statistical politics of exceptional territories. Political Geography.

Rotterdam is a port city with an economy that used to be based on its port, relying heavily on manual labour, back in the industrial era. This explains how the lower-income people have come to live in the South. Most of western Europe has been through this era which ended up needing manual labour from what was known back then as the working class. Employers built housing for their employees to stay in, close to factories, or in Rotterdam's case, the port. In this pre-war WW2 situation, the employees had a steady job with a minimal pay but they were part of the future of employment. As with most factories, the port has eventually resorted to automation which made the working class redundant. The housing that was built back then became what is now known as social housing, and it means something completely different across different European countries. According to (Baldwin Hess, Tammaru and van Ham, 2018)[6] countries like Russia and Bulgaria among others, view social housing as part of everyday life and no issue is created with many people living in them. However, all the way to the West, in European countries like the UK or the Netherlands, they are viewed as a plague of stigmatization and is most likely the last resort for someone to live in. People who had the resources to move away from this sort of housing, would do so.

However in Rotterdam, exclusionary politics were introduced after the election of the Leefbaar Rotterdam party in 2004 as an exceptional policy according to Uitermark et al. Dept. of Sociology and Dept.) of Geography at University of Amsterdam)[7]. The introduction of what is called the Rotterdam Act was introduced. Initially targeting five areas in the South, namely Carnisse, Bloemhoff, Hilesluis, Tarwewijk and Oud- Charlois. This act stated that: People who have not lived in the Rotterdam Metro-

politan area in the last six years, have a criminal record, or don't have any other desirable socioeconomic characteristic, can't move into these areas.[8] Even though this law has been questioned in the past about its potential racial bias, mainly because of the fact that Leefbaar Rotterdam and their leader Pim Fortuyn had a racist agenda, the act targets low-income people.

This becomes a political main exclusionary measure in the South of Rotterdam that as mentioned in the beginning of this chapter, only have the choice of moving into a low-income household with this act limiting their possibilities even more by lowering their housing mobility[9].

Low-income areas in general face a lot of problems, including but not limited to criminality, younger pregnancies, obesity etc. This is a domino effect that happens because of homophily[10] , These people hang around other people who are of low income, making their problems circulate within the same group of people.This prevents them from going higher on the social ladder, finding better jobs, or increasing their housing and social mobility[11]. The NPRZ helps these people to do just that, but this will be elaborated more in the next chapter. These people come to face another issue that happens in low-income areas, which is gentrification.

Gentrification is a word that is usually viewed as bad. People usually see it and imagine people getting kicked out of their houses while better, newer housing is built in its place with Starbucks[12] and artisan shops in every corner. However, not everything is black and white. Gentrification is not an exclusionary policy and can actually bring inclusivity to a certain extend.

In "The struggle to belong" by Snel et al. (Dept. of Sociology, Erasmus University Rotterdam)[13], the authors have

Figure 4: The cycle of the help given by the NPRZ focusing on the three areas of School, Work and Living, Translated from a diagram in:
NPRZ (2019). National Programma Rotterdam Zuid Implementation plan 2019-2022. Rotterdam.

observed three areas in the South of Rotterdam that have previously been gentrified in the 1980s. These were Spangen, Katendrecht and Bospolder/Tussendijken[14]. The characteristics of these areas are what you would expect from a stigmatised[15] area of the South:

"During the 1980s and 1990s, all three neighbourhoods degenerated. Particularly Spangen became well-known for its widespread poverty and unemployment, the influx of ethnic minorities (up to 75 per cent in 2010), but also for a variety of urban problems (from crime, prostitution, homelessness and drugs trade to the nuisance of youngster hanging out on the streets). Many residents that had the financial means left the disrict. For the remaining residents, the social decline in Spangen and to a lesser extent in the other two districts – caused feelings of displacement and resentment."[16]

This quote reveals the nature of gentrification as something that many people see as inhumane. People getting displaced and forced to move in an already limited supply of housing. However, in interviews in these areas later contacted by the authors after gentrification it was revealed that the people in them had mixed views about the new people who started moving into these areas. One of them said:

"I think it is a good idea. And that so many people choose to live here! I have seen that many of them are white people. I think that is good"[17]

Whereas another one with a negative view said that:

"But many of them are not worth to shoot at. So arrogant, this is their Katendrecht! They don't adapt themselves, they live their own life.(...) But they don't say 'hello'. At the start, I'd say 'hello' but I stopped doing so."[18]

Gentrification's pros do not stop on people opinions though. The same authors have also revealed that gentrification had brought increased feelings of safety, as the police started doing increased patrols in these areas, people enjoying the new life and the new shops in their areas and improved amenities which as previously shown was an inherent problem of these areas.

As an architect I can see how people can be excluded from a neighbourhood by being kicked out of it and being forced to live somewhere else but also the exclusion from the available housing in the South in general. However, I can also feel safer introducing something new into an area of the South of Rotterdam knowing that it can have a positive effect on some people. Architecture itself can never be viewed as positive by everyone, especially when it can be intrusive in someone's way of life. In the next chapter we can see and reveal ways to approach the inclusive city and how that also introduces the cooperation between the architect, or designer and the residents of said area to further improve this way of life.

"But many of them are not worth to shoot at. So arrogant, this is their Katendrecht! They don't adapt themselves, they live their own life.(...) But they don't say 'hello'. At the start, I'd say 'hello' but I stopped doing so."[18]

Gentrification's pros do not stop on people opinions though. The same authors have also revealed that gentrification had brought increased feelings of safety, as the police started doing increased patrols in these areas, people enjoying the new life and the new shops in their areas and improved amenities which as previously shown was an inherent problem of these areas.

As an architect I can see how people can be excluded from a neighbourhood by being kicked out of it and being forced to live somewhere else but also the exclusion from the available housing in the South in general. However, I can also feel safer introducing something new into an area of the South of Rotterdam knowing that it can have a positive effect on some people. Architecture itself can never be viewed as positive by everyone, especially when it can be intrusive in someone's way of life. In the next chapter we can see and reveal ways to approach the inclusive city and how that also introduces the cooperation between the architect, or designer and the residents of said area to further improve this way of life.
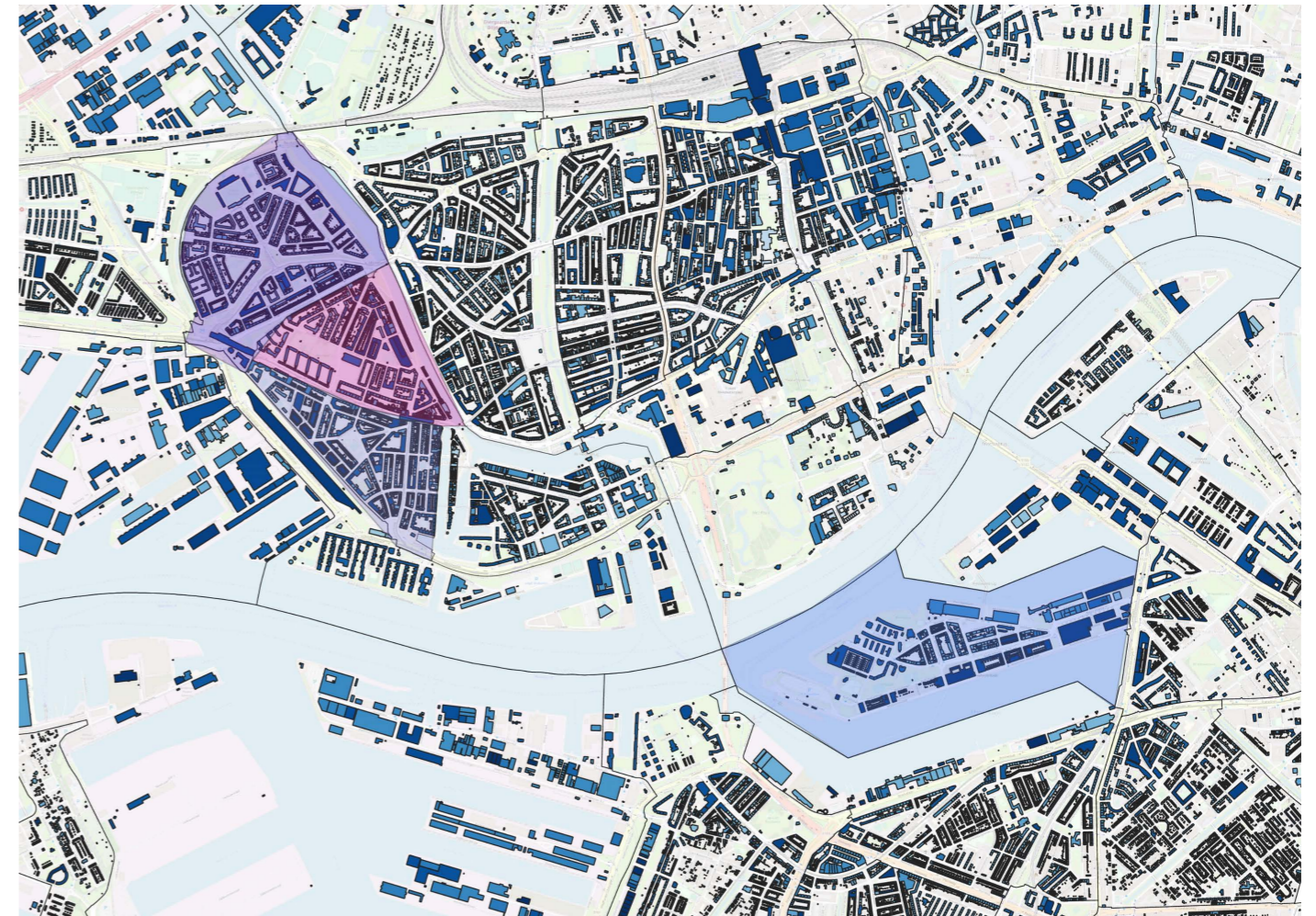

Figure 5: Map highlighting the three areas mentioned to be gentrified in the 1980s in:
Snel, E., Aussen, S., Berkhof, F. and Renlo, Q. (2011). The struggle to belong: Dealing with diversity in 21st century urban settings: Views of gentrification from below: how Rotterdam local residents experience gentrification?. Erasmus University Rotterdam, RC21 conference

The Inclusive City and the Public Place

1. People prefer indirect sunlight, usually created by a reflective building close to the public space.
2. Corners are places of arrivals and departures and hence hellos and goodbyes.
3. Water, the look the sound and the sittability around it are elements needed for a good public space
4. Triangulation (people gather around an important object or person).
5. People like looking at other people.
6. Sittability, specifically or either moving objects or stairs, benches create awkwardness.
7. People seek objects in the middle (trees, flagpoles etc.) to have a conversation under.
8. Trees should be in the middle of spaces, other wise the spaces are hidden and might be misused.
9. Food, people like to eat and will prefer public spaces with food over that don't.
10. People prefer to stick to corners close to the streets unless they gather around other objects (see numbers 4, 7)
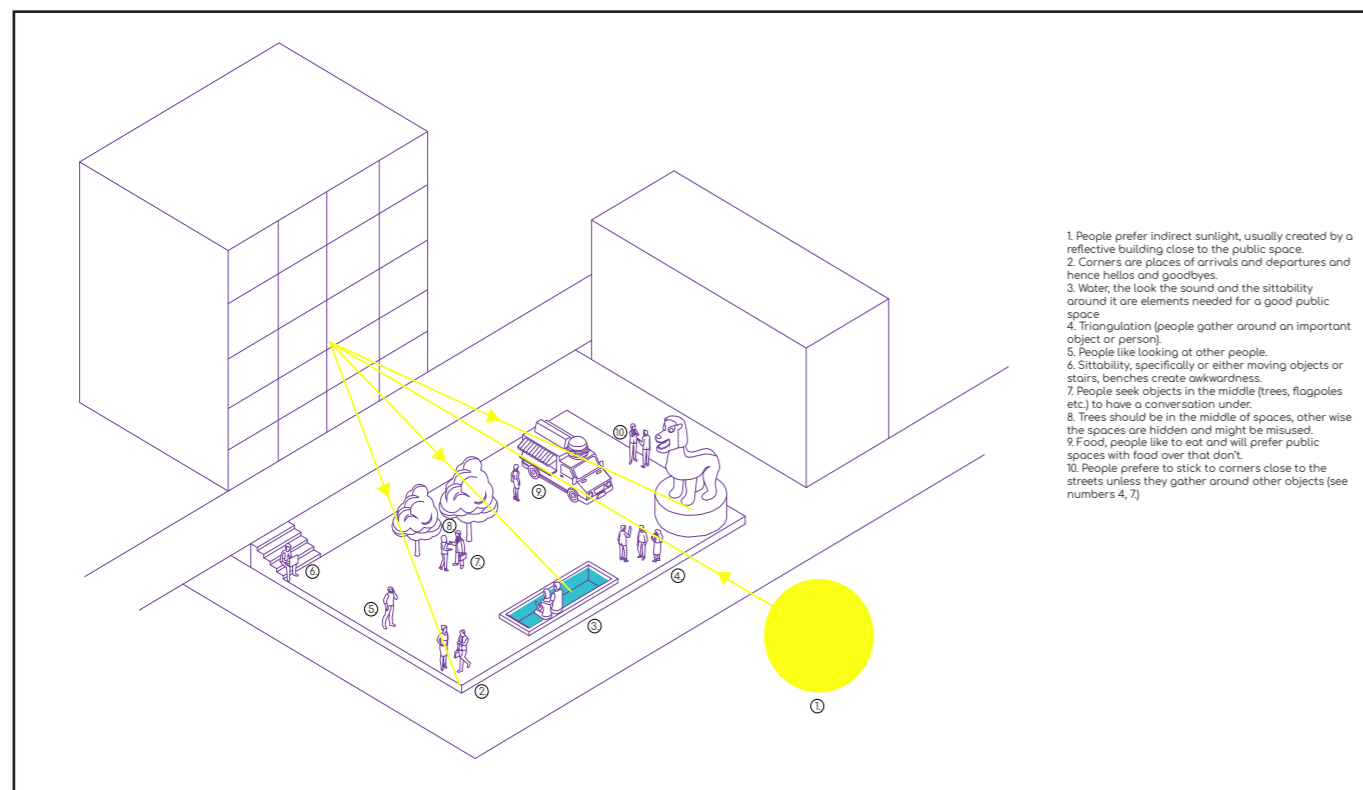
Figure 6: A conceptual plaza indicating the ideas for a good public place as viewed in his documentary: Whyte, W., 2001. The social life of small urban spaces. Project for public spaces.

An inclusive city can be regarded towards many things, and so those things need to be first become explicit. Starting with what has already been said in the previous chapter which is who inclusivity will be concerning. In this case it is low-income people as those have been determined to be the majority of residents of the South of Rotterdam. When inclusivity is deemed, other groups can come to mind that are generally seen as excluded like the disabled, or the sick. However our focus is low-income people.

A potential solution needs to be discussed and addressed further. This is regarding people's connections within the city as discussed by "The production of Space"[19] which reveals that people are the ones who create the spaces and not the architects, or designers. This is further revealed by looking at certain public spaces regarding the behaviour expected in a space against the behaviour actually revealed in those public spaces. In two of the projects by Project for public spaces, we can disclose how spaces are not necessarily used in one way or the other and that they can be either orderly or chaotic. This gives way for an excuse to further examine public spaces as a potential solution to implement inclusivity as they can become gathering spaces for the people to do several activities in, and further raises the question of how they should be designed as such which I will attempt to answer below.

According to William 'Holly' Whyte in his documentary and book the "Social life of small urban spaces"[20] several activities and repetitive patterns have been observed in many public spaces. William Whyte is a self-proclaimed people observer that has revealed these patterns by filming people and by making small calculations of what

he later presented as what is the ideal way of doing certain things in public spaces. The diagram in Figure 6 shows several of these repetitive patterns, like people liking water, feeling it, hearing it and even splashing it when given the chance. Another one is people's affinity for sunlight in a public space even though they usually prefer it in an indirect way. But the most important important one is sittability. As mentioned in his documentary "the most attractive fountains, the most striking designs, cannot induce people to sit if there is no place to sit"[21]. He determined that the ideal sitting space was 1 linear foot/30 sq. feet. Further elaboration of sittability was examined by both Whyte and by Nouri and Costa in their paper called: "Placemaking and climate change adaptation: new qualitative and quantitative considerations for the "Place Diagram""[22]

These two authors looked at public spaces regarding one specific design principle simply mentioned by Whyte which is the element of choice which further enhances the possibilities of one staying in a public space by looking at several variables they created by making what they call the 'Place diagram'. The place diagram can be seen here where the variables that affect the frequency of one's visit becomes visible. These are the human environment, the climatic environment, and the built environment. These three share several further characteristics like the whether or not it's hot in this space which affects the time of exposure too, and whether or not that can be regulated with the climatic environment meaning if one can stay under a tree or a pergola for comfort. All these variables give an idea of how much a person might want to stay in one space. In these examples of public places by the same authors these things can be seen to a certain extend. What they
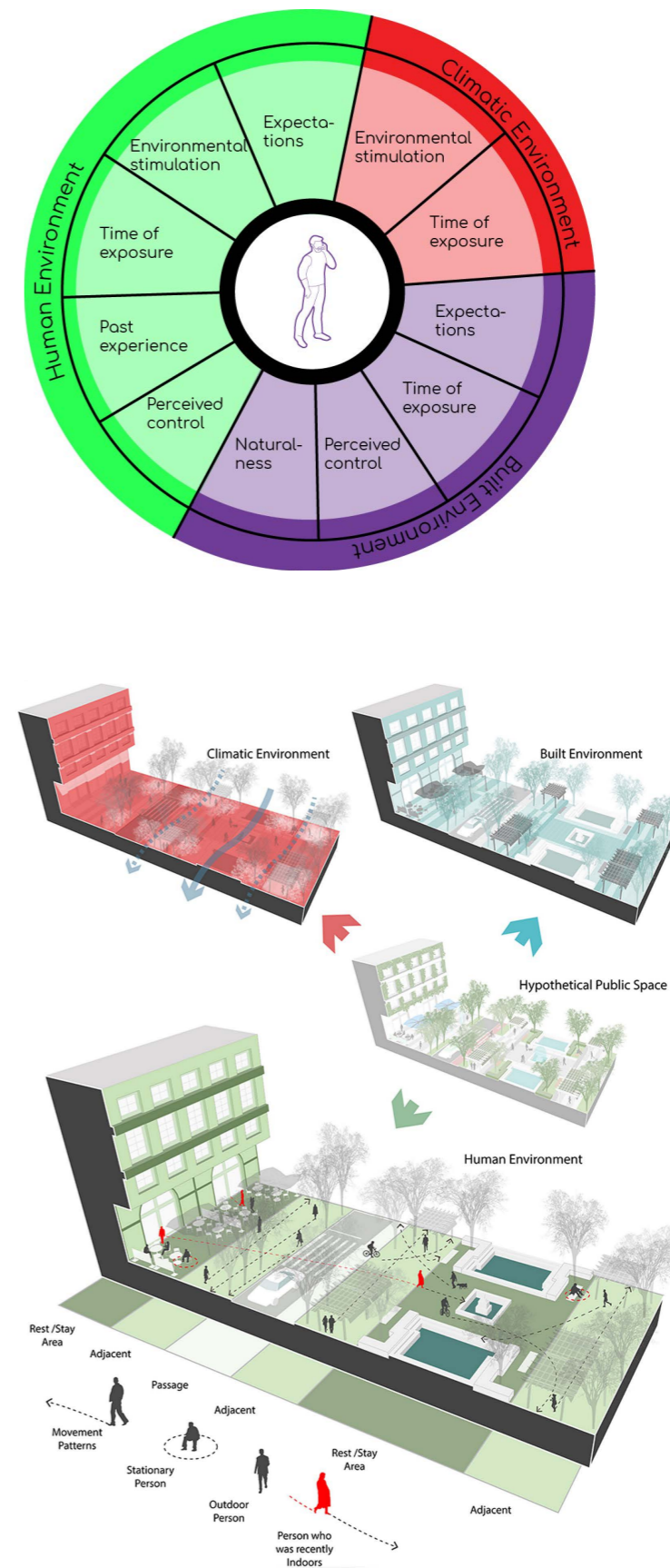

Figure 7: The Place diagram and the conceptual plazas as shown in explaining choice and comfort as seen in: Diagrams taken from: Nouri, A. and Costa, J. (2017). Placemaking and climate change adaptation: new qualitative and quantitative considerations for the "Place Diagram"

have agreed upon is that the element of choice is what makes a place more sittable and therefore more comfortable. If there is a choice to sit under a tree or in the sun, depending on temperature, that in turn increases the success of a public space.

Whyte further endorses this, by presenting St' Marcus Plaza, in Venice Italy. The following images from his documentary, verify the importance of the choice of sittability to be an important aspect for a public space. However, further research by Herthogs et al, 2018[23] has shown public spaces to also be affected by their connectivity to the people themselves. Presenting a topological relationship among the public space three more variables were added, namely walkability, time of the day and transportation. This reveals that as sittable or as comfortable a public place is, if it is out of reach for some people it will not be used. Connectivity is shown here in Figure 20, in this diagram of the South revealing the most connected streets regarding to other streets themselves. The most connected one appears to be the Pleinsweg which makes sense as it is the main avenue of the South with lots of shops and other amenities even though most of them remain local.

Having this information, we can see that adressing inclusivity in the South of Rotterdam is not an easy feat. Having a disconnected public place which lacks walkability and connectivity is what makes a potential solution, more difficult to achieve. However there is one public space in the South that uses different means to remain relevant in the South. This is the biggest public space in Rotterdam itself even having its own name as an area, that being the Zuiderpark. The map in Figure 9 and images present the several activities currently in

the Zuiderpark including a botanical garden, a big playground, and a lot of sports-related facilities. It also has a lot of sittable space like steps, benches etc and also some statues.

Contrary to the rest of the South, the Zuiderpark has relative walkability as it can easily be accessed by the surrounding areas because of its shear size. While no space of the South has what the Zuiderpark has we can still learn from the fact that it has a lot of activities to be done in it, by its wide choice of sittable spaces and also by the unique character that it has tried to achieve through the various statues positioned in it. In the next chapter an area will be chosen from the areas that were first affected by the Rotterdam Act to be looked at, and a site decided in it which is to be explained analysed by what was already mentioned in the previous chapters. That area is namely Carnisse as it is the first area where the Rotterdam Act was first tested out and it's also the only area that the NPRZ has recognised as in need of change.

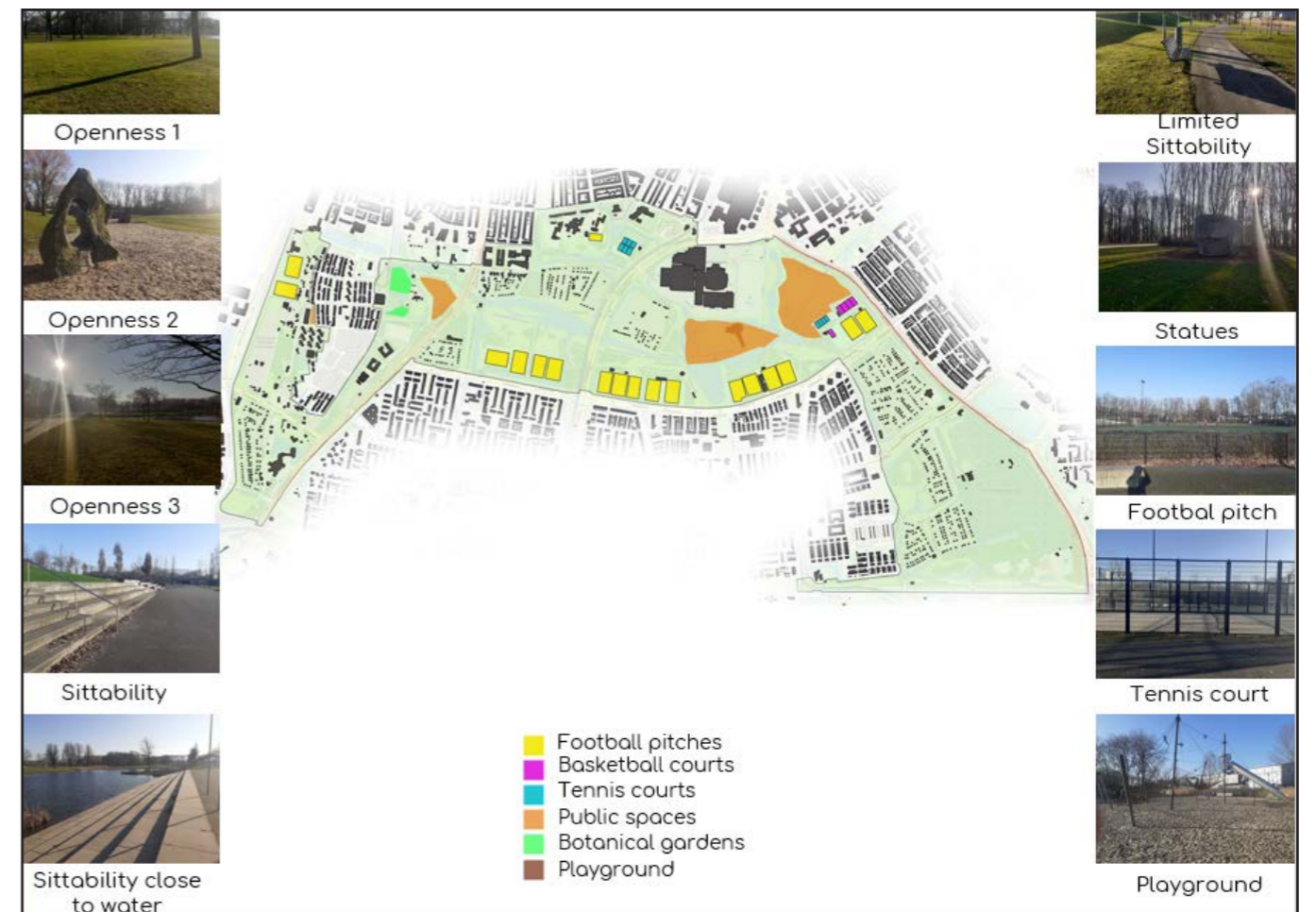Figure 8: A connectivity map of the South indicating the streets with the most connections to other streets.

Most connected

Least connected

Figure 9: A map of the Zuiderpark indicating the various activities in it.

Openness 1

Openness 2

Openness 3

Sittability

Sittability close to water

Limited Sittability

Statues

Football pitch

Tennis court

Playground

Football pitches
Basketball courts
Tennis courts
Public spaces
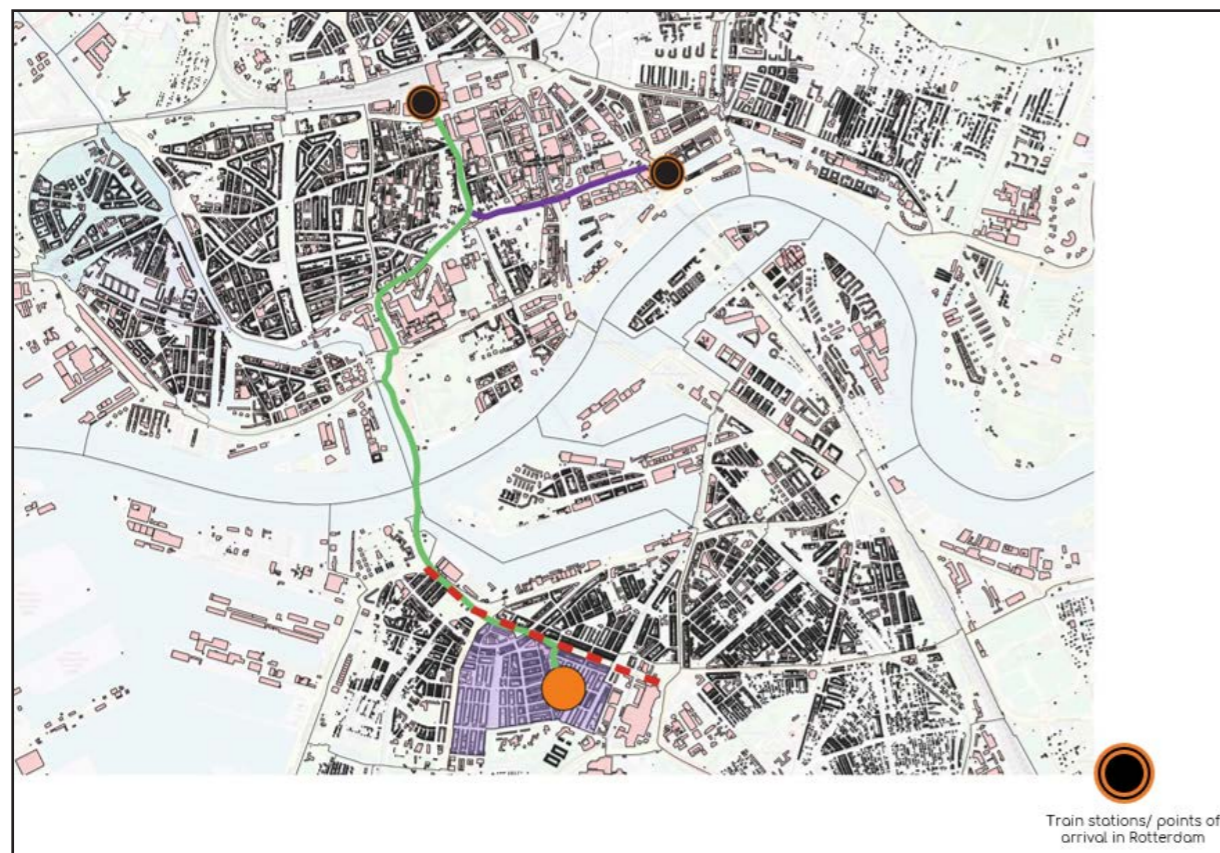Botanical gardens
Playground

Carnisse

Figure 10: A map indicating the locations of the Centrale and Blaak Stations as an arrival point indicating a lack of connectivity to Carnisse.

Carnisse was chosen out of the 5 areas where the Rotterdam Act started, initially as it is identified and seems to be the one in need of immediate change, regarding the NPRZ, but also because of its recognition as an area with low connectivity to amenities which according to the NPRZ Implementation plan 2019-2022[24] is needed to implement inclusivity in all areas of the South. Carnisse is a space which is well connected to the Zuiderpark with an immediate route leading to it from the area, and directly accessed by the Pleinsweg, the previously mentioned, most connected street into the area. That does not do the actual area any favours though as its streets themselves are pretty isolated, and is an area that nobody visits, unless directly planning to visit it for specific reasons. Finally, its connections to public transport meaning trains is limited to Rotterdam Zuid station and Lombardijen which are both far away from the actual area as shown in the following map.

The general rent in the area varies to about €640, which is relatively low, even for social sector housing with the current cap being at €752.33[25], which says something about the quality of the housing available. The area has signs of people not respecting the area that they live in by leaving trash[26] here and there, most likely a result of the residents not caring about the area itself as they don't feel at home, which is the result of the renters not knowing their neighbours and as they don't own the homes that they live in, making them less likely to be interested in this sort of thing. Another interesting fact is that much of the actual housing in Carnisse, isn't owned by housing associations, but by private landlords.[27] This can lower the standards that can be kept by these associations[28] who have to help the people living within their housing, as a private **landlord can sometimes ne-**

glect his responsibilities to safely manage a household if he isn't living in it himself.

The surprising aspect of Carnisse are the various green areas and playgrounds that appear in the streets but even those are underused. An area with underused[29] spaces is generally not living up to its full potential but it is worth noting that after gentrification
occurred in numerous areas in the South of Rotterdam, the trash around some areas usually disappears according to 'The struggle to belong' mentioned earlier. However, Carnisse is not one of these areas yet, making any potential changes to it even more interesting, but also giving it a level of difficulty, as a new development could cause a domino of negative effects in the area.

Carnisse has two big public places that stand out though, namely the Amelandseplein and the linear park. These two are interesting areas to look at as potential sites. The linear park, is an open park with no connection to the street, meaning no shadows cast on it, and no trees which introduces a lot of sun on sunny days. It also has access to water all throughout, as it has a canal going the same way as it. The sittable spaces in it are mainly benches at many spaces looking at the water, making them more desirable. Finally, if one is to walk along it, will end up at the Zuiderpark, with a very clear distinction of exiting the linear park as trees suddenly appear as an entrance to another public space.

The Amelandseplein is a park which is in the middle of a residential area with a few basic amenities on its other side, like a local grocery store, a hair salon, a church etc. The park itself doesn't look like much but has all the things that you would expect from a local park, like a

Figure 11: Images showing the trash around Carnisse but also the underused public places. Images taken from: TU Delft (2019). Carnisse: Socio-spatial Inequality on Housing, Work and Income: Multidisciplinary Analysis Report. Delft.

playground, a basketball pitch that nobody can play on as basketball isn't played on grass and some water from the canals that forms a pond where ducks usually hang around. It also has a Gemeente building on its edge that focuses on water, and an electricity box across its routes. Through my own observations of it the park usually sees little to no activity in the mornings where kids are at school, and then some activity in its playground by a few children in the afternoon that most likely live in one of the surrounding houses, along with some older ladies feeding the ducks at the edge of the pond. The routes of the Amelandseplein all go around the park with some arbitrarily positioned benches along the way, that limits both its sittability and usage as the centre remains empty. An interesting fact about the Amelandseplein that would explain its limited usage is the fact that people use it at night for alcohol and drug abuse, with even witnesses saying that they find needles and broken bottles in it. This is according to interviews that were not performed by me, but by another group of students looking at the public spaces of the area and discovered it

It is almost stereotypical and interesting that the bigger but more isolated park in Carnisse (Amelandseplein) has this sort of problems that instead of creating inclusivity because of its activities, sittability and attempt at something different, does the exact opposite where people exclude it because of safety and trust issues. In the next and final chapter, being the conclusion, the Amelandseplein is chosen as the site to examine with a brief explanation as to why, with the design principles that can be implemented to help its exclusivity become inclusivity, along with its limitations in doing so.

Figure 12: Map of the Amelandseplein with all its features.

Conclusion

The Amelandseplein was simply chosen because it would make a more interesting exploration as a park rather than the linear park. The linear park has a lot going for it as a public space, even though its lacking activities unlike the Zuiderpark. Exploring issues of safety, inclusivity and overall turning the Amelandseplein into a better public space according to the standards of William Whyte to connect with the area of Carnisse makes for a fascinating challenge.

To explore inclusivity in a public place, the Amelandseplein must become sittable. Following similar examples from public spaces as mentioned by William Whyte to give not only sittable space but also the choice of where and how to sit is important. An example of a good public place with plenty of sittability, is St. Marcus square in Venice Italy, an example also presented in William Whyte's documentary. In said documentary the plaza is shown with plenty of people adapting to sit whenever, ledges, steps, close to fountains etc which makes this space sittable and allows for the people to also be creative with the sitting arrangements.

The Amelandseplein can also take pages from the Zuiderpark, regarding activities to do like the sport-related ones already in it and the artistic aspects of it being the statues. These lessons can make for a creative and engaging public place that can even help the neighbourhood benefit in a different way. Art related activities, even though absent from the Zuiderpark, can find a place in the Amelandseplein. That can be intentional walls for graffiti, or billboards for even the rare passers-by to leave their marks in the park. This kind of activities can be engaging and inclusive, as art is something that can be performed by anyone, contrary to the

sports-related activities of the Zuiderpark which are usually for the young and able-bodied which is not everyone living in the South or Carnisse.

By attempting to implement inclusivity in such a way with what is going on in other successful public spaces, the Amelandseplein can be turned into a very different park that can benefit the surrounding area and make them feel more welcome to use it at all times of the day to perform activities and enjoy the engagement of it as a public space. Inclusivity has been explained here in terms of the public place. The inclusive city is the city that is engaging for all, and attempts to present it with a good connectivity to the public places, and by con-nectivity we mean both the plethora of such spaces but also walkability, sittability, and the choice to make it even more inviting. Even though Carnisse and the Amelandseplein is a very poorly connected public place, it can still affect the surrounding area and maybe the whole of Carnisse, in a positive manner if all the above aspects are carefully considered.

Figure 13: St' Marcus square with its sittable spaces as shown in William Whyte's documentary:
Whyte, W., 2001. The social life of small urban spaces. Project for public spaces.

References

1. Lefebvre, H., Kofman, E. and Lebas, E., 1996. Writings on cities. Oxford: Blackwell.
2. Lefebvre, H. and Nicholson-Smith, D., 1974. The production of space. Oxford, UK: Blackwell.
3. Piketty, T., 2017. Capital in the 21st Century. London, England: The Belknap Press of Harvard University press.
4. NPRZ (2019). National Programma Rotterdam Zuid Implementation plan 2019-2022. Rotterdam.
5. Breeam.com. n.d. Transport. [online] Available at: <https://www.breeam.com/BREEAM2011SchemeDocument/Content/07_Transport/tra02.htm> [Accessed 14 May 2021].
6. Baldwin Hess, D., Tammaru, T. and van Ham, M., 2018. Housing estates in Europe. Springer Open,.
7. Uitermark, J., Hochstenbach, C. and van Gent, W. (2017). The statistical politics of exceptional territories. Political Geography, 57, p.60-70.
8. Kleinhans, Reinout. 2019. "Who Is Afraid Of Rotterdam?: How A Post-Industrial Harbour City Tries To 'Engineer' Its Population". Lecture, TU Delft – BK City, 2019.
9. Kleinhans, R., 2019. Neighbourhood change: Theory, Concepts, Mechanisms and Outcomes.
10. Kleinhans, R., 2019. Neighbourhood change: Theory, Concepts, Mechanisms and Outcomes.
11. Kleinhans, R., 2019. Neighbourhood change: Theory, Concepts, Mechanisms and Outcomes.
12. Franck, T., 2018. After a Starbucks opens in town, housing prices tend to rise, Harvard study finds. [online] https://www.cnbc.com/2018/09/04/starbucks-openings-predcit-higher-home-prices-says-harvard-study.html. Available at: <https://www.cnbc.com/2018/09/04/starbucks-openings-predcit-higher-home-prices-says-harvard-study.html> [Accessed 15 May 2021].
13. Snel, E., Aussen, S., Berkhof, F. and Renlo, Q. (2011). The struggle to belong: Dealing with diversity in 21st century urban settings: Views of gentrification from below: how Rotterdam local residents experience gentrification?. Erasmus University Rotterdam, RC21 conference
14. Ibid
15. Troost, Agata. 2019. "Neighbourhood Effects". Lecture, TU Delft, 2019.
16. Snel, E., Aussen, S., Berkhof, F. and Renlo, Q. (2011). The struggle to belong: Dealing with diversity in 21st century urban settings: Views of gentrification from below: how Rotterdam local residents experience gentrification?. Erasmus University Rotterdam, RC21 conference
17. Ibid
18. Ibid
19. Lefebvre, H. and Nicholson-Smith, D., 1974. The production of space. Oxford, UK: Blackwell.
20. Whyte, W., 2001. The social life of small urban spaces. Project for public spaces.
21. Ibid
22. Diagrams taken from: Nouri, A. and Costa, J. (2017). Placemaking and climate change adaptation: new qualitative and quantitative considerations for the "Place Diagram". [online] Tandfonline.com. Available at: https://tandfonline.com/doi/pdf/10.1080/17549175.2017.1295096 [Accessed 1 Feb. 2020].
23. Herthogs, P., Tuncer, B., Schläpfer, M. and He, P., 2018. A Weighted Graph Model to Estimate People's Presence in Public Space - The Visit Potential Model. [online] Available at: <https://www.researchgate.net/publication/327817115_A_Weighted_Graph_Model_to_Estimate_People's_Presence_in_Public_Space_-_The_Visit_Potential_Model> [Accessed 5 January 2021].
24. NPRZ (2019). National Programma Rotterdam Zuid Implementation plan 2019-2022. Rotterdam.
25. Huurwoningen.nl. n.d. Sociale huurwoningen. [online] Available at: <https://www.huurwoningen.nl/info/sociale-huurwoningen/> [Accessed 15 May 2021].
26. TU Delft (2019). Carnisse: Socio-spatial Inequality on Housing, Work and Income: Multidisciplinary Analysis Report. Delft.
27. Ibid
28. Ouwehand, André, and Gelske van Daalen. 2002. Dutch Housing Associations: A Model For Social Housing. Delft: DUP Satellite-TU Delft press.
29. TU Delft (2019). Carnisse: Socio-spatial Inequality on Housing, Work and Income: Multidisciplinary Analysis Report. Delft.