REDESIGNING RHYTHMS

HOW URBAN RHYTMS CAN ENHANCE THE SENSE OF PLACE IN HERTEN

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Abstract

Herten, which is a neighborhood in Roermond, has lost part of its sense of place as a result of recent urban expansions. This thesis links the sense of place to the concept of time and concludes, through a literature review, that the sense of place and sense of time can be comprehended through static, dynamic, and collective elements. The thesis focuses on the dynamic elements, which are the urban rhythms, and explores how they can be used to create an urban design.

The main research question for this thesis is: How can urban rhythms be used in an urban design to enhance the sense of place in Herten. To answer this question, a historic analysis is conducted to understand how the sense of place in Herten has been changed in the past century. After this, fieldwork is used to observe what rhythms currently take place in the location. The results of these analyses are then used to create a small-scale urban design for a central location in Herten. This design consists of several areas inspired by a variety of rhythms, increasing the activities that can take place and allowing people from the neighborhood to meet. This strengthens the sense of place and sense of community in the neighborhood.

Additionally, the thesis presents a long-term strategy for the neighborhood which shares the same goal as the design: to enhance the sense of place in Herten. This strategy is based on ongoing trends and sketches a possible future for Herten in 2070. Because Herten shares many characteristics with the Dutch vinex neighborhoods, many of the interventions and conclusions from this thesis may also be applicable to other, similar neighborhoods.

ACKNOWLEDGEMENTS

Dear reader,

The report that you have before you is my P5 graduation thesis in urban design, which I have been working on for the past year. Writing this report would not have been possible without help of many people.

First and foremost, I would like to thank my mentors: Gerdy Verschuure-Stuip and Tess Broekman. Gerdy, I would like to thank you for inspiring me and helping me develop my topic and my interests, during our meetings you always came with new ideas and directions for my thesis and helped me organize and refine my story.

Thank you for Tess for helping me improve my design, and project as a whole. Through our discussions you have challenged me to think deeply about, and connect the many aspects of my design which I greatly appreciate.

To my family and friends, thank you for supporting and motivating me, also thank you for all the discussions we have had, they have helped me greatly. Another special thanks to my parents who were willing to drive out whenever I needed new pictures and I could not be there myself.

Lastly, thank you dear reader, for taking the time to pick up this. I hope it inspires you and sparks new ideas.

Kind regards,
Maartje Frencken

Personal fascination

I have always been fascinated by the world changing around me. One example of this is the neighborhood of Herten, a place I would visit often to meet up with my friends who live there. The neighborhood was under development during most of my elementary and high school years. Every time I visited the place would look different as new houses had been built and new families moved in. I remember being completely disoriented one day when visiting my friend because an entire new street was built next to hers in the few months I had not been there: what used to be an overgrown field was now full of houses. My friend no longer lived at the edge of the neighborhood but in the middle of it all.

During my studies at TU Delft, I learned about how a design can influence how people act, and which activities take place. Combining this with the fascination about change, I became interested in how a design can facilitate different uses for a place, and how a place can be experienced completely differently depending on the time of the day or year.

It feels fitting to finish my time at TU Delft by writing a thesis about these fascinations of mine, and it is wonderful to have a chance to further explore this topic.

A CHANGING URBAN LANDSCAPE

Chapter 1 - Introduction

Content

1.1 Introduction

This chapter looks at the urbanization in the Netherlands in recent years and the vinex neighborhoods that have been created during this expansion. After explaining what a vinex neighborhood is in paragraph 1.2, it zooms in on the location of this thesis in paragraph 1.3. The chosen location is the neighborhood of Herten which is part of the city of Roermond. The chapter concludes with a problem statement and research question in paragraph 1.4 and 1.5. The problem statement and research question are about the lacking sense of place in Herten and the role of urban rhythms in defining a place.

Figure 1.1 Herten & Roermond
map edited from Geographixs (n.d.)

1.2.1 Urbanization in the Netherlands

Expansions of urban areas

In the 20th century urban areas in the Netherlands have been rapidly expanding. A hundred years ago most people lived in rural, often agricultural areas. However during this time industrialization had taken root, leading to the expansion of urban areas, figure 1.1 shows this expansion. As more expansions took place, the population of the Netherlands grew from around five million people in 1900 to more than triple this amount a hundred years later. Nowadays the Netherlands is one of the most densely populated countries in Europe and is highly urbanized, with 74% of the population living in urban areas (Nabiliek & Hamers, 2015).

Each expansion from the last century has brought with it its own structures and ideas about how we should use the space around us. The accumulation of structures and ideas together with innovation in technology and shifts in culture have made it so that the city of today is unrecognizable from what it was a hundred years ago, having completely changed in time. That does not mean that no traces of these past cities remain, the different expansions to cities are still recognizable when traveling through the cities and make each place in the city feel different, shaping the city as we observe it today.

Legend

- Urban areas 1900
- Urban areas 1960
- Urban areas 2003

1.2.2 The latest expansion: vinex

Expansions of urban areas

The expansions of urban areas in the Netherlands are not just something of the last century, they still continue. In the nineties, the Netherlands was dealing with a housing crisis and the government introduced a plan called the 'vierde ruimtelijke nota extra' which is mostly known as vinex. This plan aimed to build 650.000 new houses in the following years to combat the housing shortage (Jókövi et al., 2006). The new neighborhoods had a focus on family homes with a good connection to public transport. The neighborhoods were located in between the city and surrounding green spaces, making both accessible to the inhabitants of these neighborhoods.

The vinex neighborhoods were introduced in the so called 'vinex-uitleglocaties': locations that are used to showcase the concept of the new expansion. These locations were appointed by local governments and were often located at the edge of existing cities (Lörzing, Klemm, van Leeuwen & Soekimin, 2006). Apart from these uitleglocaties other suburban expansions from the same period often share many characteristics with the vinex neighborhoods and are considered part of the same expansion, vinex can therefore be considered as a style for all suburban expansions from 1995 to the early 21st century.

Figure 1.2 Newspaper articles
(BNR Webredactie, 2019; Havermans & Obbink, 2016; Redactie AD, 2016; Venderbosch, 2021)

1.2.3 Praises and criticism about vinex

Expansions of urban areas

Now that many of the original vinex locations are finished and have been in use for some years, it is possible to evaluate whether the vinex plan was a success. A lot has been written about this topic, Figure 1.2 shows some of the newspaper articles that are related to the vinex neighborhoods. Some praise the vinex for succeeding in building many new homes of good quality and good accessibility, while others criticize the neighborhoods for being boring with too little variation.

The report 'VINEX! Een morfologische verkenning' (Lörzing et al., 2006) claims that there is much variety in the vinex neighborhoods in style, location and size. However, the general ideas behind the neighborhoods are similar: building average homes on the edges of the city. Because of this the vinex neighborhoods look alike when comparing the neighborhoods on a higher scale. Nio (2006) adds to this by looking at the daily lives of the inhabitants in these neighborhoods. He shows that these people share certain characteristics and describes them as 'netwerkstedelingen' which translates to untethered inhabitants: by this he means that the people living in vinex neighborhoods are characterized by their mobility and are not limited to the neighborhood they live in for choosing where to spend their time. They often go to the neighboring cities for work or to spend their free time. The people living in vinex are often young families witch children, and they earn more on average than people living in the city (CBS, 2016).

The reason people choose to live in a vinex is because they are looking for a place that combines characteristics from living in both rural and urban areas, they often want a house with its own garden, with good accessibility to both the city and open landscapes. The neighborhood also offers most basic amenities such as a supermarket or elementary school which makes it well suited for families (Nio, 2006). While people live comfortably in the vinex neighborhoods they do not feel a strong attachment to the place, and any connection they feel is mostly practical in nature. Nio (2006) gives two main reasons for this, the first being a lack of collectivity, people have little contact with others in their neighborhood and instead find close contact with people outside the neighborhood. The second reason is that vinex lacks transformational capacity. They are designed to quickly realize the residential function for which they were built and give no room for initiatives by inhabitants or a change in function over time.

In conclusion, vinex succeeded in building the necessary new homes in a comfortable neighborhood for those looking to live close to the city, it is more varied than previous expansion projects but lacks the transformative capacity that allows inhabitants to shape their own neighborhoods. While comfortable to live in people go elsewhere for personal connections, the neighborhoods could still be improved by fostering a stronger sense of community.

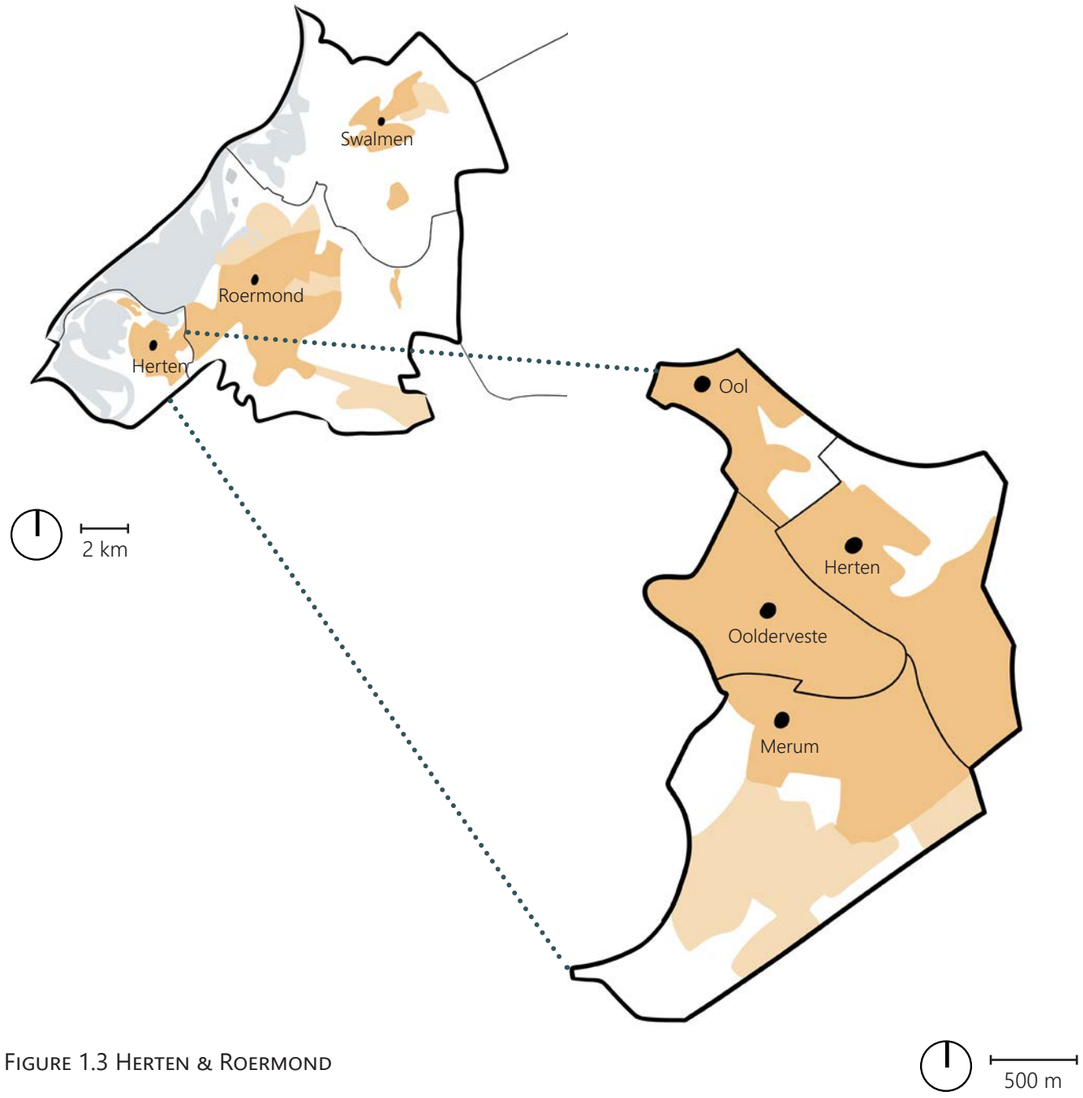


Figure 1.3 Herten & Roermond

1.3.1 Herten and Roermond

Introducing Herten

This thesis focuses on the neighborhood Herten as an example of rapid urbanization in the Netherlands in recent years. Herten is a neighborhood that is part of the city of Roermond which is located in Limburg in the southeast of the Netherlands. The neighborhood has around 8000 inhabitants (KadastraleKaart, n.d.-b) and consists of four cores: Herten, Merum, Ool and Oolderveste. Oolderveste is the newest expansion to Herten, the construction process of this core started in 2005 and is now nearing completion.

The other three cores have also expanded over the recent decades and have now grown to directly border Roermond. With the addition of Oolderveste in the middle, the borders between the different cores have started to break down.

Oolderveste will be the focus of this thesis project as it is the most recent expansion and has undergone many changes in the past few years. It also has a central location in the neighborhood and connects to the other cores and the Maasplassen

Legend

- Urban areas
- Industrial areas/Business district
- Maasplassen

1.3.2 The four cores of Herten

Introducing Herten

Figure 1.4 Herten

"Herten forms the center of the neighborhood where basis amenities such as the supermarket or elementary school can be found."

(Notes from fieldwork)

Figure 1.5 Merum

"Merum is characterized by the old village center with its café, but also by the business district to the south which provides work for many people in the neighborhood."

(Notes from fieldwork)

Figure 1.6 Ool

"In Ool the old village structure is the most visible with its farmhouses and fields, this core has barely expanded over the last century."

(Notes from fieldwork)

Figure 1.7 Oolderveste

"Oolderveste is the newly built core in the neighborhood, it is completely residential and many families live here."

(Notes from fieldwork)

1.3.3 Characteristics of Herten

Introducing Herten

Herten, and especially Oolderveste, shares many similar characteristics to the vinex neighborhoods discussed previously. Herten is a residential neighborhood with 89% of the addresses having a residential function (AlleCijfers, n.d.-b), In Oolderveste this function is even more prevalent with over 99% of addresses being residential (AlleCijfers, n.d.-a).

Another characteristic that Herten shares with typical vinex neighborhoods is that the population consists of more children than average, In Herten 20% of the population is 15 years or younger which is higher than the national average as seen in figure 1.9, in Oolderveste this is 29%, showing that there are many families in this core (AlleCijfers, n.d.-b). This aligns with the research done by CBS which shows that there are often many children in vinex neighborhoods (CBS, 2016). Another demographic characteristic of the population of vinex neighborhoods is income, people in these neighborhoods often have a higher income than surrounding areas. The income in Herten is 20% higher and the income in Oolderveste is 28% higher than the average income in Roermond (AlleCijfers, n.d.).

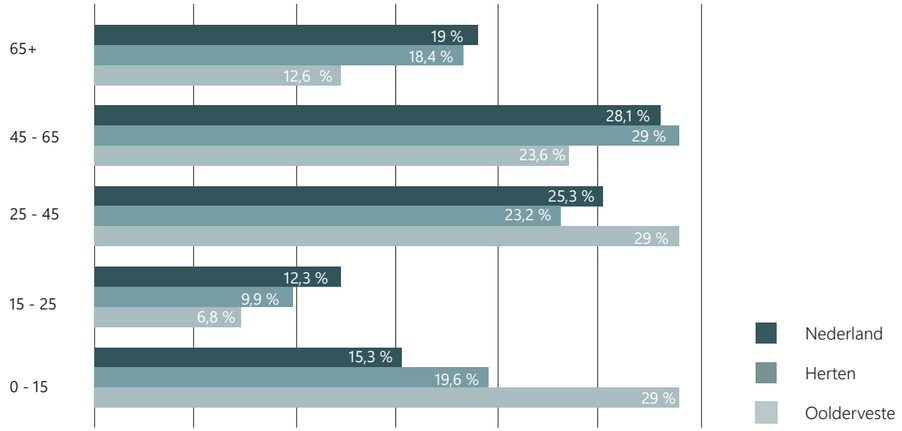


Figure 1.8 Age distribution
Data from AlleCijfers (n.d.)

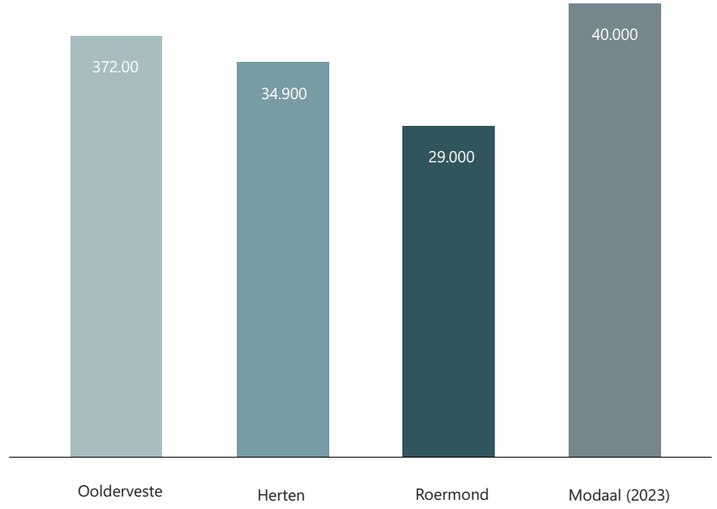


Figure 1.9 Income
Data from AlleCijfers (n.d.)

Figure 1.10 Isabellagriend, Oolderveste

1.3.4 Daily life in Herten

Introducing Herten

Another characteristic that Herten has in common with the typical vinex neighborhood is that most people that live there can be described as untethered inhabitants, their house is in Herten but they travel elsewhere for many aspects of life. There is little life on the streets which makes the neighborhood feel deserted. Again, within Herten this is most noticeable in Oolderveste. Figure 1.10 shows the empty streets in Oolderveste: there are no pedestrians and even cars driving past are rare. Even in weekends when you would expect more people to be home, there is little life on the streets as most people prefer to either stay indoors or leave the neighborhood.

This lack of urban life also makes it so that the rhythms in the place are difficult to notice. While certain rhythms such as the sun rising and setting are always there, the telltale sign of human activity is limited to people leaving the area at certain times and coming back on others.

In the other cores besides Oolderveste a similar lack of rhythms is found in the residential areas. However, in some places, such as near the daily amenities in Herten or in the old village center of Ool there is more activity on the streets, these places feel more alive, and they are more inviting to visit. This shows how important activities and rhythms are to a neighborhood.

1.4 Problem statement

Herten has changed completely over the past century; through multiple expansions, it has become a residential neighborhood that is part of the city of Roermond. Inhabitants keep to their own homes while in Herten and travel to the nearby city for work or to spend their free time.

Public spaces in Herten often feel deserted: few activities take place and the activities that do happen are not very diverse in program. This is one of the reasons people must travel elsewhere for many aspects of life and why the place feels abandoned. With a lack of activities and people partaking in them, it is difficult to notice rhythms in Herten beyond the basic cycles such as the sun setting and rising, and the change in seasons. Without noticeable rhythms in public spaces, the place feels static and impersonal: it becomes clear that the sense of place in Herten is lacking.

An absence of sense of place means that people do not feel connected to a place: they will not be motivated to improve the place and it becomes more difficult to build a strong community. In Herten, especially in the newly built residential areas, it is difficult to enhance this sense of place. The neighborhoods were practically finished by the time people came to live in them -people had little influence over what the place would look like- which is another reason the place feels impersonal.

Because the residential areas are already finished, they are difficult to transform when, for example, a change in function is needed or when demographics change.

The lack of sense of place is not unique to Herten: many of the recently built vinex neighborhoods share a similar lack of connection to the place. Like Herten, these neighborhoods are often finished when people move in, they are also difficult to

1.5 Research question

Main research question:

How can urban rhythms be used in an urban design to enhance the sense of place in Herten?

This thesis explores how to use rhythms as a way to enhance the sense of place, it does this by using Herten as a test case for both an analysis and an urban design, all these topics are combined in the proposed research question above. The concepts of urban rhythms and sense of place are defined in chapter 2.

To answer the main research question four subquestions have been formulated, each to further explore and better understand the concepts this thesis connects. The first two subquestions are used to better understand the situation and the concepts, while the purpose of the last question is to translate the previously gathered information into something applicable to an urban design.

SQ1:
How has the sense of place in Herten changed due to previous expansions?

SQ2:
What are urban rhythms in Herten?

SQ3:
How can urban rhythms be translated into design?

1.6 Conclusion

This chapter introduced Herten, the location for this thesis, as an example of a vinex neighborhood: a recent type of expansion neighborhood in the Netherlands. It concluded that Herten lacks in having a sense of place and that there are few rhythms that can be observed, this is especially true for Oolderveste which is the most recent expansion to the neighborhood. The chapter ends by asking the research question: How can urban rhythms be used in an urban design to enhance the sense of place in Herten? The concepts rhythms and sense of place that are used in this question will be defined in the next chapter.

DEFINING THE PROJECT

Chapter 2 - Key literature and methodology

Content

2.1 Introduction

The goal of this chapter is to introduce key literature for the thesis and define the project through methodology and aims. The chapter starts with defining the concepts that were introduced in chapter 1 in the research question. In paragraph 2.2 a literature review is conducted to define sense of place, temporality in urban spaces, and urban rhythms. These concepts are combined in a theoretical framework shown in paragraph 2.3.

After introducing the key literature for the thesis, the chapter continues to define the project though methodology in paragraph 2.4 and the project aim in paragraph 2.5. The chapter ends by presenting the conceptual framework in paragraph 2.6.

Chapter 1 has shown that expansions and other developments over time change places, but what is a place? And how is it different from a location in space? Tuan (1977) has described a place as a space that we have gotten to know and have attached value to. A space for him is undifferentiated while a place is defined by the experiences linked to it. By interacting with a space, we start to experience it, sensing the place that it is. These experiences can be physical: when we visit a place we experience through our their senses, we hear, see, and feel what a place consists of. But our experience of a place is also influenced by the memories of the place or similar places and by stories we have heard about a place.

Inhabitants of Herten interact with the place daily, they might walk their dog, look at their surroundings and feel the breeze through their hair. Walking further, they might see the house of a friend and remember their birthday party last month. All these experiences and memories built up their sense of place.

Sense of place

The concept of sense of place is used to describe the relation between people and the places they find themselves in, having a sense of place can help people describe the place to others. When the sense of place grows stronger, it can create attachment to the place which can help people to integrate with a place and other people in this place. People are more likely to feel at ease when they understand the place better and they are more inclined to contribute to preserving or improving the place. When people have a very strong sense of place they are often loyal to the place, this loyalty to a place can help shape stronger communities and enhance feelings of collectivity (Shamai, 1991).

Elements of a sense of place

A sense of place is built from the experiences people associate with the place, there are multiple authors such as Canter (1977), Punter (1991) and Montgomery (1998) who have looked into what elements strengthen a sense of place and what makes places successful. All three of these authors agree that a place consists of the physical attributes of that place, the activities that happen in the place and some kind of element that influences how we perceive the place. This thesis will mostly be using the elements proposed by Montgomery (1998) who defined the elements as form, activity and meaning , these elements are shown in figure 2.1.

The form of a place includes physical elements such as buildings, public squares, street patterns, and water bodies amongst others. While a space always has physical elements, there are certain factors which can contribute to placemaking, such as these elements being diverse, having a fine grain and being publicly accessible. Some of these qualities tie directly to the activities of a place which is the second element that makes up a sense of place according to Montgomery (1998). A diverse physical environment caters to more diverse activities, in a qualitative place there is a variety of activities to choose from and even diversity within the same type of activity. These activities need not be constant, and can change according to certain rhythms: shops close at night and ice skating is only possible in winter. The activities are often what draws people to a place and having a wide variety makes the place feel alive.

While the physical elements and the activities of a place can be observed objectively and can be obtained from other sources this is not the case for the third and final element introduced by Montgomery (1998): the meaning of a place. This element is based on the perception that people have of a place, this perception can be different for different individuals, it is influenced by cultural values and memories that a person may have related to a place (Montgomery, 1998). However while differences might occur the sense of place that a group has is often similar to that of a individual because of a shared culture and because people influence each other, it is therefore not

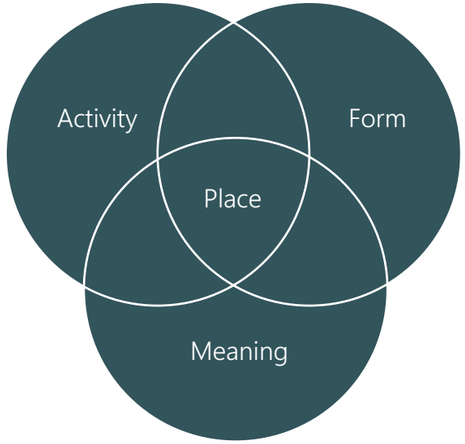


Figure 2.1 Sense of place
Based on Montgomery (1998)

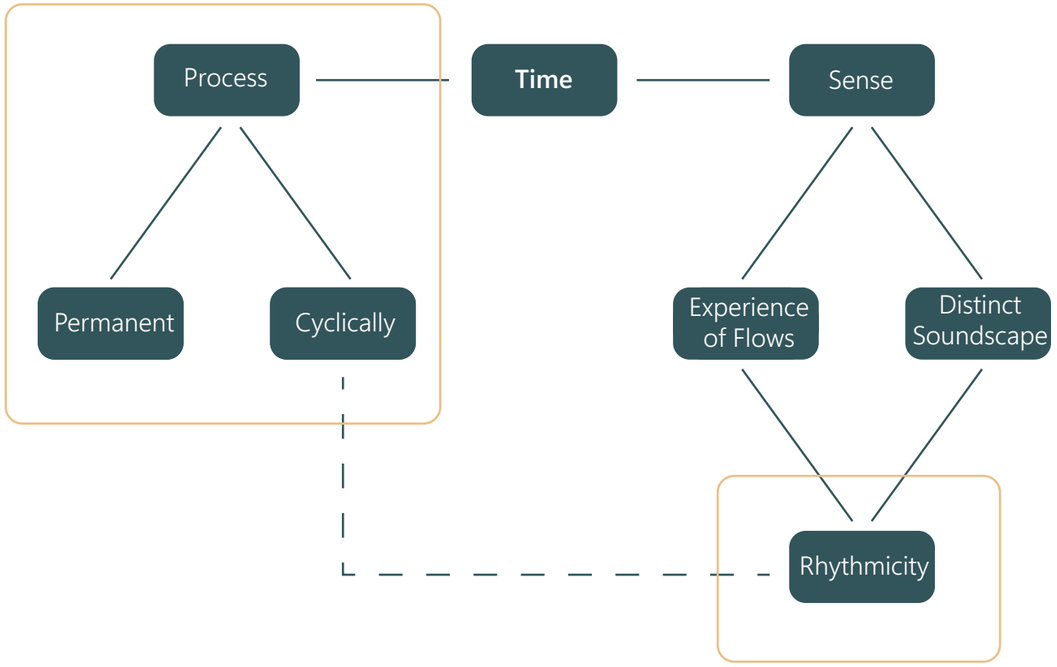


Figure 2.2 Time as a sense and as a process
Based on Wunderlich (2013)

2.2.2 Temporality in places

Literature review

Places are not constant; a place today can be different from what it was yesterday and might be unrecognizable from the place it was a hundred years ago. If a long enough period passes all aspects that make up a sense of place will have changed. This happens naturally as time goes on, old buildings might fall into ruin and local customs may change. How we use the world around us changes and new technologies arise: once the roads were mostly used by pedestrians and maybe a horse drawn carriage, while nowadays most roads are designed for cars.

While a place might change totally, traces of its history often determine what a place is like today, an example of this is an old manor whose ruins have become a touristic attraction. Where it once was an elusive building, accessible to only a few people, it can now be visited by thousands of people a year. Without its past it would never have become what it is today. The same goes for urban places, the past of a place often determines how it changes or grows. How long it takes for a place to change completely can vary depending on events and ongoing trends. While the aforementioned manor may slowly have fallen into ruin, it might also have been destroyed almost immediately in a fire.

Time can be seen as a process; the previous example shows an irreversible change in time. But this is not the only way time influences our places, they also change along certain natural cycles, such as the daily or seasonal cycle (Lynch, 1976). A street may be a bustling shopping area during the day but a deserted alley at night, while the location is the same, the experience of the place is completely different.

Even when our surroundings remain the same, we still sense time. Wunderlich (2013) speaks of time as something with a dialectic nature, there is the passage of time as a process and the sense of time that we use to better understand the world around us. This double nature of time is shown in figure 2.2.

The sense of time is similar to the sense of place as it is something people use to understand the world around them. People observe time through sensing the flows of a place, these flows are very similar to the activities used to observe the sense place, it teaches people how to act in a certain place at a certain time and invites people to participate. We also sense time through the soundscape around us, the blend of background noises and distinctive sounds can help keep track of time.

Through these flows and sounds, we can find rhythms in the spaces around us. These rhythms, or the lack thereof are the basis for our sense of time and give places their temporal distinctiveness (Wunderlich, 2013). They are also essential to notice the process of time. As they are part of both aspects of time they will be central to this thesis

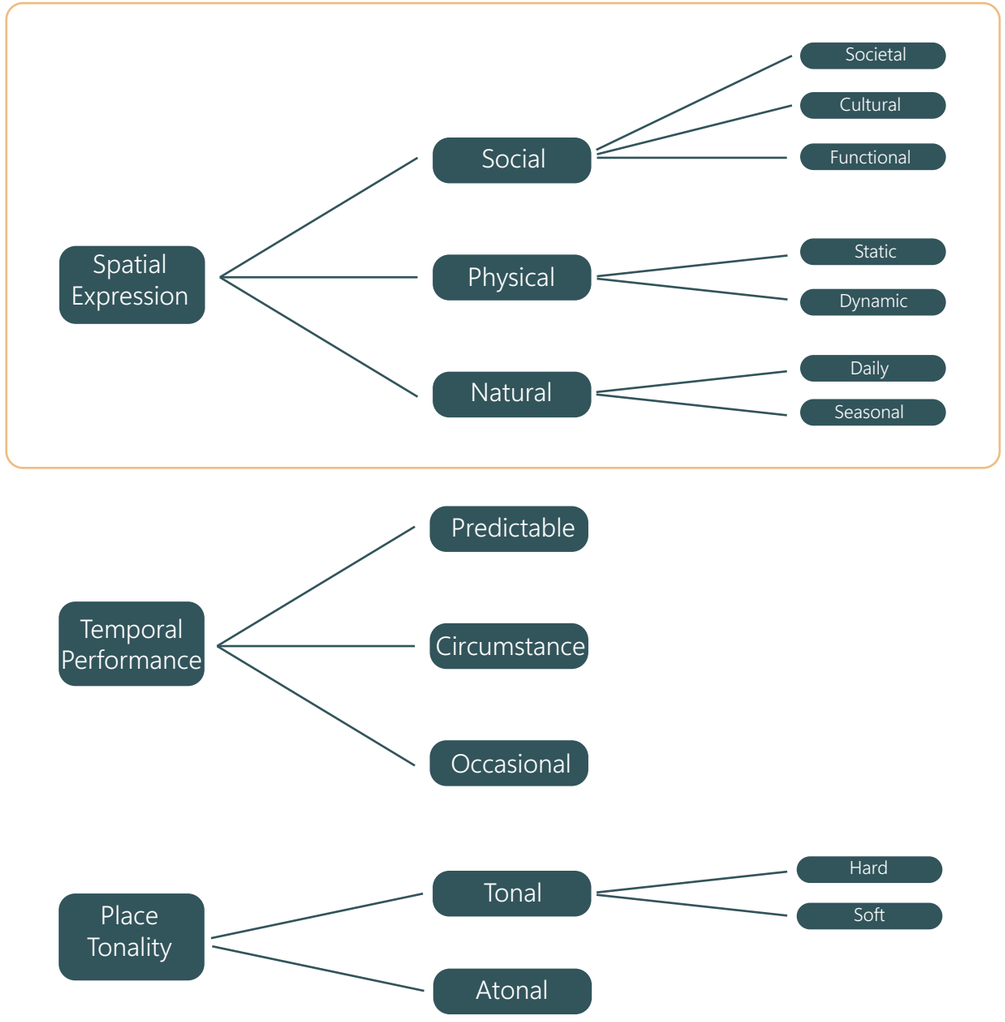


Figure 2.3 Classification of rhythms
Based on Wunderlich (2013)

2.2.3 Rhythmicity

Literature review

Urban rhythms are part of the urban fabric and are specific to their spatial context. They can be found in the form of a place as well as in the daily lives of people or in natural systems. These rhythms can be classified in different ways, Wunderlich (2013) offers three ways to categorize them shown in figure 2.3.

The first categorization is based on the spatial expression of rhythms. This categorization has three main categories: social rhythms, physical rhythms, and natural rhythms. Each of these categories have subcategories. Social rhythms are rhythms related to people and can be divided in societal, cultural and functional rhythms. These social rhythms include rhythms related to the daily lives of people, the services and maintenance of places and cultural rituals. Physical rhythms can be divided in static and dynamic rhythms: dynamic rhythms refer to moving objects such as cars or pedestrians passing by while static rhythms are more permanent, these rhythms can be found in for example the façade of a building. Natural rhythms can also be divided into two subcategories: natural and daily rhythms, both part of their own natural system.

Rhythms rarely stand alone and often interact with each other to create a more complex and distinct sense of time. The second categorization of rhythms is based on the temporal performance of rhythms and investigates how rhythms interact with each other. It also has three main categories: predictable rhythms, circumstance rhythms and occasional rhythms. Predictable rhythms are rhythms that happen almost continuously such as the movement of the sun along the sky. Circumstance rhythms are often related to specific social practices such as rush hour when everyone leaves for home or work at the same time. Occasional rhythms happen less often and are more uncertain.

The final categorization is based on place tonality and like temporal performance looks at the interaction between rhythms. This categorization only has two main categories: tonal rhythms and atonal rhythms. Tonal rhythms go well together and create harmonious sense of time. Within this category there are two subcategories: soft rhythms that are mostly part of the background -they are most noticed when they are missing- and hard rhythms which are more distinct and easier to notice. Atonal rhythms do not fit within the expected sense of time as easily, and can distort the sense of time, this is not necessarily a bad thing as it may make the sense of time more vivid. Places with a lot of different rhythms that do not feel connected are often described as chaotic, in these places, it may feel as if time is passing faster than in places where all rhythms are neatly organized.

The envisioned result of this thesis is a spatial design, as such it emphasizes on the first categorization of spatial expression of rhythms and links them to elements in urban design.

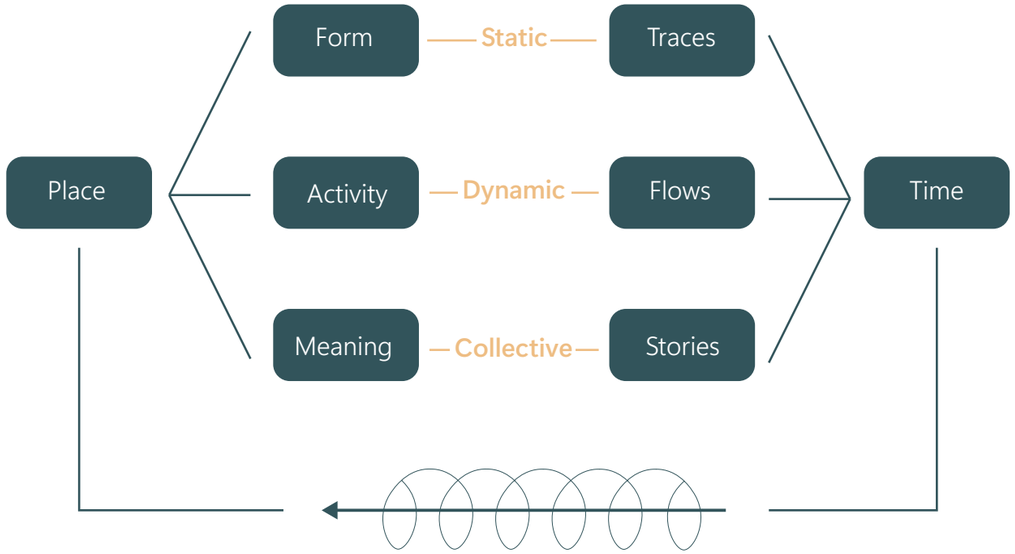


Figure 2.4 Theoretical framework

2.3 Theoretical framework

This thesis connects the sense of place with the concept of time, there is an overlap between the sense of place and the sense of time that people experience: both are a way for people to understand the places around them better. The three elements that make up the sense of place: form, activity and meaning can be linked to elements that are linked to experiencing time as shown in figure 2.4.

In the form of a place there are often traces to be found that remind us of times past, giving hints as to what the place used to be. These traces can also influence the future form of a place. Change happens gradually most of the time, and often times people try to preserve some elements of the past (Lynch, 1976). While the form of a place and the traces that can be found in it can change, this often only happens over a long period of time, therefore this element can be considered mostly static when analyzing or designing a place.

The activities that happen in a place bring life, and with it, certain flows to a place. These flows are closely related to the urban rhythms that give a place its temporal distinctiveness. It can be different from one moment to the next depending on the time of day or year; activities, flows and rhythms are the dynamic element that makes up our sense of place and time.

The final element, the meaning of a place, is in part shaped by stories about a place. These stories connect the place through different times and shape the memories people link to the place. When there are a lot of stories circulating about a place, the sense of place is often stronger. The stories also connect the sense of place of different people and harmonizes it. This way these stories and the meanings people attach to a place becomes a collective rather than a personal interpretation, connecting people together through a place.

The connection between time and place does not only consist of these elements, places themselves also change through time which brings us to the second aspect of time, time as a process. The form of a place often changes permanently over a long period of time while activities and flows change all the time, often along natural cycles; there are different activities, flows and rhythms to be found in a place in summer than in winter which can change how people perceive a place. This passage of time is illustrated by the arrow and the spiral around it in figure 2.4.

2.4 Methodology

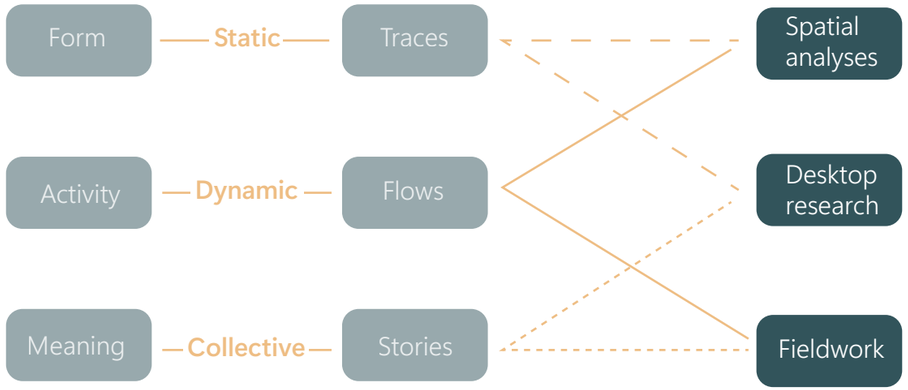


Figure 2.5 Methodology linked to the theoretical framework

In order to research and design with the concepts of sense of place, time and rhythms, multiple methods are used. To understand the static elements of a place: the form of a place and the traces of time within it, desktop research and spatial analysis are used. For this element, the desktop research consists mainly of research into the archive of the municipality, where old maps and news articles are available. Spatial analyses are used to understand the current structures of the place, all data used for this spatial analysis is open data accessible through websites of either the municipality or national government.

Spatial analyses are also used to understand the dynamic element of place and time. It can give more insight in which locations are suited to which activities and where certain rhythms and flows are expected. Fieldwork is then conducted to observe these activities, flows and rhythms. This fieldwork will be done at different times throughout the project.

To research the collective element of place and time some fieldwork is used as well. However most of the stories about the place told in this thesis are historical and as such are determined via desktop research, they can also be stories based on the design which is made.

2.5 Project aim and relevance

The aim of this thesis is to gain a better understanding of how rhythms shape the world around us, how they are connected to the places we live in and how these rhythms can be used as a tool in designing public places. It does this by analyzing these rhythms in Herten, a place in which many expansions have recently taken place, and creating a design for an urban space that incorporates these rhythms.

This project has great societal relevance as vinex neighborhoods, which are similar to the design location, are common and can be found throughout the country. This thesis offers an exploration into an alternative method of designing with these neighborhoods, and looks into how it could improve the sense of place.

The scientific relevance of this thesis lies in combining theory about sense of place with theories about time. Both have been explored as part of urban design before, but there are few projects that combine the two, especially the practical application of using these theories in a design is still lacking. This thesis explores what type of designs could be made by combining these concepts.

2.6 Conceptual framework

This thesis assumes that the sense of place in Herten has decreased over the years as the neighborhood was expanding. The sense of place decreased as new people moved in that were not part of the existing community and a new sense of place was hard to establish as people were not given the opportunity to shape the places they live in as most of the neighborhood was already finished and not open to transformation. This thesis hopes to bring back or create a sense of place that can connect people to the place they live in and to other people, by introducing new rhythms that can make the place feel more alive.

The concepts of sense of place and time will therefore be connected in an urban design.

The conceptual framework in figure 2.6 shows these concepts and aims. The timeline shows how the sense of place has decreased and increases again in the future, which is the goal of the design. Linked to this sense of place are the elements that describe the sense of place and time: the static, dynamic and collective elements. The rhythms decrease and increase along with the sense of place as this thesis uses these rhythms to explore and design the sense of place.

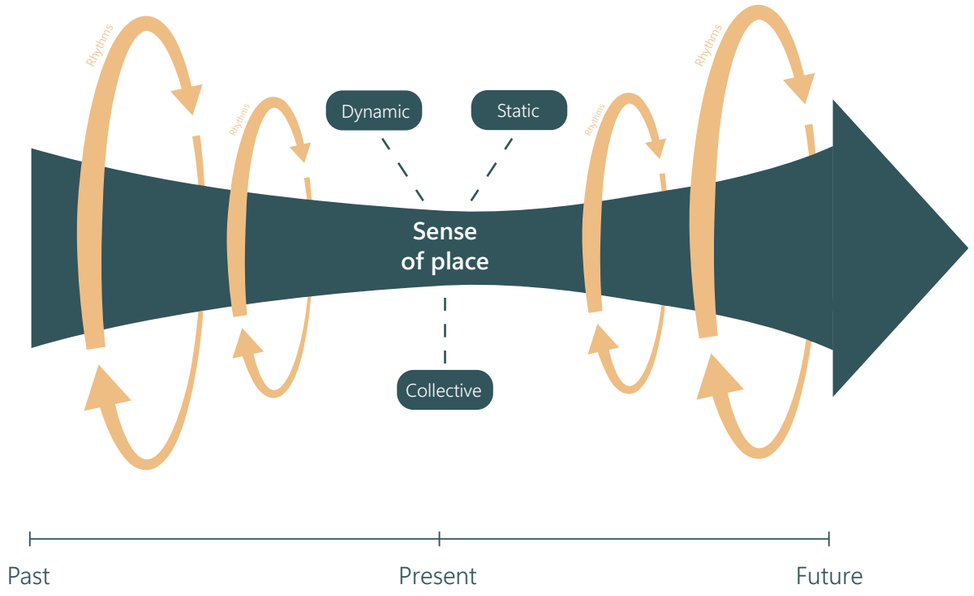


Figure 2.6 Conceptual framework

2.7 Conclusion

This chapter started by defining and combining the concepts of sense of place, time and rhythmicity. It has shown that the sense of place and the sense of time can be combined through the static, dynamic and collective elements that make up a place. It has also concluded that urban rhythms can be a tool in understanding and designing urban spaces, these urban rhythms will play an important role in this thesis.

The chapter also discussed the methodology and aims for the rest of the project, from this it became clear that the imagined result of the thesis is an urban design that incorporates urban rhythms to enhance the sense of place of Herten.

HERTEN: THEN AND NOW

Chapter 3 - Analyses

Content

3.1 Introduction

This chapter looks into how Herten has changed in the past century, the chapter answers the first subquestion: How has the sense of place in Herten changed due to previous expansions?

To answer this question the situation of Herten in the early 20th century is explained in paragraph 3.2. Paragraph 3.3 looks at how some elements in Herten such as the waterside and the street patterns have changed while paragraph 3.4 shows how the daily life in Herten has changed. After this we zoom out and shows the change in function of the neighborhood and the growth of the residential areas, these changes are summarized in a timeline in paragraph 3.5.

3.2 Herten in the early 20th century

A hundred years ago the neighborhood did not yet exist and was instead a collection of three villages: Herten, Merum and Ool. Although the villages were separate, they shared most of their facilities in the early 1900s. The church, municipal house and school were located in Herten which at the time was the smallest of the three villages (Gemeentebeschrijving Herten, 1988). For the market and the mill, the inhabitants had to travel to Merum where these facilities were located at the edge of the village. In Ool there was not much to be found except for the ferry that could take people the other side of the river (Beurden, 1891). Once upon a time this ferry was part of the main road to travel to the north but after the construction of the Roerbrug in 1867 the ferry was mostly used by farmers visiting their lands on the other side of the village (Resort Marina-Oolderhuuske, n.d.).

That the villages shared this many facilities did not go unnoticed, in surrounding areas there was a proverb that goes "Herten, Merum, and Ool, three villages but only one pastor."

"Herten, Merum en Ool, drie dorpen en maar eenen pastoor" (Beurden, 1891)

A description from Beurden (1891) shows that the villages mostly consist of farms and a few bigger houses and that they are surrounded by agricultural land with a view on the river.

"De huizen van Ool, Meestal boerenwoningen en schuren, met enkele heerenhuizingen vormen een laaggetrokken eirond door wegen omsloten. Wandelt men door, dan heeft men aan de achterzijde een ruim uitzicht over het langs de Maas liggende bouwland en het verschiet aan de overzijde der Maas." (Beurden, 1891)

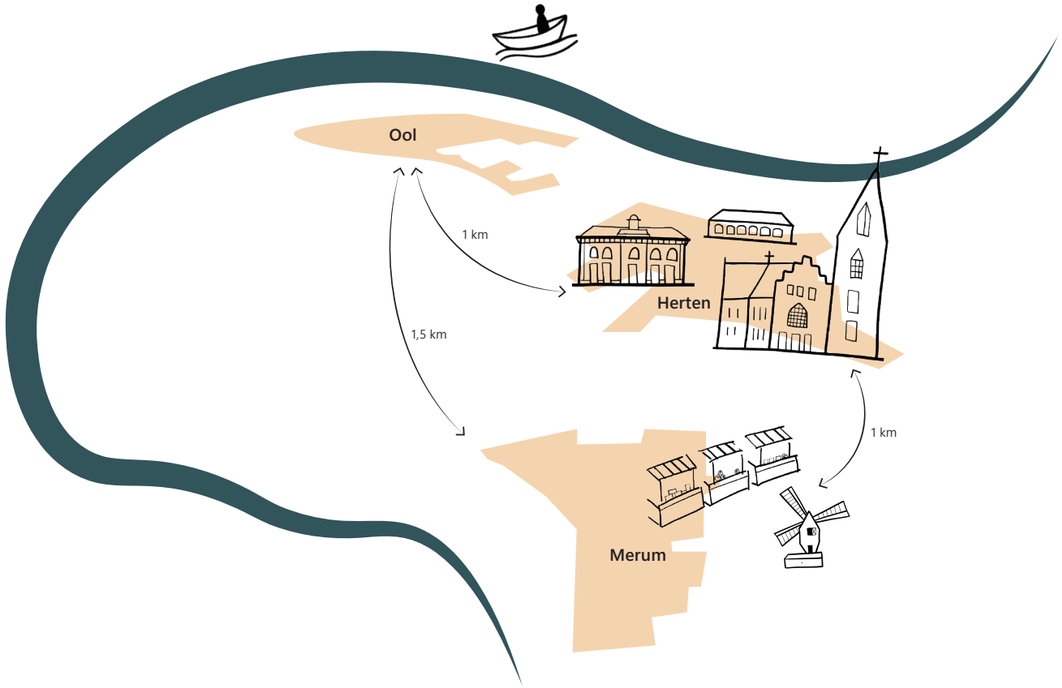


Figure 3.1 Herten, Merum and Ool in 1900

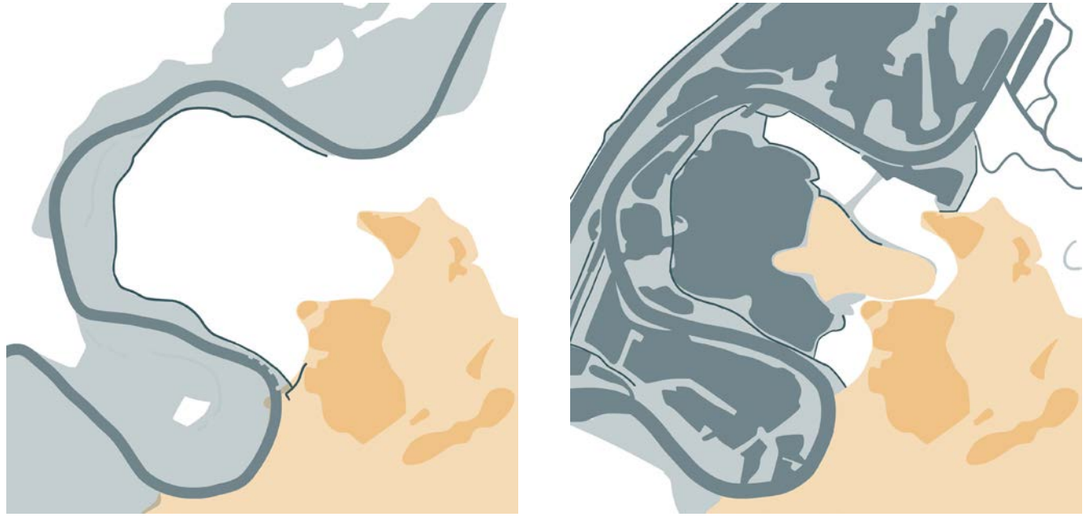


Figure 3.2 Differences in water structure
Information from AHN (n.d.) & Kadaster (n.d.)

3.3.1 On the edge of the river

Differences in form

The three villages have always had a close relation to the nearby water, Ool was located on the floodplain next to the river the Maas protected by a single dike. Multiple times during the previous century this dike proved to be insufficient, and the village was flooded. Herten and Merum had a bit more protection against the water as they are located on the higher sandbanks.

The situation regarding the nearby water has changed a lot the past hundred years, the river is no longer a single stream but has become a structure consisting of multiple pools of water that were created through the gravel extraction in the area. The water has become more accessible from all places in the neighborhood and the pools are mostly used for recreation. New protections against the water have also been added, existing dikes are fortified, and new dikes have been built. To protect the new neighborhood Oolderveste the land has been artificially raised.

Legend

- Water
- Floodplain
- Dike
- Sand > 15 m (NAP)
- Sand > 20 m (NAP)

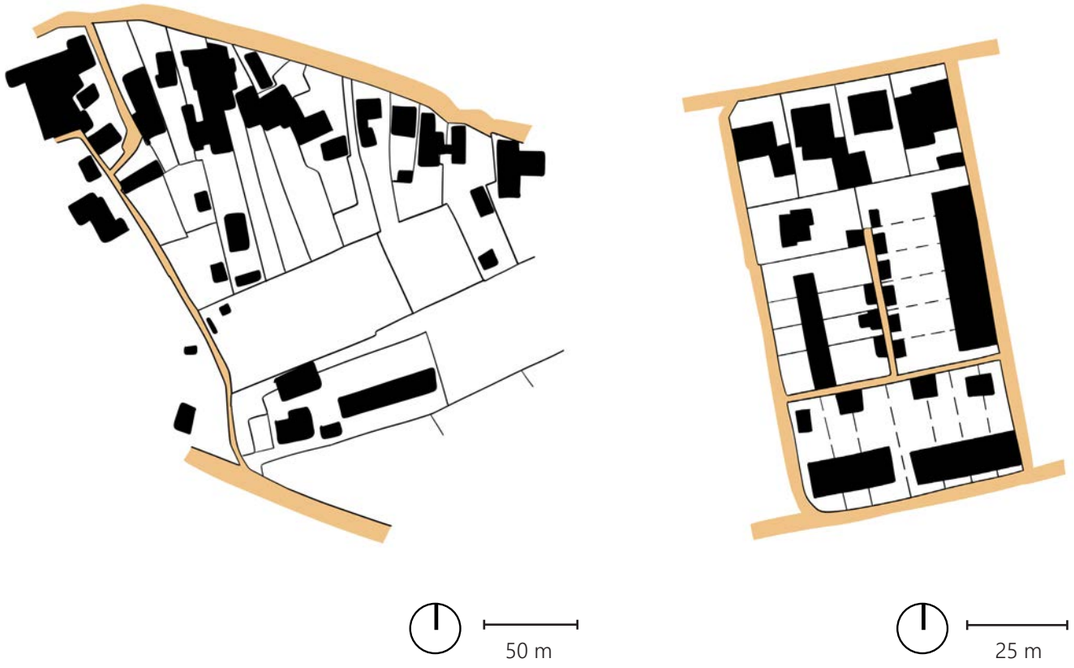


Figure 3.3 plot structures
Information from KadastraleKaart (n.d.-a)

3.3.2 Street patterns

Differences in form

Another element in which the physical differences between the 1900s and now are easily visible is in the street patterns. Figure 3.3 shows the current street patterns of an area in the historic village center of Ool and the street pattern from one of the expansion areas, the drawing is based on maps from Kadastrale kaart (n.d.)

Comparing the current map with maps from a century ago (kadaster, n.d.) it seems that the street pattern in Ool has remained mostly the same. The lots differ in shape and fall together like puzzle pieces. From this structure you can see that the village has grown organically and has expanded along the road. One thing most of these lots have in common is that they are quite long, their back gardens bordering fields. These fields now seem mostly abandoned but were once used to grow crops making it easy for the inhabitants of the village to reach their fields, sometimes the fields did not even border the road and were only accessible through the private lots.
The allotment structure in Ool is very different from one of the expansion areas. The second map in figure 3.3 shows a building block near the Molenweg in Merum which was part of an expansion in the 1950s. This building block and the streets surrounding it have been built along a clear grid with many of the houses having the same dimensions and physical appearance.

The expansions look completely different from the old villages, but these old village centers have also changed over time. On the next page in figure 3.4 to 3.7 photos have been collected that compare some of the places in Herten to their own past. These photos show that some places are still easily recognized while others have changed completely.

Legend

- Street
- Building
- Plot

3.3.3 Historic photos Herten

Differences in form

Figure 3.4 Hoofdstraat Merum 1926
Photo from Schumulder.nl

Figure 3.5 Aldenbourgh 1883 -2023
Photo from Tussen Roer en Vloot

Figure 3.6 Rijksweg 1930 -2023
Photo from Schumulder.nl

Figure 3.7 View on the church 1994 -2023
Photo from Gemeentearchief Roermond (GemeenteRoermond n.d.)

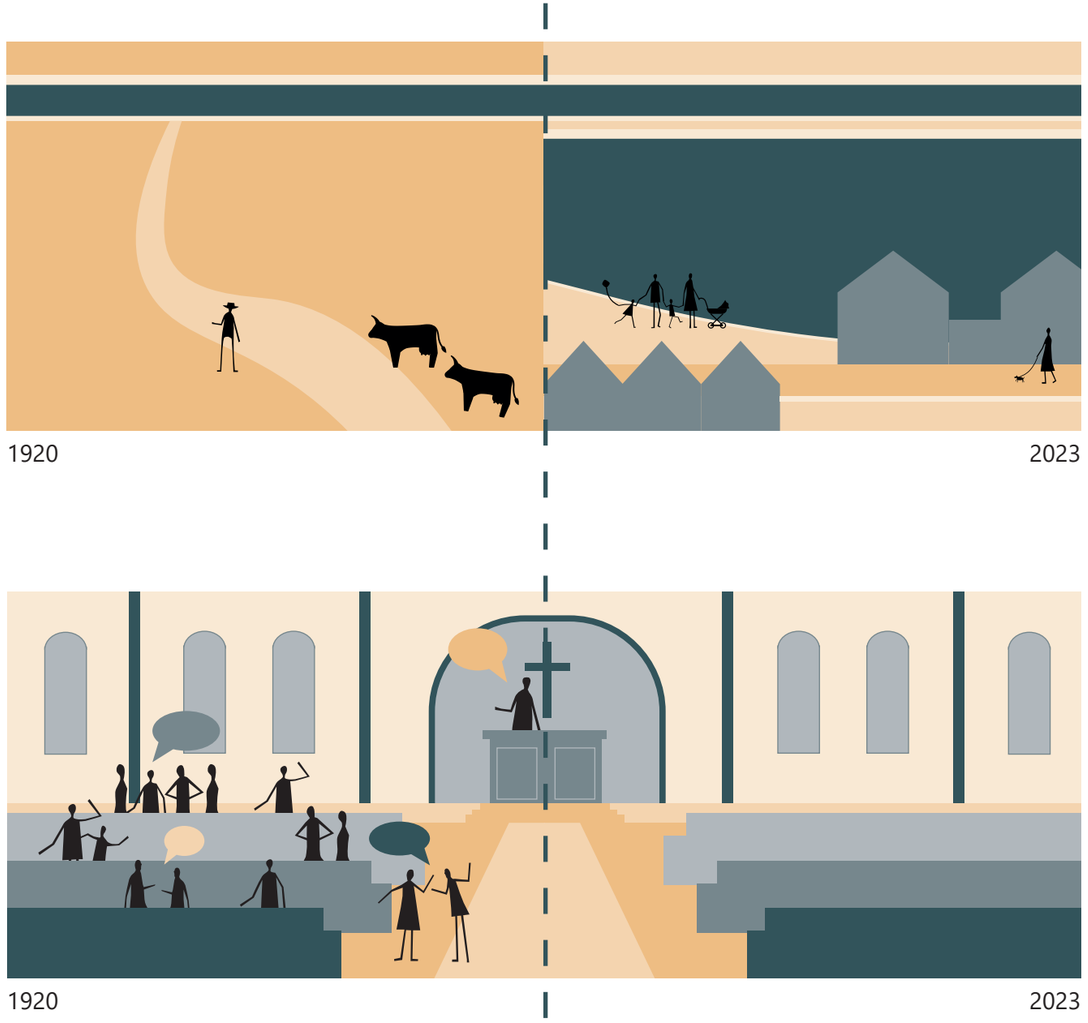


Figure 3.8 Changes in daily life: agriculture & religion

3.4 Differences in activities

Agricultural village

A hundred years ago Herten used to be an agricultural village, most of the area surrounding the villages consisted of fields to grow grain and potatoes (Gemeentebeschrijving Herten, 1988) and most villagers made their living with agricultural activities. During the early 1900s this way of living started changing as people started to work in different professions, during summers some people left for Germany to do seasonal work and some industrial locations were opened to the south of Merum that brought new work with them (Gemeentebeschrijving Herten, 1988).

Nowadays there is not much left of the agricultural activities, there are still a few farms in the urban area of Herten but most of the agricultural function has been moved outside the neighborhood. What used to be the fields has now become either part of the residential area or has become part of the water structure surrounding Herten

Religious village

Religion used to heavily influence the lives of people in the 1900s: in Limburg, and especially in the rural villages, it was expected that all people were catholic. A quote by Van Haecke (n.d.) states that you were not supposed to question your religion and that not being religious could make you an outcast within the village.

"Je stelde niets in vraag, je accepteerde alles. En wie niet geloofde, niet naar de mis ging, op zondag werkte, hoorde er niet. Die werd dan scheef bekeken en ervan verdacht communist te zijn. De mensen die niet naar de mis gingen, waren op één hand te tellen in heel Vlissegem." (van Haecke, n.d.)

People were expected to visit the church every day, while this was for religious reasons it also made the church the social center of the villages, it was a place where you could expect to see everyone together. Religion was therefore also an important social ritual and something which strengthened the sense of community between inhabitants.

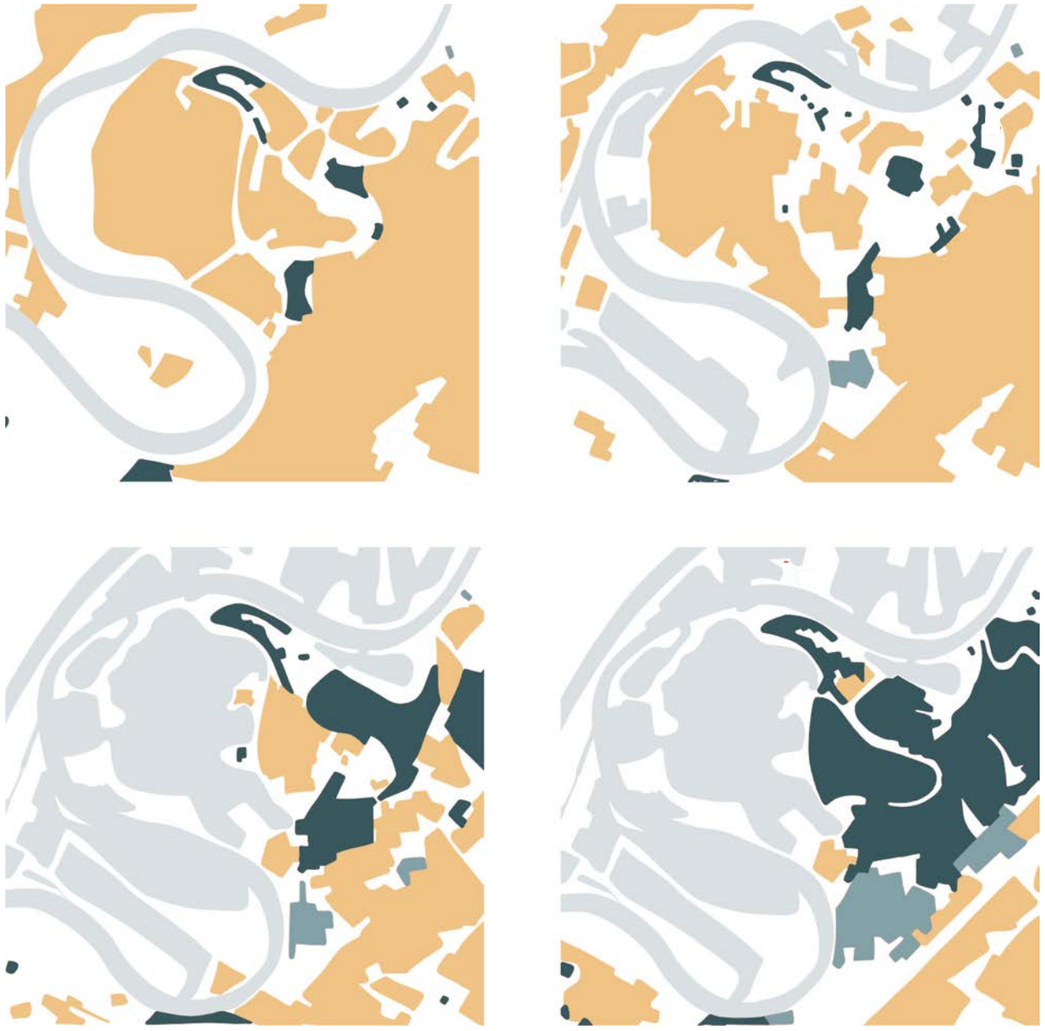


Figure 3.9 Development of Herten in the last 100 years
Information from Kadaster (n.d.)

3.5.1 Change in function

From 1900 to now

The change of Herten over the past 100 years is best summarized by looking at the storylines from different developments. On the map the shift from agricultural to residential areas is the most noticeable. Figure 3.9 shows how the farmland started fracturing and eventually disappeared to make room for new expansion projects. These expansions of the residential areas were needed as more people wanted to live in or close to the city. Another change clearly visible on the maps is the gravel extraction that created the Maasplassen which caused Herten to border the water on most sides.

Figure 3.11 shows the gradual changes in Herten, however not all changes were gradual: some developments were caused by sudden events The bad harvest of 1888 caused a first shift away from the agricultural character of the area and the floods of 1924 and 1993 showed the importance of water safety, which caused new measures to protect against the water to be built in the years thereafter. Another important event in the recent history of Herten was the bombing during the second world war, not only did it destroy most of the historic center of Herten it was also the starting point of the expansions. A final event important to Herten was the fusion with the municipality of Roermond, after this fusion the expansion projects in Herten accelerated.

All these developments and events have made it so that Herten as a whole has completely changed from a century ago, it is no longer the same place as it once was. The Herten of 1900 would be described as quiet collection of villages where people worked together on the fields, where everyone knows everyone else, easy as there were only about 950 inhabitants, (Gemeentebeschrijving Herten, 1988) and where everyone gathered in the church every day. The Herten of today can still be called a quiet place, however nowadays the cause for this is that people can easily travel to neighboring places to spend their time.

Legend

- River and lakes
- Industry/bussiness
- Housing
- Agriculture

Figure 3.10 Construction year of buildings
Data from 3DBAG (n.d.)

3.5.2 Growth of residential areas

From 1900 to now

One of the biggest changes in the neighborhood of Herten shown in figure 3.9 is the growth of the residential areas. Figure 3.10 shows a more detailed map of the construction year of buildings and shows when and where the expansions have taken place. The original villages are recognizable by their centers which consist of buildings built before the 1920s. One noticeable difference between the villages is that Herten and Merum have expanded a lot over the past hundred years while Ool has mostly remained as it is.

The historic center of Herten seems a lot smaller than that of Merum and Ool, which does not accurately represent the size of the village before the 1900s; the village was bombed during the second world war and has since then been rebuilt (L1 Limburg, 2012). The first expansions happened around the same time as this rebuilding effort, but it was not until the 1990s that the three villages really started to merge together through their expansions.

With the addition of Oolderveste in between Herten, Merum and Ool this merging is nearing completion. The map shows Oolderveste clearly as an area where all buildings are from 1990 or later: most of the buildings date from after 2005.

Legend

- < 1920
- 1920 - 1950
- 1950 - 1970
- 1970 - 1990
- 1990 - 2010
- > 2010

3.5.3 Timeline

From 1900 to now

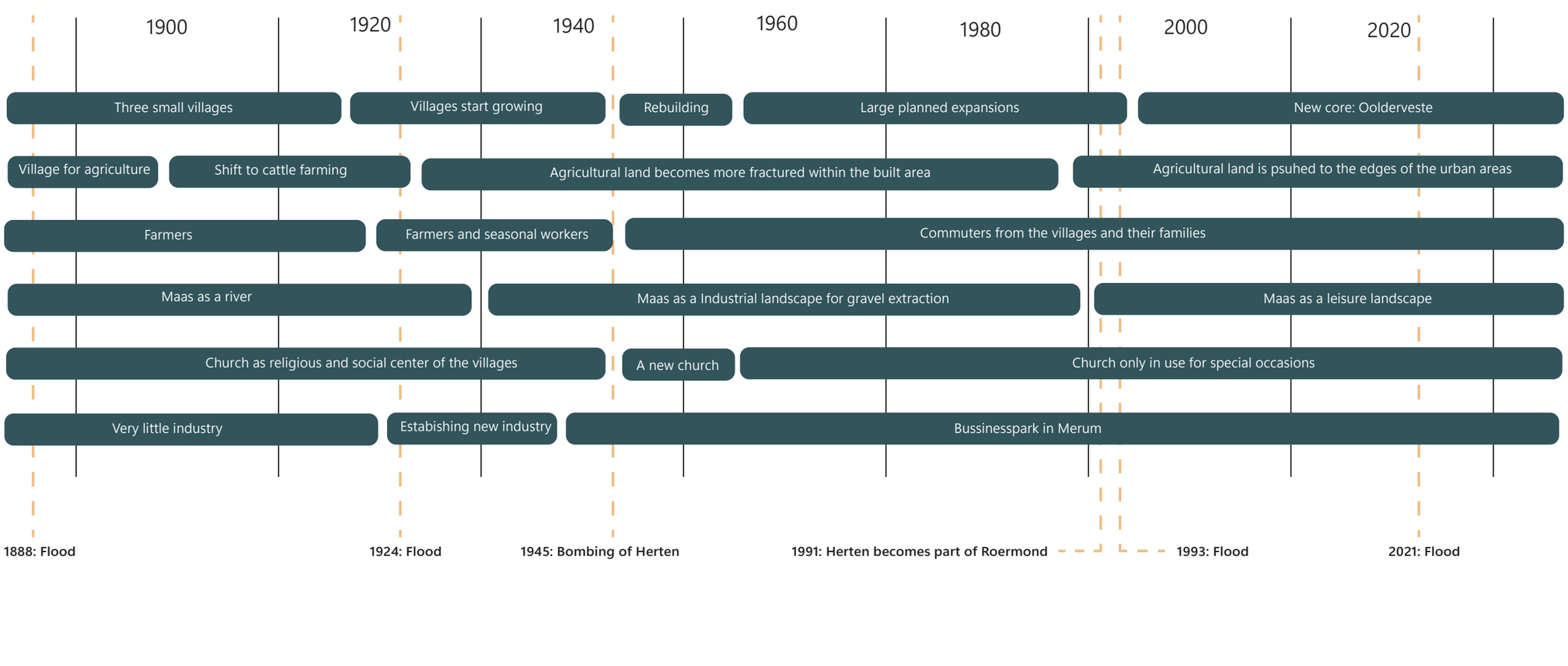


Figure 3.11 Timeline development Herten
Photos from Gemeentearcfief Roermond (Gemeente Roermond, n.d.) & Schumulder.nl

3.6 Conclusion

In the past century Herten has changed from a collection of agricultural villages to a residential neighborhood. The Herten from today is a different place than the Herten of a hundred years ago, their sense of place is completely different. In 1900 the place would be described as quiet collection of villages where people worked together on the fields and where everyone knows everyone and all inhabitants gathered in the church every day. The Herten of today can still be called a quiet place, however nowadays the cause for this is that few activities take place in the residential areas and people instead decide to travel neighboring areas to spend their time.

SEARCHING FOR RHYTHMS

Chapter 4 - Analyses

Content

4.1 Introduction

The goal of this chapter is to discover what rhythms can be found in Herten currently and to answer the second subquestion: What are rhythms in Herten?

The chapter starts with an exploration in the functions and activities that can be found in Herten in paragraph 4.2 and 4.3. It then links these findings to the concept of rhythms which is further expanded on in paragraph 4.4 and 4.5, these paragraphs define how rhythms will be classified for this thesis. Paragraphs 4.6 and 4.7 then look further into the natural and social rhythms respectively and link these rhythms to the history and identity of the place. A more extensive overview of all rhythms can be found in the booklet Rhythms in Herten.

Figure 4.1 Amenities in Herten
Data from openstreetmap (n.d.), Baselayer from PDOK (edited)

4.2 Amenities in Herten

Most basic amenities such as a supermarket or an elementary school can be found in Herten. The map in figure 4.1 shows where these amenities can be found within the neighborhood. This map was made with data from openstreetmap (n.d.) and includes all schools, shops, restaurants, cafes and healthcare facilities in the neighborhood. The heat map shows that most of the amenities are clustered in the center of the core Herten with a few others that can be found in the other cores. People from the neighborhood are expected to gather in these place.

Figure 4.1 also shows the bus route through Herten, the bus is the only public transport available in the neighborhood and only consists of a single bus line. It is likely that most households depend on their own transportation rather than public transport.

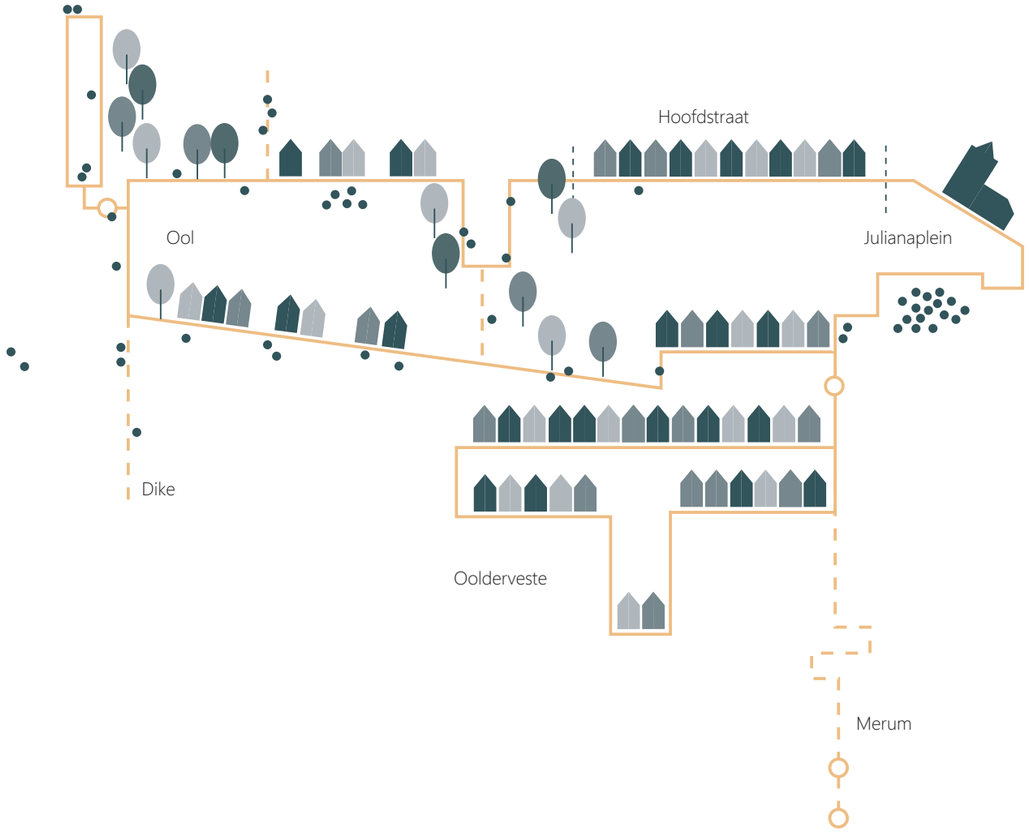


Figure 4.2 Interpretation of a walk through Herten, Ool and Ooldervestе
Based on Fieldwork

4.3.1 Walking through Herten

Activities

Fieldwork 10.12.2023
13.00 - 15.00, Sunday
Cloudy, 10 Celsius

Figure 4.2 shows the experience of walking through Herten from the fieldwork done in December 2023. It shows the walking route as it was experienced, this drawing is not to scale and does not follow the actual street patterns. The actual route is drawn in figure 4.3. The drawing documents the amount of people encountered during this walk, it only documented slow traffic such as pedestrians, people driving by in cars are not counted for this first exploration.

The most noticeable thing during this walk was the variations in the amount of people encountered. Near the starting point of this walk, in the area where amenities are clustered there were lots of people, most of whom were there to do their daily groceries or children playing on the playground near the school. Continuing the walk through Herten the amount of people decreased and almost no one was encountered on the streets.

Figure 4.3 Route of Fieldwork 10.12.2023
Based on Fieldwork

This was a big contrast to Ool were lots of people were walking alongside the dikes. The activities here were very different compared to Herten, people here seemed to be walking their dog or take a walk with friends and even though this fieldwork was done in winter there were people surfing on the Maasplassen. This shows that the activities can vary per place. The next page compares three places from this walk with each other.

Legend

- Walking route
- People

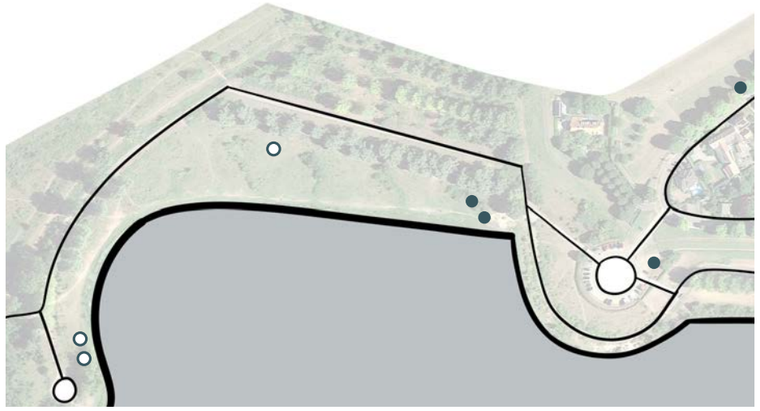
4.3.2 Activities in three locations

Activities in Herten

CENTRAL AMENITIES HERTEN

25 m

The busiest place encountered during the fieldwork of the tenth of December was the supermarket and surrounding parking place. Here there was a constant flow of people arriving and leaving, mostly to do their daily groceries. In this place few people remained stationary, instead they were constantly moving with a goal or destination in mind, most people were alone or at most in small groups of two or three people. The exception to this were the children on the playground.



WATERSIDE OOL

50 m

Another interesting place from the fieldwork of the tenth of December to study more closely is the water side. This is a very different place from the supermarket and its surroundings as seen when looking at the behavior of people. While there were less people here the people that did come here stayed in place for longer and the purpose of visiting seemed mostly for leisure rather than necessity. People here were using the space to fish, sail or in the case of a little girl play in the puddles. All these activities are linked to nature and are place specific.

RESIDENTIAL AREA OOLDERVESTE

50 m

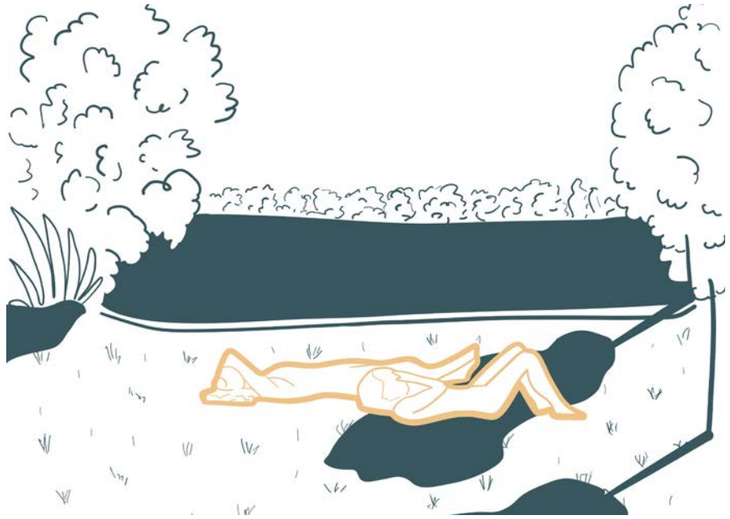
Oolderveste creates a stark contrast when comparing this location to the previous two, here no pedestrians were spotted in the time spend observing and even other traffic by car or bike was minimal. Only two cars and one cyclist passed in the time this place was observed. This place was observed for 30 minutes in total, thrice as long as the other locations.

Legend

Person moving Stationary person

Figure 4.4 Observations of activities in three locations

Based on Fieldwork, Baselayer from PDOK (edited)



Example 1: people sunbathing

Example 2: playing in puddles

Figure 4.5 The waterside in different seasons
Based on Fieldwork

4.4 From activities to rhythms

In the fieldwork that was done a variety of rhythms were observed that are typical for the places they were found in. They are closely linked to the sense of place as they help in defining what the place is. An example of this is the area with amenities, the amenities themselves are part of the form of the place, the buildings are permanent elements and the shops in them do not usually change, however just as important to defining this place as these permanent elements are the activities taking place. The place is characterized by a constant stream of people arriving and leaving the place, making it one of the busiest places in the neighborhood. Only if the activities can be expected to happen can they become part of the sense of place. You can expect a flow of people in the area because a similar flow of people can be observed here almost every day, it is part of the daily routine. By linking the dimension of time to these activities they become rhythms.

For this thesis urban rhythms are defined as elements that can be expected to repeat over a certain period of time and are specific to the place. The rhythms can be repeated over either the span of a day, year or based on certain event. While many activities can be translated into rhythms, it does not mean that rhythms are always based on activities. Other repeating, location-specific rhythms are for example the temperature or the amount of light during the day, these are natural rhythms that help define the place.

Most of the rhythms discussed are based on activities that can be expected to take place every day, however, many activities and therefore many rhythms are also dependent on the time of year. Temperature, rainfall, and intensity of light are all rhythms that vary throughout the year and have an impact on the activities that take place and the rhythms that can be observed. Examples of this are shown in figure 4.5 which shows two scenarios from a similar location in Herten. In the summer, this location on the water side is used by two women sunbathing, something which only happens when it is warm outside. In winter, the land on this location has become a marsh and there is a little girl playing in the puddles that have formed due to recent rainfall while being watched by her grandmother.

In conclusion, activities can often be translated into the urban rhythms, but urban rhythms can also be based on other, often natural, elements. These rhythms influence each other and this collection of rhythms can be used to define a place.

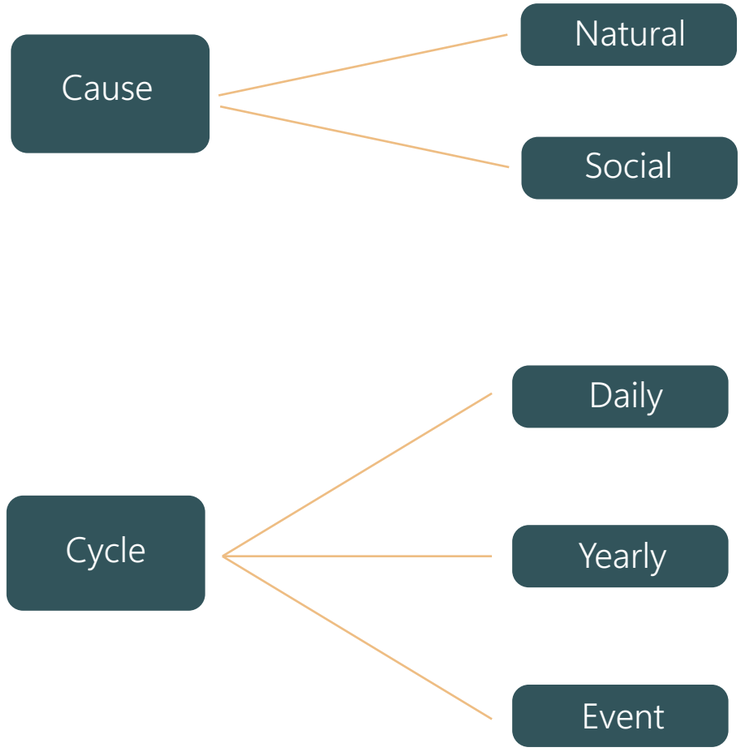


Figure 4.6 Categorization of rhythms in Herten

The rhythms found in Herten can be organized into different categories, in paragraph 2.2.3 several classifications made by Wunderlich (2013) were shown, the most relevant classification for this thesis is based on the spatial expression of the rhythms which included three categories: social, physical and natural rhythms. The classification for this thesis is based on what causes the rhythm, for this there are two categories: rhythms are either part of the natural system or have social causes. These categories are similar to the classification by Wunderlich (2013) but does not include physical rhythms. More permanent physical rhythms are not included because rhythms are defined as changing elements for this thesis, these permanent physical rhythms are seen as part of the form of a place but will not be further discussed. Dynamic physical rhythms will be included in either the natural or social category based on what caused this rhythm to take place.

Apart from a classification between either natural or social rhythms, rhythms will also be classified based on their scale in time. Rhythms can either be elements that repeat along a daily cycle, rhythms that repeat along a yearly cycle or rhythms that take place due to an event. The classification of rhythms for this thesis is shown in figure 4.6.

A pattern language

The rhythms that can be found in Herten have been organized in a pattern language where each rhythm makes a different pattern. The pattern language is a tool to collect and connect the different rhythms. In the booklet 'rhythm language' a collection of rhythms can be found that have been classified in a system based on figure 4.6. The rhythms are organized in different themes and are further explained using either fieldwork or conceptual design interventions.

Figure 4.7 Herten in winter

4.6 Yearly natural rhythms

Natural rhythms are best observed over the year, they are some of the best indicators we use to tell the seasons apart. Temperature, rainfall, and daylight hours are all different in the different seasons. Days in summer are long and hot while those in winter are short and cold. During the seasonal cycle we can see the world around us changing, in spring the trees blossom and flowers start to bloom, in summer all vegetation is green or maybe a little yellow from the heat and in autumn the world is colored yellow and orange for a moment until the leaves fall. Figure 4.8 on the next page shows an overview of the different natural rhythms throughout the year.

The natural rhythms used to have a great impact on the daily life of people and therefore also on the social rhythms that could be found in Herten.

The long days of summer were spent outdoors in the field to finish all the work in time for the harvest. Winter was a quiet time where people mostly stayed indoors to find shelter against the cold. The growth cycle of crops decided what food would be available.

We still see and feel the changing of the seasons, but it has less impact on our daily lives. Work is available year-round and often done in offices that can be cooled in summer and heated in winter. While technology and a change in our lifestyle has caused the seasons to become less noticeable to us it still impacts the behavior of people, in summer more people are tempted to take a walk outside while in winter people mostly opt to stay inside.

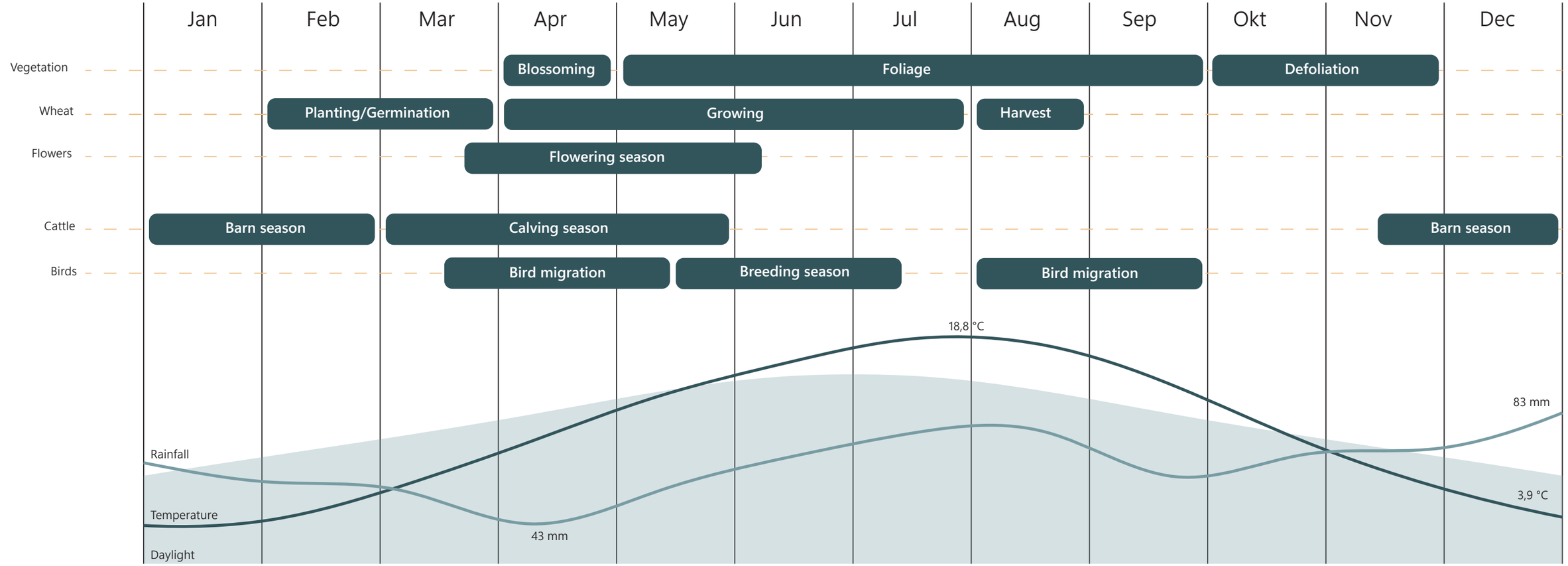


Figure 4.8 Overview of natural rhythms throughout the year

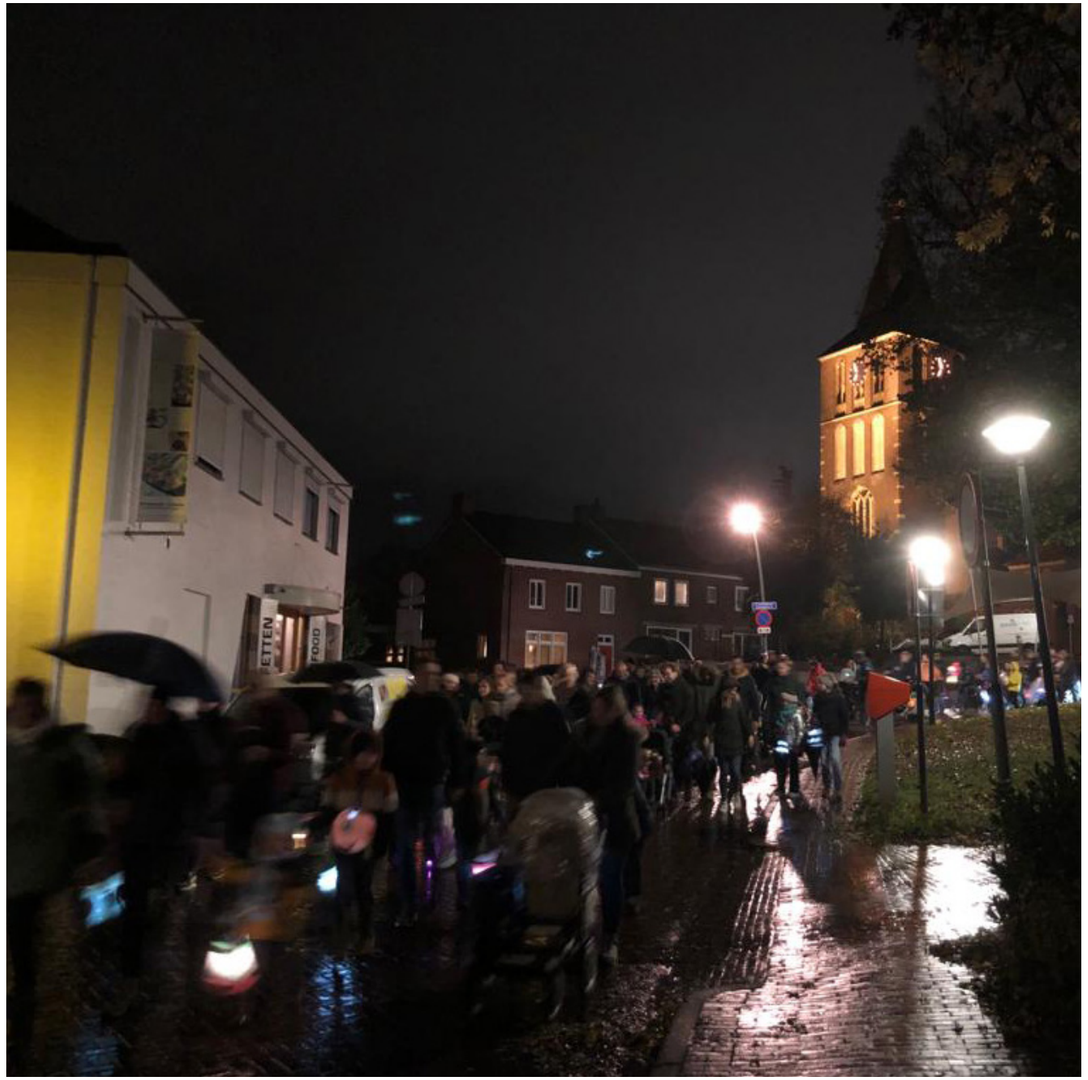


Figure 4.9 Sint Maarten proccession

4.7 Yearly social rhythms

Social rhythms include both daily rhythms that show the routine of people and yearly rhythms. The rhythms that can be observed throughout the year have changed a lot during the past century. A hundred years ago these rhythms were mostly dictated by the church and the agricultural calendar, most of the holidays were religious in nature and the agriculture rhythms moved alongside the natural rhythms.

How different life is today in Herten, while the church still exists there are few people who attend the service regularly. Most of the religious rhythms throughout the year are no longer practiced and most of the agriculture has been pushed to beyond the borders of the neighborhood. Nowadays, the yearly social rhythms that can still be observed are either linked to the school vacations and the tourism that it brings to the neighborhood or to the events that happen yearly. But even many of those events such as Sinterklaas or Easter are only noticed by a select group of people, often children and their families. Figure 4.10 on the next page shows both the current and past social rhythms in Herten.

Sint Maarten

An example of an event that shows the change in social rhythms over the year is Sint Maarten: the origins of this holiday can be traced back to both religious and agricultural rhythms. On one hand it is a religious holiday that celebrates the birthday of a saint, on the other hand is used to be a beggar's holiday in which the poor people got extra food to last them through the winter. It is celebrated on 11 November when the harvest season is done, just before the start of winter, it can therefore also be seen as some kind of harvest festival. Nowadays the holiday is mostly celebrated by children who tour the village with little lights towards a bonfire, after this they might go around the village to ask for candy.

While this holiday is nowadays focused on children, it is still something that brings together the inhabitants of the neighborhood as seen in the photo in figure 4.9.

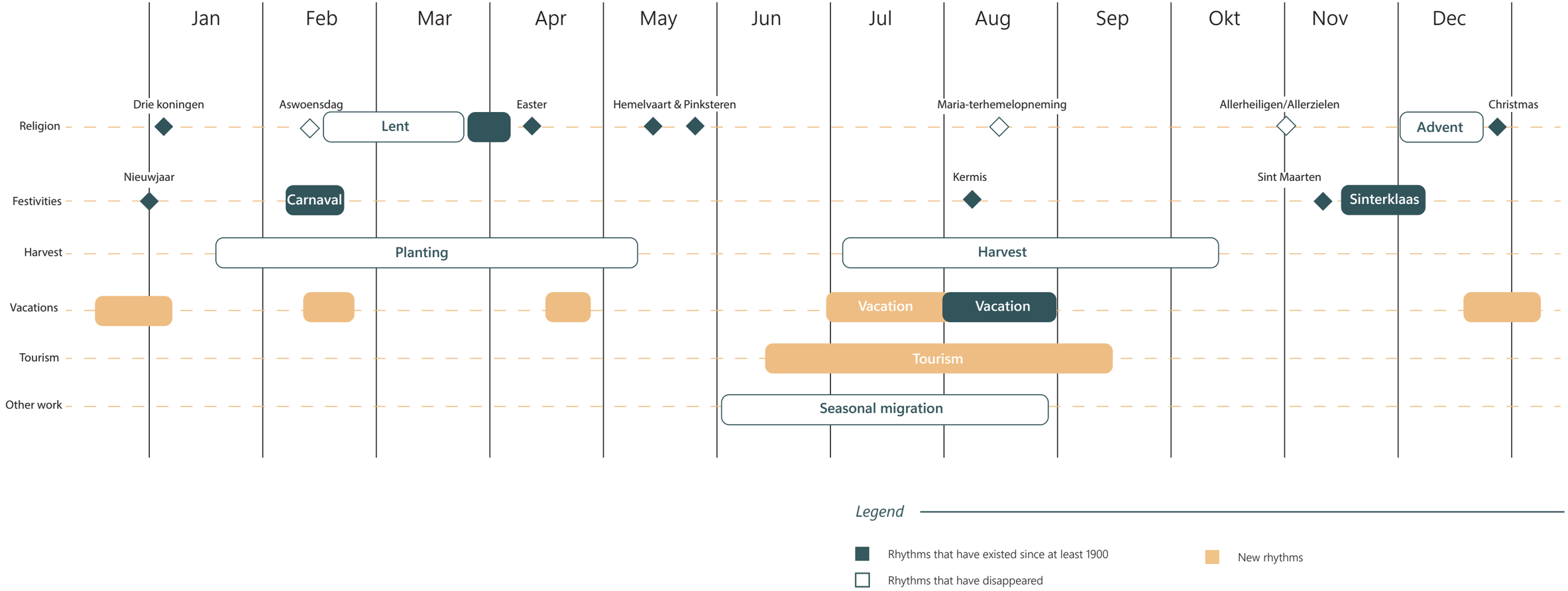


Figure 4.10 Overview of societal rhythms throughout the year

4.8 Conclusion

This chapter explained how urban rhythms are defined in this thesis, it explained that these rhythms can be both natural or social and take place over different cycles or moments in time. It showed how urban rhythms can be based on activities or natural processes and that they are always location specific. The later paragraphs also show how the history of the place has influenced the rhythms that can be observed nowadays and that some rhythms may disappear over time.

Rhythms in Herten are often related to the daily routines of people and can include things such as people doing their groceries or bringing their children to school. There are also rhythms that are more specific to Herten such as certain events and rhythms related to tourism and the waterside. The chapter also showed that many activities and rhythms have specific locations within the neighborhood.

An overview of the different rhythms in Herten can be found in the booklet Rhythms in Herten.

CONCEPTS AND TRENDS

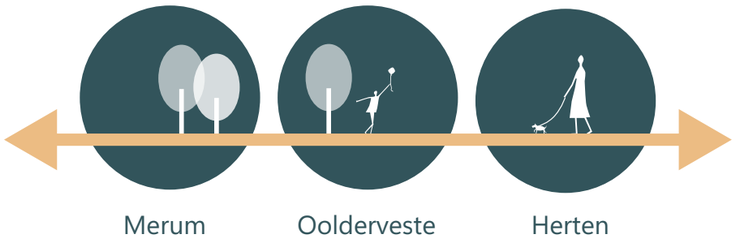
Chapter 5 - Design

Content

5.1 Introduction

This chapter is an introduction to the design made for in thesis. Paragraph 5.2 defines the goals for the design based on the current needs of the neighborhood. In paragraph 5.3 three possible locations are chosen for the design, these locations are further explored in paragraph 5.4 and a final decision for a design location and concept is made in paragraph 5.5.

The chapter looks not only at the current needs of the neighborhood but also considers the ongoing trends that have an impact on the design. In total, three trends are studied: paragraph 5.6 looks at the future of mobility, paragraph looks at climate change and finally paragraph 5.7 investigates demographic changes. The exploration of these trends is combined with some sketches of design interventions that will be incorporated in the design in chapter 6.

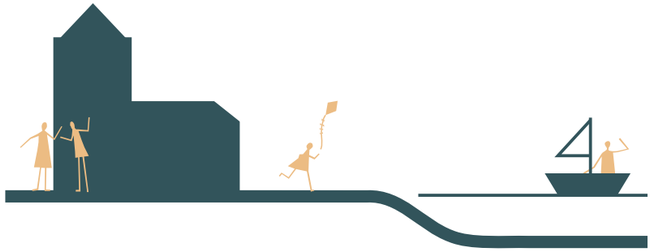


CREATING BETTER CONNECTIONS

The first goal of the design is to connect the different cores of the neighborhood and make it easy and fun to travel between places. The focus will be on connecting Oolderveste with its surroundings and make qualitative public spaces that are more accessible to the people in this neighborhood. The design will focus on connections for slow traffic such as pedestrians and cyclists.

ADAPTING TO RHYTHMS

The second goal is to make the design adaptable to the existing rhythms of the people in Herten, the design should promote a variety of activities during the day or year.



ENHANCING SENSE OF PLACE

The design should enhance the sense of place, this means it will expand on existing urban structures to emphasize on the qualities of the space. It should include spaces where people can meet others and come together to increase the sense of community.

Figure 5.1 Design goals for Herten

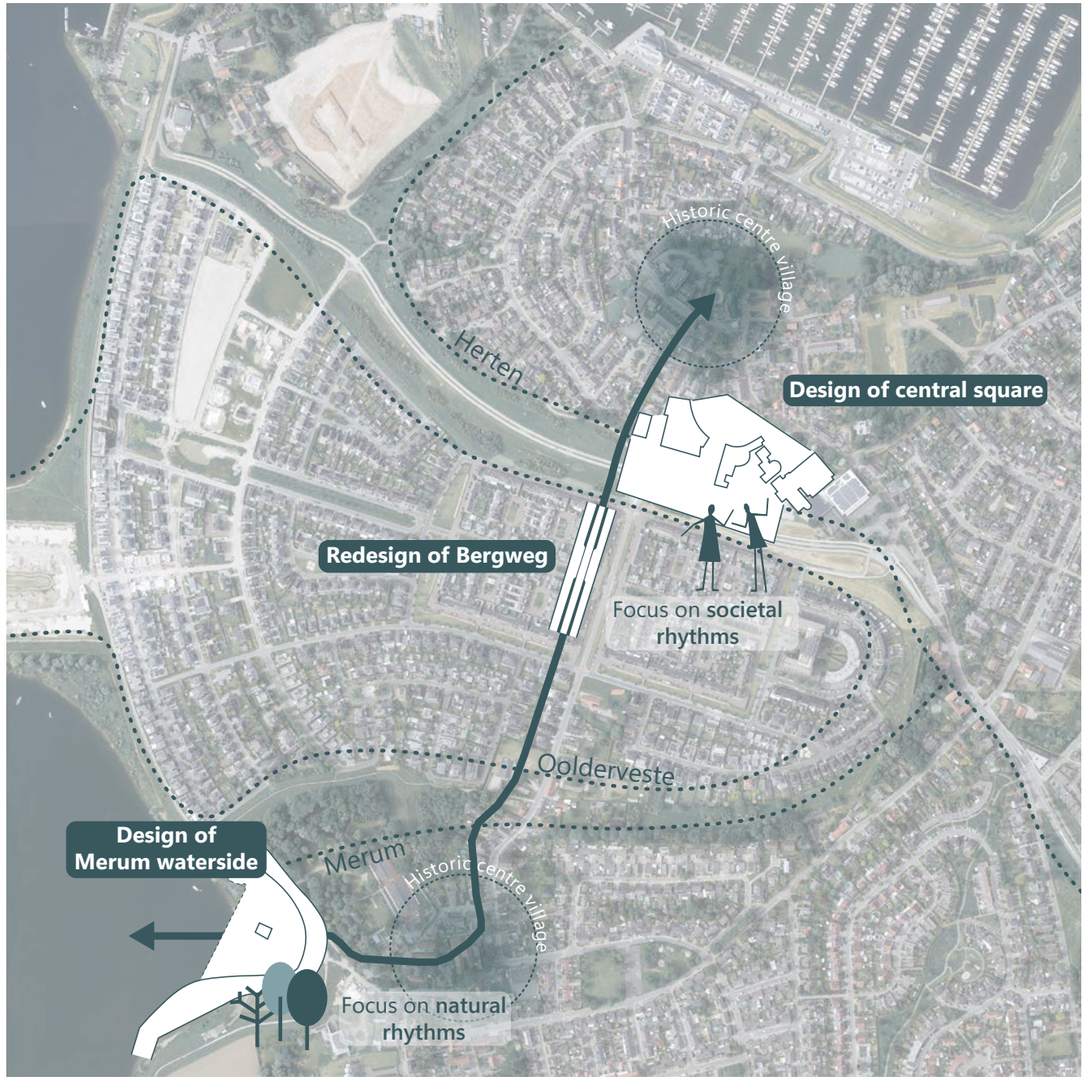


Figure 5.2 Selected design locations
Baselayer from PDOK (edited)

5.3 Location choice

The goals of the design are to create better connections and promote diverse activities and a sense of community. To generate a wide variety of ideas, possible design locations were chosen along an axis between the historic village center of Herten where most of the amenities can be found and the waterside of Merum where the project could focus on activities and rhythms related to the river. This axis also takes us through Oolderveste, a residential neighborhood that currently lacks in diverse activities.

Along this axis, three design locations were chosen, each with a different focus as shown in figure 5.2. At the waterside in Merum the design can focus on how humans and nature come together with a focus on the natural rhythms. This location lies outside the dike, a design for this location should therefore be able to withstand floods.

The next location is the Bergweg which is one of the main entry roads in Oolderveste, a design in this location would focus further on creating connections and making Oolderveste more accessible by walking or cycling.

The final location is near the Oolderweg, one of the main roads that gives access to the neighborhood, it lies in between Herten and Oolderveste. This location is also close to the historic center of Herten, and it is the place where most of the daily amenities can be found and therefore also a place where there is a wide variety of social rhythms. These social rhythms are the focus of this location: the design should accommodate these rhythms and create a place where people can come together.

5.4.1 Design of the Merum waterside

Design concepts

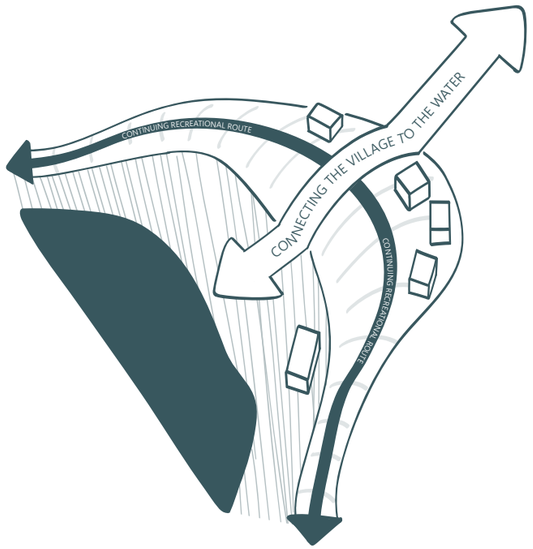


Figure 5.3 Concept Merum waterside

The chosen location near the waterside in Merum is characterized by a dike as shown in figure 5.4 this dike is a bit more land inwards, the area outside the dike is well suited as beach area where people can enter the water. The dike is both a connection and a barrier for the location: on one hand, it connects the entire water side of the neighborhood Herten by a cycling route. On the other hand, the dike is three meters high and thus forms a barrier between the waterside and the village center of Merum.

The focus of the design in this location is the natural rhythms, this means creating a natural environment that showcases the river landscape. The seasonal cycle will become very apparent in the design for this place, in winter the area will be waterlogged and there will be a higher chance of the area flooding, it will not be visited by people as often. In summer it can be a place where people go for leisure activities such as sunbathing or surfing, on hot days it will be filled with people. One of the biggest challenges in the design is to connect the village to the waterside while preserving the natural qualities that the area already has.

Figure 5.4 Location analyses Merum

Baselayer from PDOK (edited)

5.4.2 Redesigning the Bergweg

Design concepts

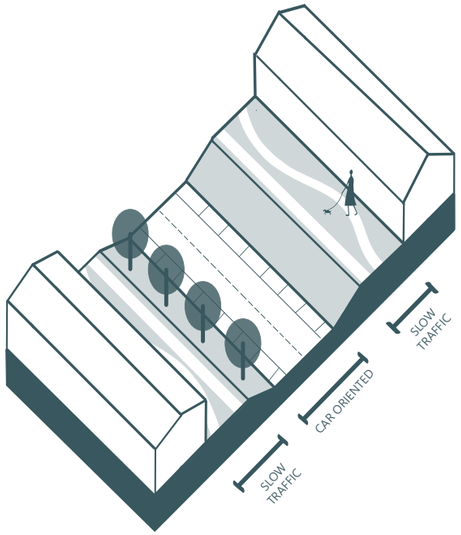


Figure 5.5 Concept Bergweg

The Bergweg is one of the main roads in the core of Oolderveste, however it is not just one road, Figure 5.6 shows that is flanked by the Vestesingel on both sides, another road mainly for cars. An important characteristic of the Bergweg is that it lies lower than the rest of Oolderveste, the Bergweg and the Vestesingel are separated by a green slope.

The design concept for this location is to bring the three car roads back to one: the Bergweg will remain as the main connection for cars through the neighborhood, while the Vestesingel on either side will be transformed into a green pedestrian and biking zone. This promotes slow traffic while the neighborhood is still easily accessible by car. The amount of parking available also remains the same in this area as it is simply relocated from the Vestesingel to the Bergweg.

Oolderveste has a lot of young families with children, the redesigned Vestesingel offers safe spaces for children to walk and play, giving these children more opportunities for independent movement.

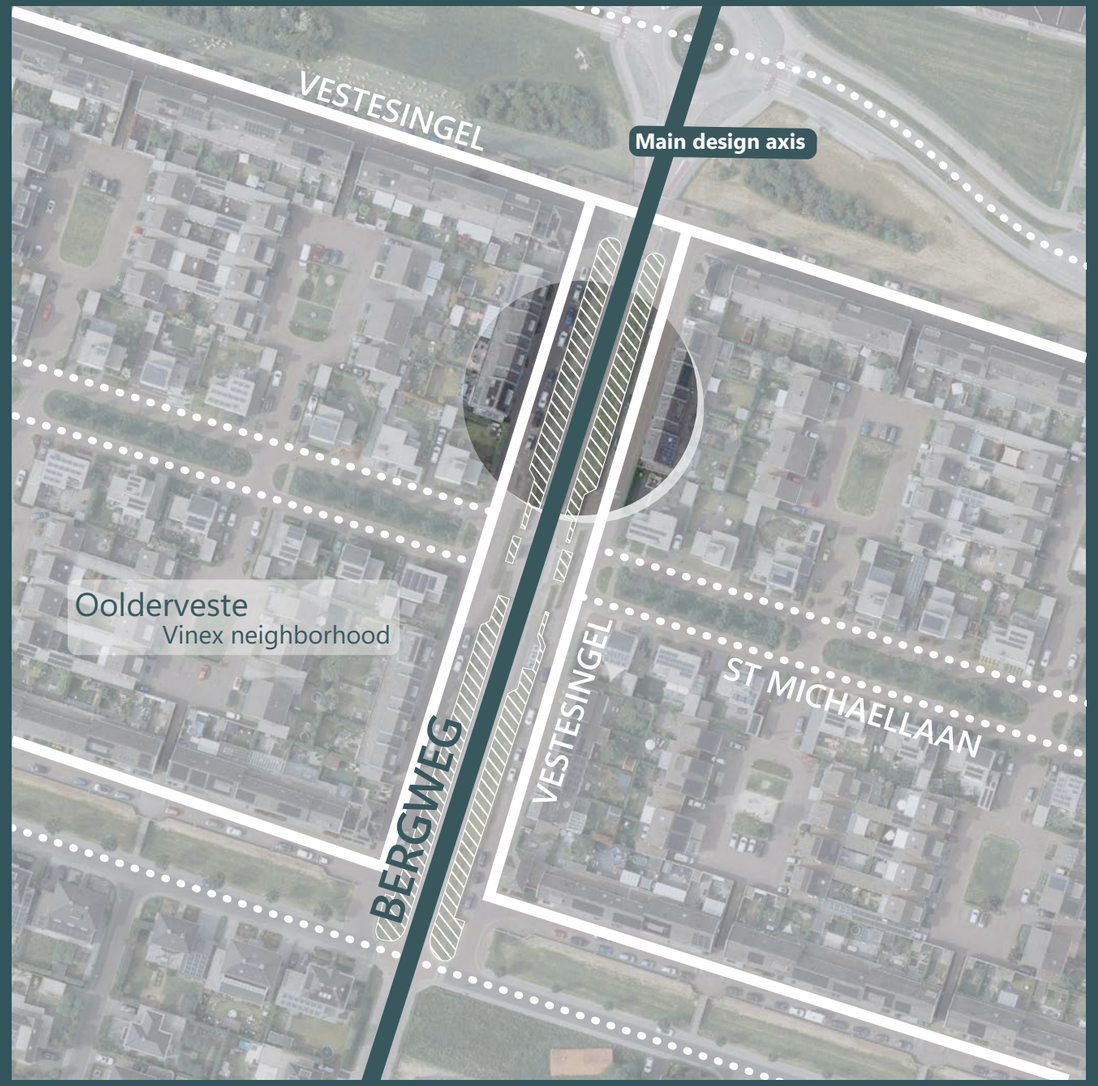


Figure 5.6 Location analyses Bergweg

Baselayer from PDOK (edited)

5.4.3 Design of a central place

Design concepts

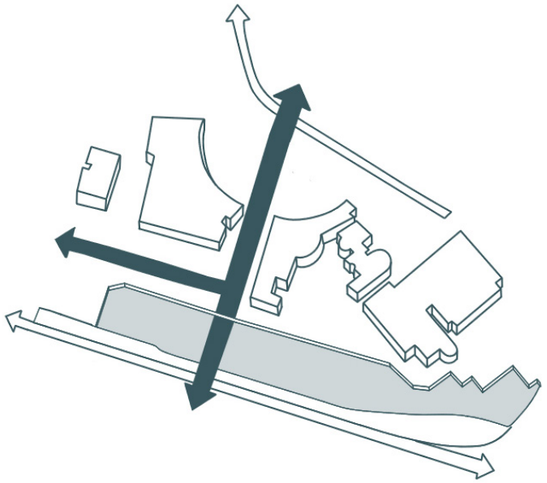


Figure 5.7 Concept central place

The design for this location aims to create a central place where inhabitants of the neighborhood can gather. It is located in the area where the main amenities such as the supermarket, elementary school, sport school and some other shops can be found. Currently the place is mostly designed for people who come here with a specific goal in mind, such as doing their groceries, and leave immediately after they are done. The space between the amenities consists mostly of a large parking lot as seen in figure 5.8 and in figure 5.9. To the south of this parking area there is a green area, in the middle the Oolderweg can be found. This area is meant for water retention and is not made to be accessible for people.

The design concept for this location is to create more qualitative public spaces, in between the amenities there should be places where people can stay for a bit, people should be able to sit down and relax. The Oolderweg will be combined with the Vestesingel and the water retention area will be transformed into a park where people can walk and play while it retains it functions as a water buffer. A final intervention for this location is to continue the historic ribbon structure of the village by adding new housing to the north side of the location. This connects the location to the old village center located close by as seen in figure 5.8.

Figure 5.8 Location analyses Herten, near amenities

Baselayer from PDOK (edited)

5.5.1 Amenity area in Herten

Choosing a concept

Out of the three locations shown on previous pages, only one design is detailed further. The design for the central square was chosen for this as this is the place where the design goals are best represented. It is located in between Herten and Oolderveste and is therefore well suited to explore the connection between these two very different cores. Since it already is a place where a lot of people gather it could be transformed into a place representing the neighborhood and enhancing the sense of place. Because people gather here the focus will be on social rhythms and how these rhythms can inform design related decisions, however the park area shown in the concept in figure 5.7 also offers opportunities to include designing with natural rhythms which are just as important to this thesis as the social rhythms are. In conclusion, the design of the central square is the best location to showcase a full design related to the themes of this thesis.

Figure 5.9 Parking lot near amenities

Figure 5.10 Event locations in Herten
Baselayer from PDOK (edited)

5.5.2 Events in Herten

Choosing a concept

Another reason that the concept for a central Herten is well suited to be developed further is because it gives the opportunity to design for future events. In Herten a variety of events are celebrated throughout the year, these events are an important tool in bringing people together and enhancing the sense of place and sense of community.

The map in figure 5.10 shows where in the neighborhood these events mostly take place, the map shows that the locations for events can be found mostly in either Ool or in Merum, there is little space to host an event in Herten or in Oolderveste. The events all have different spatial requirements: some events such as the arrival of Sinterklaas needs to be held on the waterside for the boat to be able to arrive, while some other events require an indoor space. For this the congress center or one of the local cafes can be used.

By developing the chosen design concept, a new possible event location could be added to the neighborhood, this additional event space in Herten spreads out the possibilities for an event over the neighborhood. The space could be combined with the square in front of the church or with the church itself if more space is needed. In the future, more places for events could be placed around Oolderveste to increase the amount of activity in this core.

The winter fair and Merumer market, which are events proposed in the booklet 'Rhyhtms in Herten', are well suited to this location as these events would benefit from being in a place where there are already people gathering, the events could be visited spontaneously by people already in the area. They are also variable in size, when introducing the events they could start out small with only a few market stalls, but they could potentially grow in size and take up a larger area.

5.6.1 Trends in mobility

Mobility

The design goals of this thesis are set based on the requirements that the neighborhood currently has, however the design should also include future needs of the neighborhood. To determine what these future needs are, several ongoing trends are studied, starting with the changes to mobility over the past years and the expected changes to mobility in the near future.

In the past century, the car has come to play a big role in the design of urban areas, as more and more people started using cars, they became more prominent in public spaces. Nowadays, a lot of urban areas are designed for cars, in residential neighborhoods there is often space to park your car next to the road and new roads have been created to make places accessible by car (Hajer & Dassen, 2014). This trend is still continuing in the report 'Kerncijfers mobiliteit 2022' by the ministry of infrastructure and water of the Netherlands three scenarios for future of mobility in the Netherlands are sketched, in these scenarios the amount of traffic on dutch roads will increase with 3 to 14% by 2027 compared to 2019 depending on the scenario (Hamersma et al., 2022).

Although car traffic is expected to increase in the future, there has also been in an increase in ideas on how to limit the role of the car in urban areas. One of the strategies that cities have started to adopt is the 15 minute city, which aims to have all facilities needed for daily life within 15 minutes by foot. This strategy focuses on the neighborhood scale and shows how slow traffic such as pedestrians and cyclists can be prioritized, it is also often combined with strategies to make the city greener (Kandal, Braumuller, Goorden & Hart, 2023)

The plans for Vinex neighborhood also often included strategies to limit the number of cars, the neighborhoods were built close to existing cities and their public transport networks, it also enables people to walk or cycle to the nearby city (Snellen, Hilbers & Hendriks, 2005). However, the report by Nio (2006) also shows that inhabitants of vinex neighborhoods are characterized by their mobility, this often includes travel by car.

Within Herten there is a lot of space designed with the car in mind, one of the best examples of this is the Oolderweg, which is also the chosen location for the design. The street profile in figure 5.11 shows how one of the main roads in Herten is located in the middle of the water retention areas creating a profile of 80 meters in length in total. While not all this space is space for the car- the water retention areas are needed to ensure the neighborhood does not flood- the space has become mostly unusable by the position of the road and has become a barrier between two of the neighborhood cores.

In conclusion, trends show that the amount of traffic will increase and that the car will not disappear from cities in coming years, however there is also a want to design cities differently and give more space to slow traffic and green. While the car is still needed, the amount of space cars take up in the city might decrease in the future.

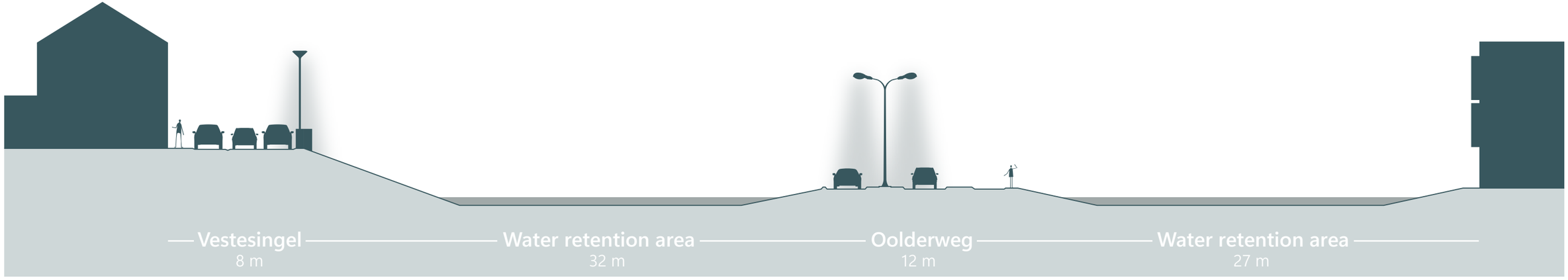


Figure 5.11 Section current Oolderweg & Vestesingel

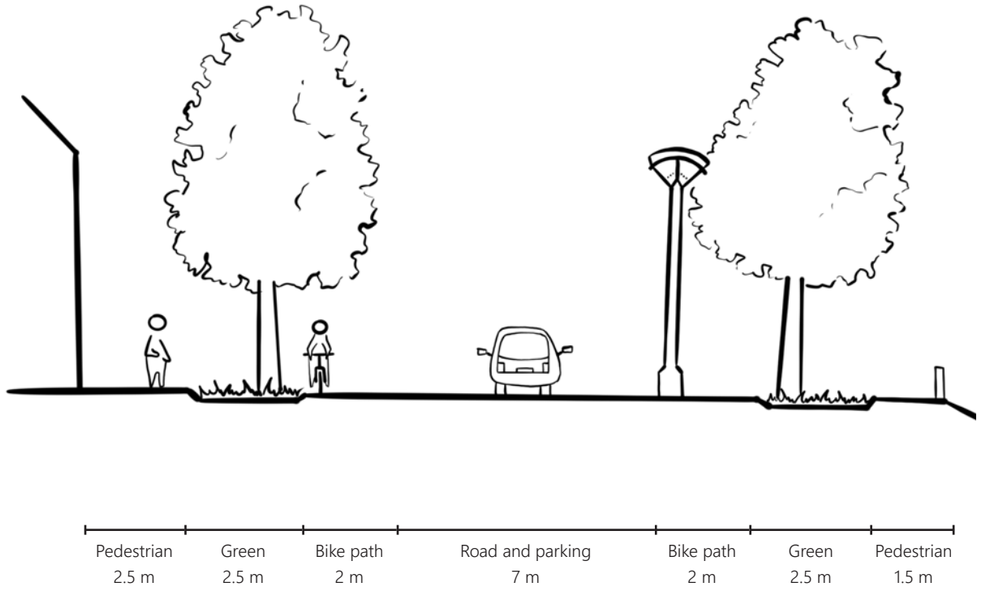


Figure 5.12 Street profile combined Oolderweg/Vestesingel

5.6.2 Proposals related to mobility

Mobility

Taking the trends surrounding mobility into account, it becomes clear that good accessibility by car remains a priority in the neighborhood of Herten where people often travel to their work or leisure activities by car. However, trends also show a want to create more spaces without cars, these spaces stimulate slow traffic and encourage people to meet others on the streets, which closely aligns with the design goals of the project.

One necessary design intervention for the chosen location is to combine the Oolderweg and Vestesingel, these two roads are parallel to each other and give access to many of the same areas. Combining these two roads is needed to create space for the design. The section in figure 5.12 shows a new section for the combined Oolderweg and Vestesingel, the most important change in this section compared to the current situation is the addition of green areas and the increase in pedestrian space. The combined road will become busier than the Vestesingel which was previously found in this location, the added green and pedestrian areas are needed to preserve the livability and appeal of this street for current residents.

Another necessary intervention to the design location is the removal of the parking lot surrounding the amenities, what is currently space for cars should become a place for slow traffic where people can meet, it should become a place where people are willing to spend more time in. The removal of this parking lot encourages people to walk or cycle to the amenities. When needed there is still space for visitors to park their car on the parking lots shown in figure 5.13 or on the

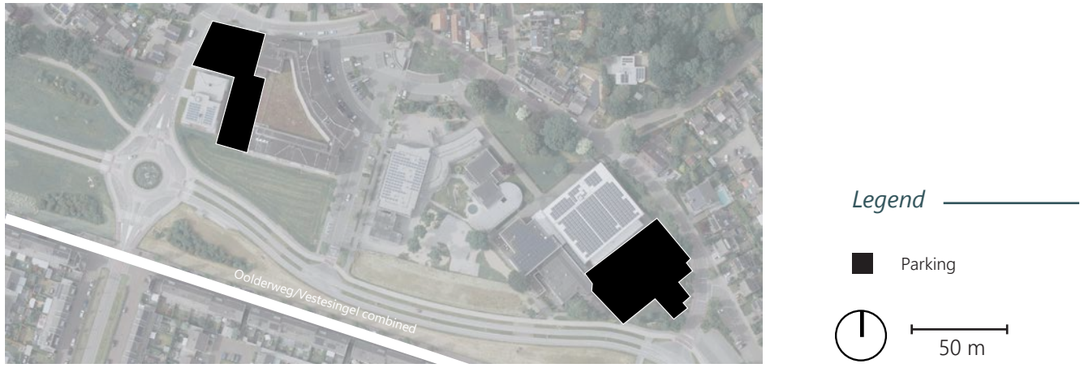


Figure 5.13 Main parkinglots near the design location
Baselayer from PDOK (edited)

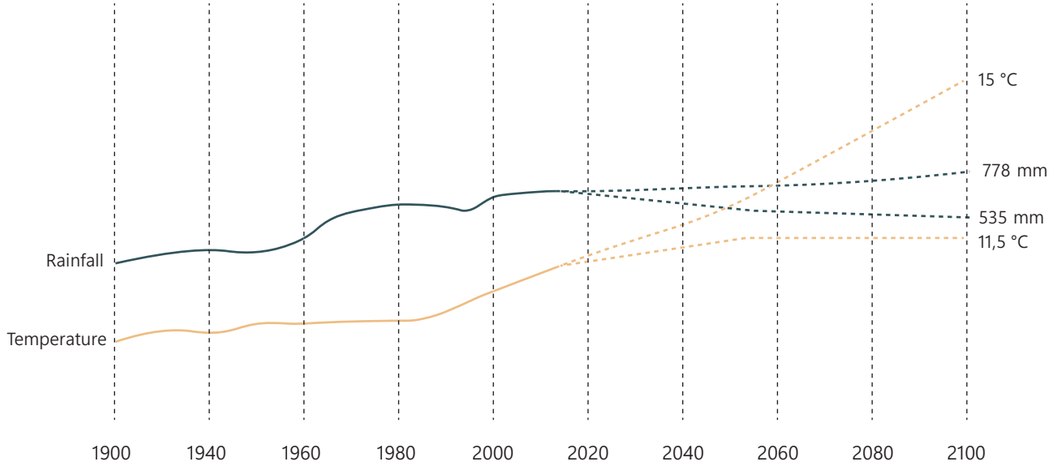


Figure 5.14 Past and future change of temperature and rainfall
Data from KNMI (n.d.)

Figure 5.15 Waterdepth during a flood
Map from Interprovinciaal overlaag (IPO) (2021), edited

6.2.3 A changing climate

Climate

Temperatures and the amount of rainfall change throughout the year and are part of the natural rhythms in a place, however there are also trends visible over a longer period of time. Figure 5.14 shows that in the past century temperatures have been rising and that this is a trend that we can expect to continue. This increase in temperature is most noticeable in the summers which have grown a lot hotter over the past century (KNMI, 2023a, 2023b). Currently there is an average of 115 warm days during the summer months, these are days in the months April to October that were warmer than 18 degrees. In 1900 there were only about 25 warm days throughout the year on average (KNMI, 2023b).

Figure 5.14 shows a less drastic change in the amount of rainfall throughout the year compared to the changes in temperatures, however this does not mean that there will be no changes to the precipitation throughout the year, we can expect more extremes throughout the year, meaning there could be very wet periods and periods of drought. (KNMI, n.d.). This increase in extremes also make floods happening in the area more likely. Figure 5.15 shows the water depth of the flooded areas in the neighborhood (Interprovinciaal overleg (IPO), 2021), the chances of a flood like this happening are currently small, however floods like this might become more common in the future. If floods like this become more frequent, more water safety measures are needed in the neighborhood.

Legend

- Waterdepth during a flood: 2-5 m
- Waterdepth during a flood: 1,5-2 m
- Waterdepth during a flood: 1-1.5 m
- Waterdepth during a flood: 0,5-1 m
- Waterdepth during a flood: < 0,5 m

The increase in temperature means we need to adapt our urban places. To cool down places in summer, designs should provide areas with plenty of shade similar to urban places in other climates. It could also mean that our daily rhythms might have to change during summer, going outside in the cool mornings and evenings while staying outside the sun in the middle of the day when the temperatures are the highest. Figure 5.15 shows a relatively simple design intervention: adding more trees to urban spaces, these trees provide shadow and help with evapotranspiration in urban areas. Another possible intervention is to add water elements to the design.

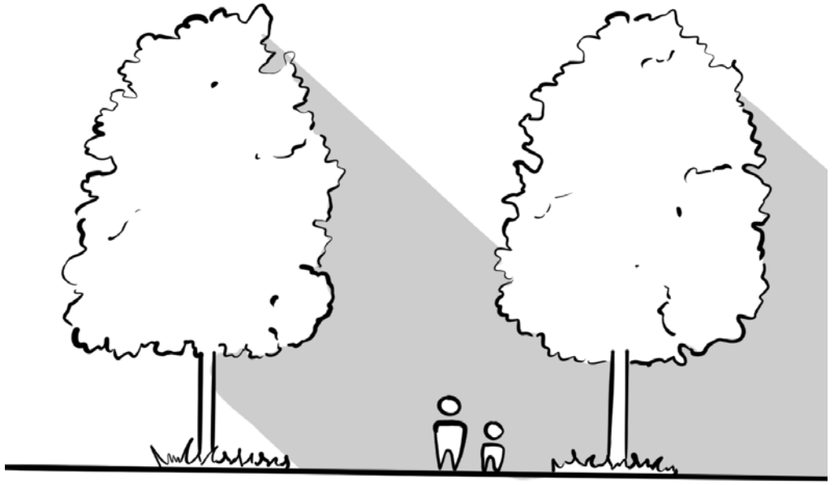


Figure 5.16 Trees providing shades on walkways

Several measures are needed in the design to decrease the chance of the area flooding in the future. First of all, it is important that the water retention areas remain and can store extra water in case of a flood or heavy rainfall. Areas can be further protected by installing flood barriers that rise in the case of a flood. To protect the homes of people during a flood event the living spaces could be placed higher than the ground level: this could mean heightening the ground floor or to putting some other functions on the ground level. Figure 5.17 shows a schematic section for the design that included these interventions.

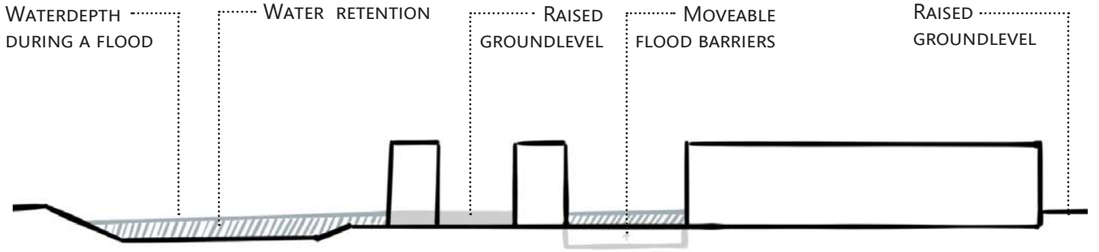


Figure 5.17 Flood prevention measures

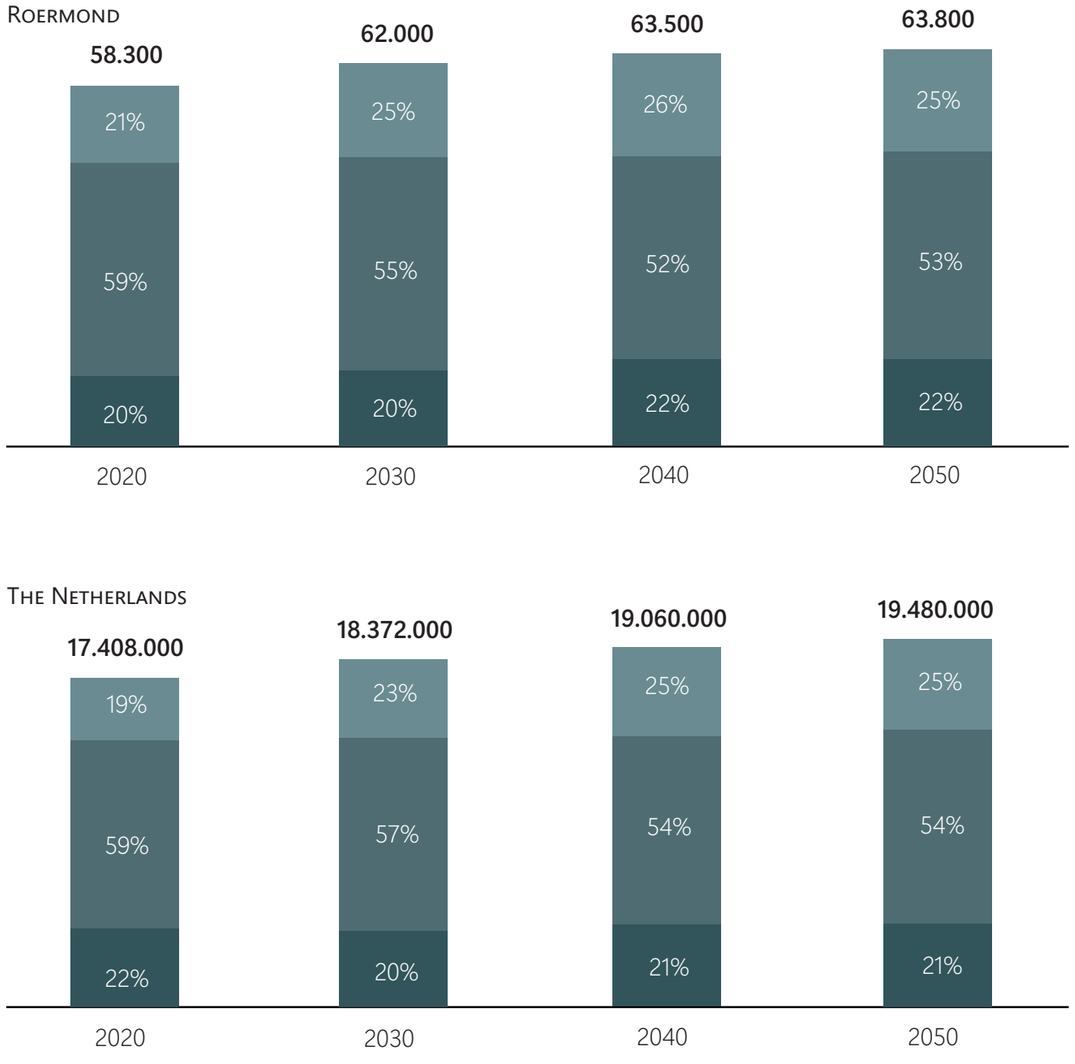


Figure 5.18 Population growth in Roermond and in the Netherlands

5.8.1 Demographic trends

Demography

The Vinex neighborhoods were built because new housing was needed for the growing population in the Netherlands. This growth in population continues, by 2050 the population is expected to exceed the 19,5 million people, which is a rise of 13% compared to 2020. However, not all age groups are expected to grow equally, a larger increase is expected in people above the age of 65, this group is expected to grow by 41% between 2020 and 2050. (Van Duin, Feijten & Van Duin, 2023).

The growth in population is also not expected to happen equally everywhere in the country, in Roermond the population is expected to increase from 58300 in 2020 to 63800 in 2050, this is an increase of 9%, which is lower than the national expectations. In Roermond the elderly are also the fastest growing age group, the estimated increase is 29% over the same time period (ItsPublic, 2021).

Herten will likely follow the national and local trends and experience an increase in the elderly population. However these trends are not the only reason an increase in this age group is likely for this specific neighborhood, currently the neighborhood is not very diverse in age, it is mostly built up out of families with children, as people grow older some will decide to move and new families can move in but there will also be older people who decide they want to remain in the neighborhood.

Having more elderly people and generally a more diverse population in regards to age can lead to some changes in the urban design. For elderly people it is important to have good connections to public transport and to have meeting places to prevent social isolation (Jones & O'Neill, 2016)

Legend

- < 25 years old
- 26 - 64 years old
- > 65 years old

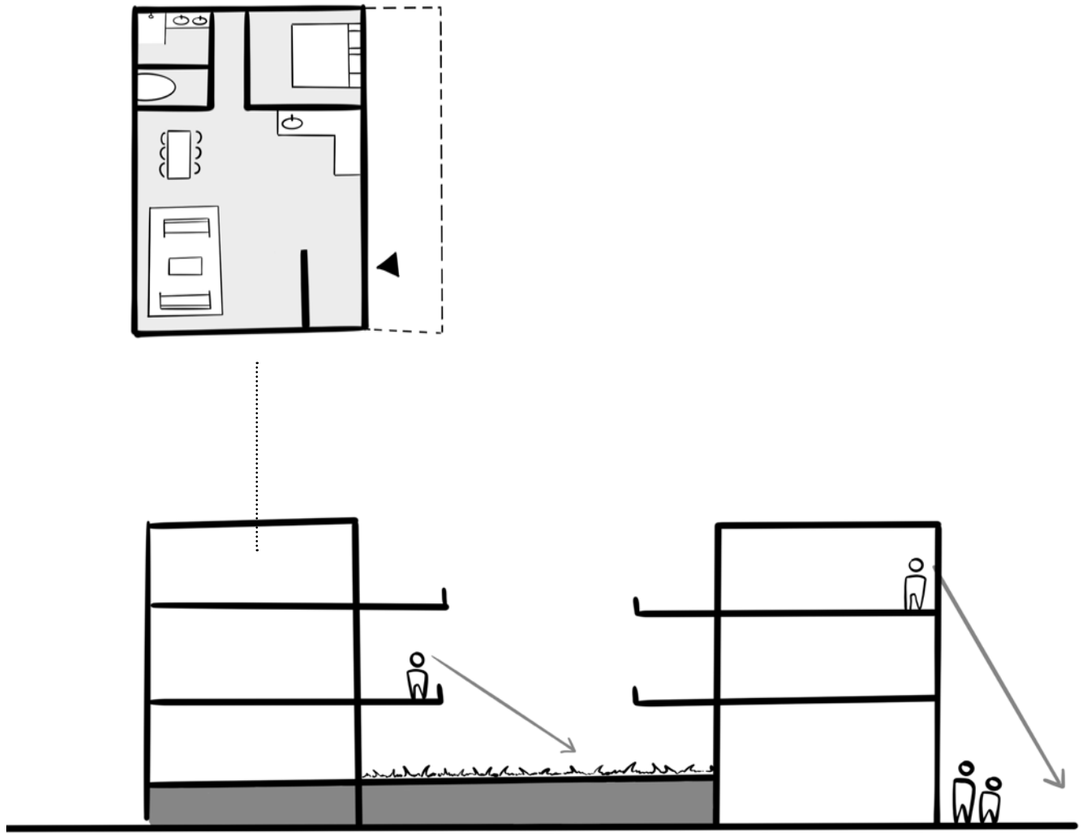


Figure 5.19 Scheme elderly housing

5.8.2 Proposals related to demography

Demography

The increase in the elderly population is the demographic trend that will have the biggest impact on the design. Herten is currently not very diverse in housing types, it is mostly built up out of family homes, which are often not suited for elderly: they are too big for a household of one or two people, a common household type for those over the age of 65. The houses also often span multiple floors connected by stairs. The upper floors of these houses will not be accessible for those that have a difficulty going up the stairs.

The lack of suitable housing for elderly means that much of the planned housing stock should be adapted for use by elderly, this means smaller, single floor homes. These new homes could also play a role in preventing social isolation. One of the proposed buildings of which a sketch is shown in figure 5.19 consists of apartments that share a communal garden, here residents of the building can meet. All the apartments also have a view on both this communal garden and the public streets. Because the design location is close to most amenities is the neighborhood it is well suited for elderly who might have trouble traveling. The building is based on the 'knarrenhofjes' which is a form a shared living where elderly share facilities and can help each other if necessary, the image in figure 5.20 shows one of the "knarrenhofjes' that is proposed in Gouda after the concept has been proven to work in other places.

Figure 5.20 Reference image: Knarrenhof Gouda
Photo from Knarrenhof.nl (n.d.)

5.9 Conclusion

This chapter started by defining three goals for the design: to create better connection within the neighborhood, to adapt to the rhythms in the neighborhood and to enhance the sense of place. Keeping these goals in mind three different locations were chosen and explored with simple design concepts, out of these three locations the area with amenities in Herten is chosen to develop further into a design. This location was chosen as it offers the opportunity to design with bot natural and social rhythms and because it is a well-known location within the neighborhood making it ideal to enhance the sense of place.

The chapter also looked into ongoing trends regarding mobility, climate change a demographics. It can be concluded that slow traffic, green spaces and places for elderly people will be important to the design. Some proposals for design interventions were made based on these trends, these proposals will be incorporated in the design which is presented in the next chapter.

DESIGNING WITH RHYTHMS

Chapter 6 - Design

Content

6.1 Introduction

This chapter showcases the design for the amenity area in Herten. The design is based on the design goals defined in the previous chapter. The proposed design interventions from chapter 5 are also integrated into the design.

The chapter starts showcasing the design in a plan and sections in paragraph 6.2. One of the design elements: the water features on the central lane is further explained in paragraph 6.3. Paragraph 6.4 looks how the design would function with a variety of rhythms; these rhythms are based on the findings of chapter 4.

After this the chapter zooms in on the design and looks at the central lane and the water retention park –two of the key elements in the design- in more detail.

At the end of the chapter we zoom out to show how the proposed design affects the core of Oolderveste and how elements in the design could be applicable for vinex neighborhoods in general.

Figure 6.1 Plan amenity area

6.2 Designing the amenity area

This paragraph explains the design made for the amenity area in Herten, figure 6.1 shows the full plan for the design, while figures 6.2 and 6.3 show the accompanying sections. Through several interventions the design aims to connect the cores of Herten and Oolderveste and to enhance the sense of place; urban rhythms are used as inspiration for the design.

One of the main interventions of this design is to create a lane from the north side of the location, close to the old village center, to the south side where it is connected to Oolderveste. This lane is easily recognizable by the double row copper beeches and shows different ways of including water into a design, it is inspired by natural rhythms. The sections in figure 6.2 and 6.3 show reference projects of some possible water features that could be included on this lane such as fountains and other forms of surface water, the different aspects of the lane are further explored in paragraph 6.3.

The lane ends on the combined Oolderweg/Vestesingel which connects the design area to Oolderveste. The Oolderweg and Vestesingel are combined as proposed in paragraph 5.6.2. The new road is located on the edge of Oolderveste and extra green and pedestrian spaces are added as seen in the plan in figure 6.1 and the section in figure 6.3.

Legend

- Slow traffic zone
- Roads
- Parking
- Private
- Flood barriers
- Green areas
- Green slopes
- Flower fields
- Existing buildings
- New buildings
- Existing trees
- Diverse trees
- Fruit trees
- Red beeches *Fagus sylvatica f. purpurea*

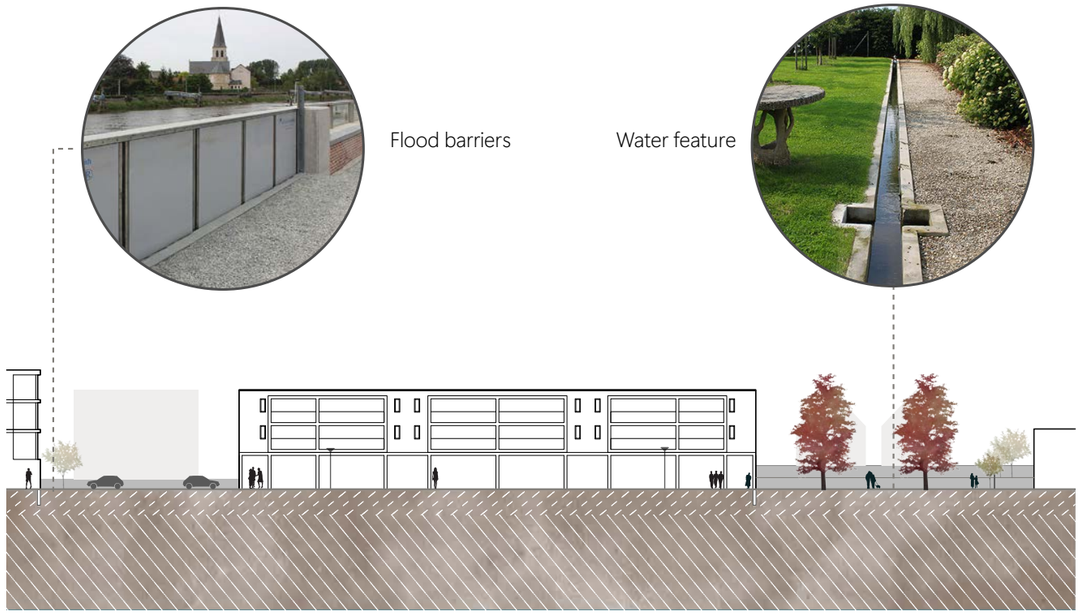


Figure 6.2 Section AA: shopping street
Images from (Floodcontrol International, n.d. & Gemeente Eindhoven, 2024)

Another important design intervention are the changes to the amenities and their surroundings. The parking lot has been removed and the space surrounding the amenities is now a slow traffic zone with a focus on pedestrians, people are encouraged to walk or cycle to the area, if necessary there are still some parking places on the sides of the location. The amenities themselves have also shifted: what was once the backside of the supermarket and other shops has now become the front. This brings these amenities closer together and creates some kind of shopping street, this street ends in a small square. The square is a water square where people can cool down near the fountains in summer and which can store water during heavy rainfall. This square is one of the water features along the central lane.

New buildings have been added to the design area, these are mostly residential buildings consisting of apartments that are suited for the elderly population. The building opposite to the supermarket and other shops, is similar to the building proposed in paragraph 5.8.2. This building has a shared garden for residents where they can meet and help each other. Part of the ground floor of this building is public and a variety of functions can be placed here. Examples of possible functions are a local café, a space for associations or some other small shops.

Another set of buildings of note are the freestanding houses on the north side of the design, these are inspired by the farmhouses in the historic centers of the different cores, and they continue the historical village structure of Herten. The trees in front of these new buildings are already present at the location, these trees add quality to the surrounding area and are therefore preserved.

The final main design intervention is the creation of a park area on the south side of the design, this park showcases the natural rhythms and offers people a place for their daily walk or for children to play after school is over. In the park, fruit trees have been placed, these trees show the passing of the seasons as they blossom and grow fruit. Visitors to the area can freely take fruit from these trees, plucking fruit from these trees could also become a communal activity.

The park still functions as a water retention area during times of heavy rainfall or when a flood happens, it is therefore located lower compared to the rest of the design area. The height differences in the design are shown in section BB in figure 6.3. Section CC shows that flood barriers have been added to the design, if the water retention areas in the park prove to be insufficient, these flood barriers can be raised to protect the homes of people in the design location. The park also plays a role in cooling down the area during the summer, trees in this park and on the central lane provide shade.

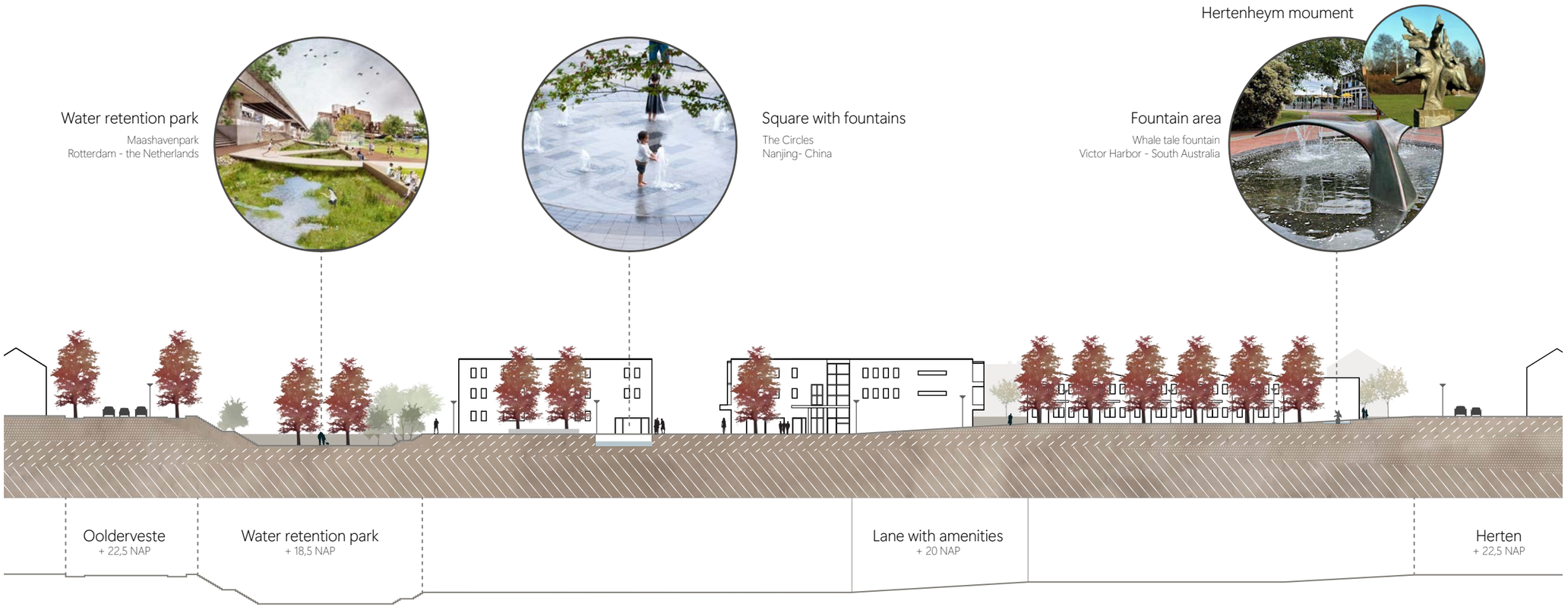


Figure 6.3 Section BB: central lane
Images from (Nationaal Comité 4 en 5 mei., 2012; South Australia, 2021 & Tauw, n.d.)

Legend

Sand
Gravel
Clay

10 m

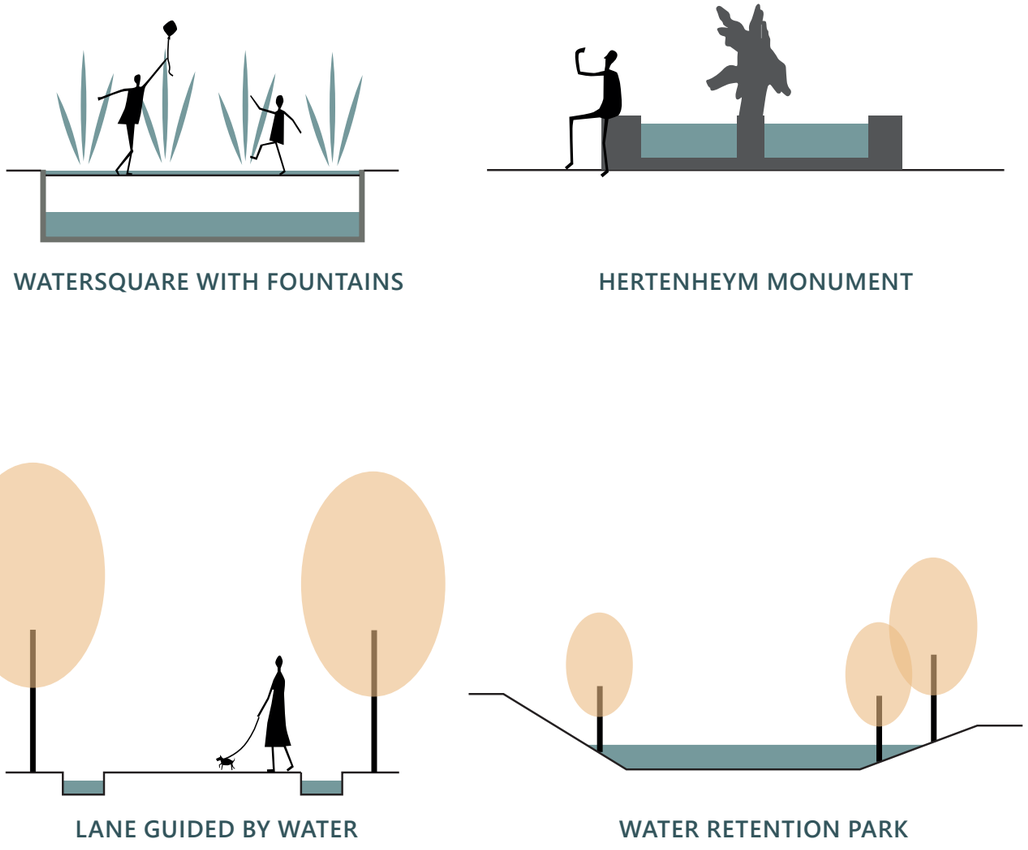


Figure 6.4 Water features on the lane

The lane is a central element in the design it runs from the north side of the location to the south side, the lane connects the historic center of Herten and Oolderveste and offers people a way to walk to the other core. The connection that this lane creates is also visual, this visual connection is strengthened by the copper beeches, Fagus sylvatica 'Atropunicea', on both sides of the lane. The purple color of these trees contrasts with the predominantly green vegetation in the rest of the design and make the lane stand out.

Within the lane several water features have been added as seen in figure 6.4. On the north side, the Hertenheym monument is placed as piece of a fountain, this monument is currently located near the sport school but will have to be moved as new buildings are placed here in the design proposal, the monument commemorates the bombing of Herten in the second world war. Around the middle of the lane, where the lane converges with the shopping street, a water square has been placed, this water square also has some low fountains that cool the city and can retain extra water if needed. The water square is connected to the water retention park, which is the next water feature on this lane, while normally a park it can also be used as water retention area which was the original function of the area. All these elements are tied together by an open water stream that guides the lane, this stream is connected to the trees that border the lane, any excess water will go to these trees.

The lane plays an important role to many of the social rhythms, as the main axis of the design it gives access to many of the amenities and some of the new housing. These rhythms are further explored in the next paragraph.

6.4.1 Daily rhythms

Rhythms

One of the goals of the design is to include the different rhythms happening in the place. The variety of amenities bring their own rhythms with them, an example of this is parents that gather in front if the school to bring or pick up their children, after school times are over the school is an empty building that has little impact on the surrounding place. The rhythms that take place change over the day, and with it the focus of the area changes. Figure 6.5 show how much influence the different functions have on the place over the course of a normal weekday.

The next pages study a few of the rhythms taking place in the design. These include daily rhythms that are linked to the functions shown in figure 6.5 such as doing groceries or rhythms related to the school but they can also be rhythms that only happen occasionally during certain events such as rhythms related to a flood or to a heat wave.

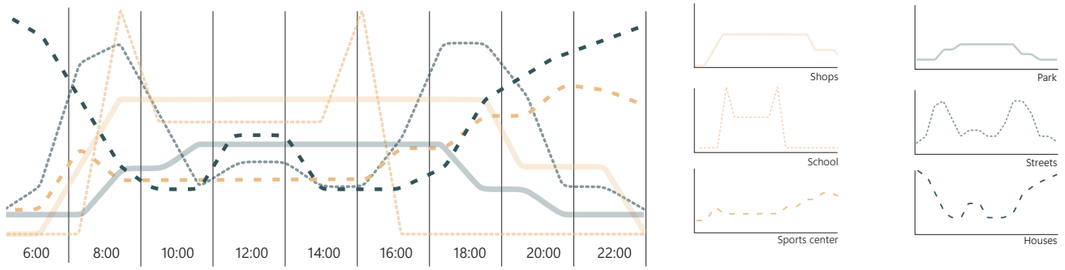


Figure 6.5 Daily rhythms

6.4.2 Merumer market

Rhythms

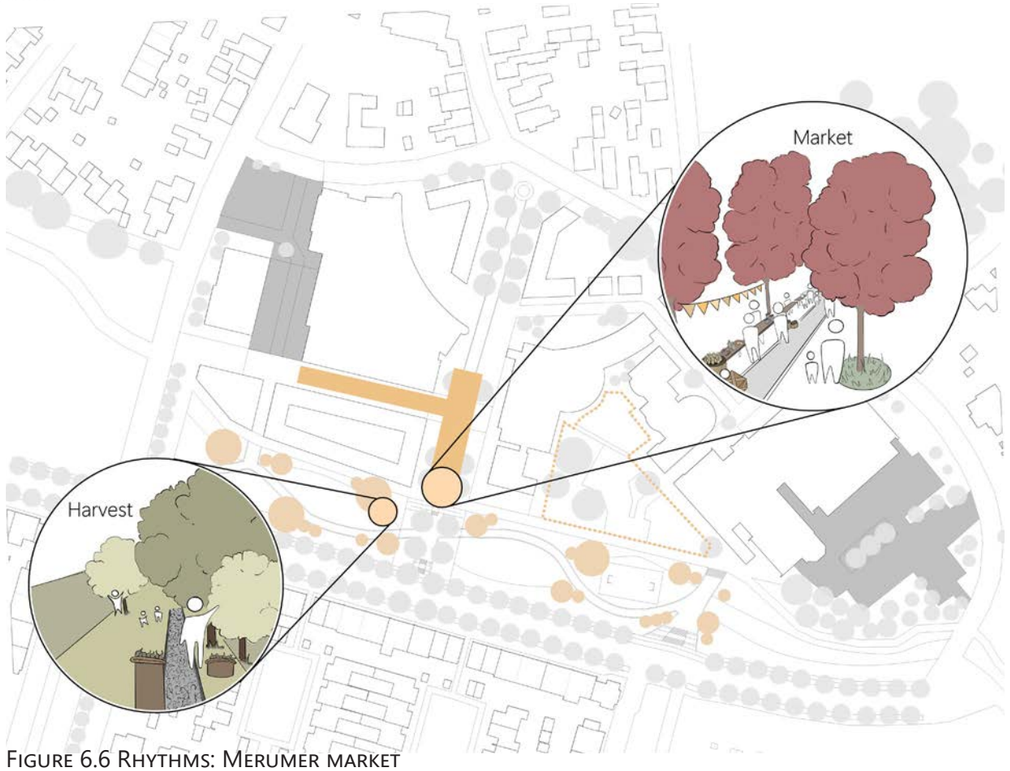


Figure 6.6 Rhythms: Merumer market

MERUMER MARKET/HARVEST FESTIVAL

One event that could be reintroduced to the area is the Merumer market, this market used to be hosted once a year and attracted people from the region. The proposed event is similar to a harvest festival and consists of a (food)market and people going into the park the pluck the fresh fruits. The market would be set up around the central lane so people could visit when visiting other amenities. The event could also expand to include the playground of the school if necessary.

Legend

- Focus area
- Possible expansion
- Fruit trees
- 25 m

6.4.3 Elementary school

Rhythms

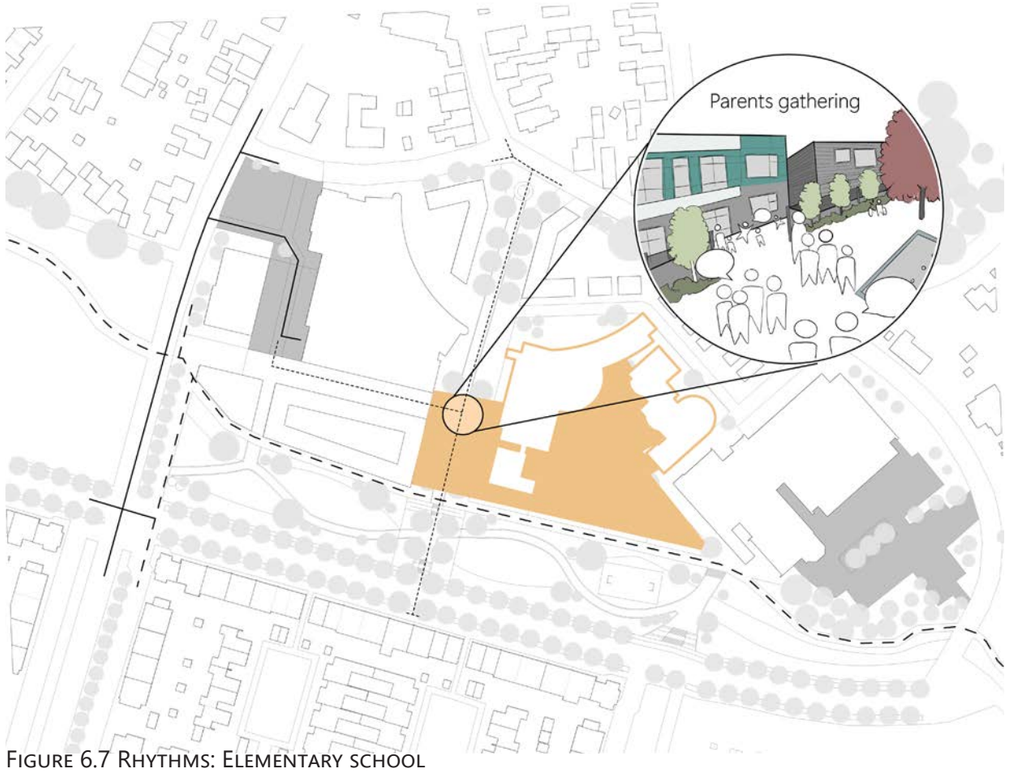


Figure 6.7 Rhythms: Elementary school

ELEMENTARY SCHOOL

The elementary school brings activity to the location at specific times of the day. When the school starts or ends parents gather to bring their children to school or pick them up, the square in front of the school becomes a meeting place during these times. While school is ongoing the playground is full of children playing; some of these activities will in the park after school.

Legend

- Focus area
- Important building
- Parking
- Car route
- Cyclist route
- Pedestrian route

25 m

6.4.4 Shopping

Rhythms

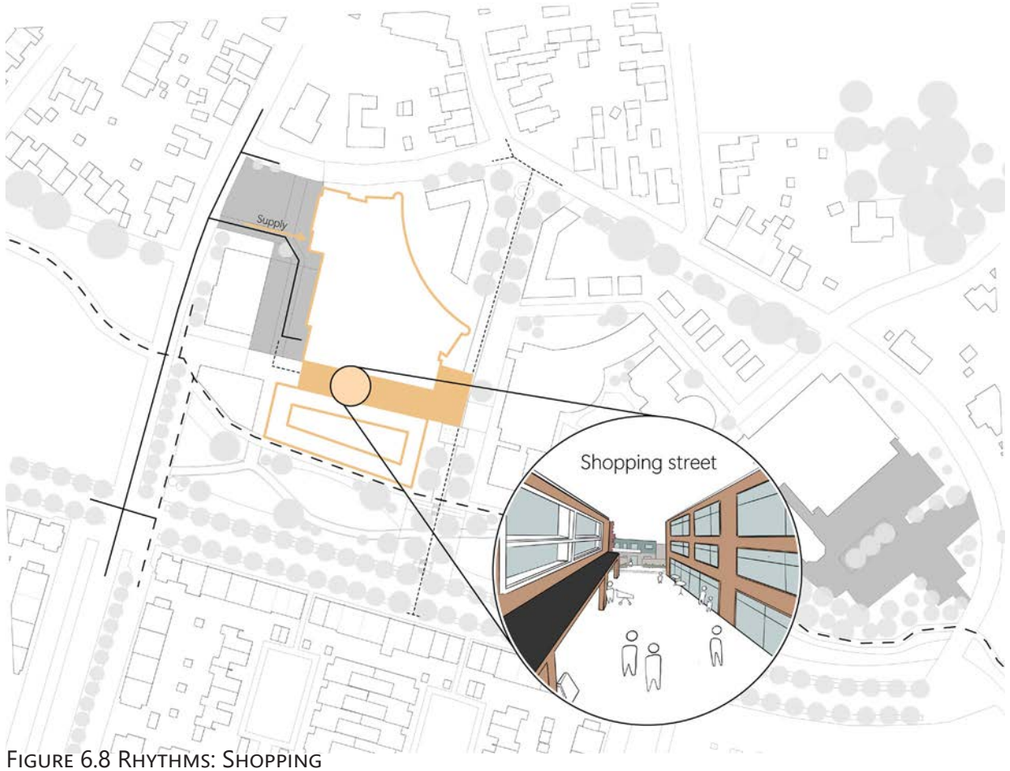


Figure 6.8 Rhythms: Shopping

SHOPPING

In the design most of the shops can be found along the shopping street, this street is a pedestrian zone but is also accessible for cyclists. For those traveling by car, there is a parking lot nearby. The shopping street is busy during the day when the shops are open and becomes quiet in the evening after shops have closed.

Legend

- Focus area
- Important building
- Parking
- Car route
- Cyclist route
- Pedestrian route

25 m

6.4.5 Flood

Rhythms

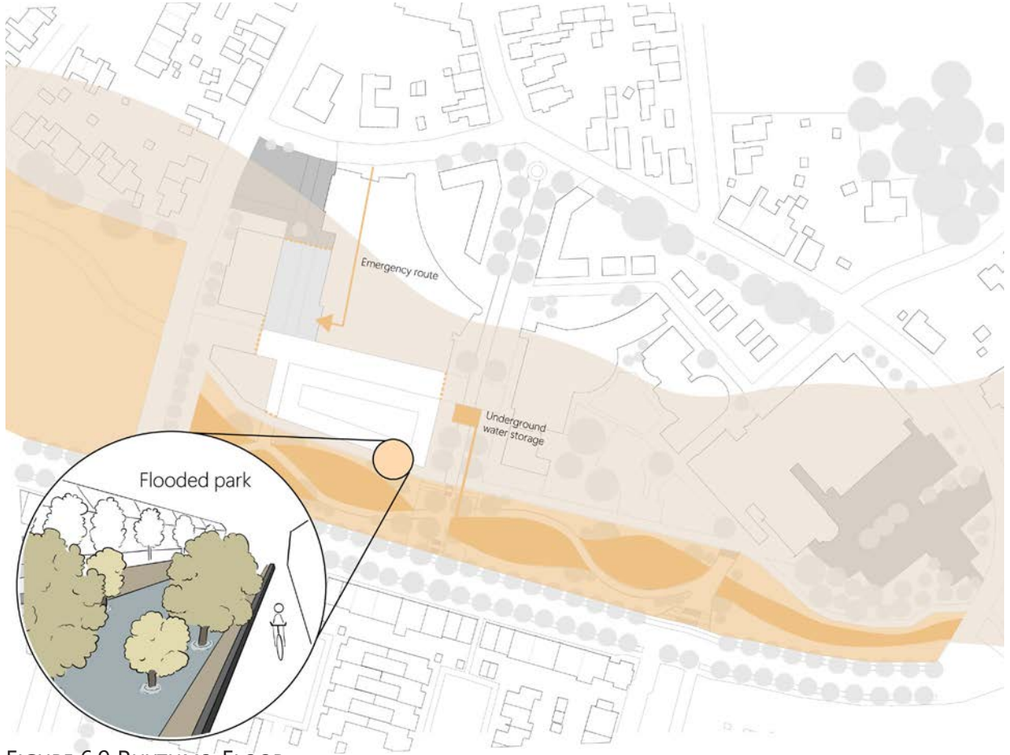


Figure 6.9 Rhythms: Flood

FLOOD

In the case of a flood, the water retention areas in the park will be underwater, only in the case of an extreme flood event will there be a chance of other areas to flood as indicated in figure 6.9. In this case, the flood barriers will automatically rise and protect some of the areas. These areas are then accessible via one of the buildings, this route is only open in case of an emergency.

Legend

- Heavy rainfall
- Flood
- Extreme flood
- 25 m

6.4.6 Heat wave

Rhythms

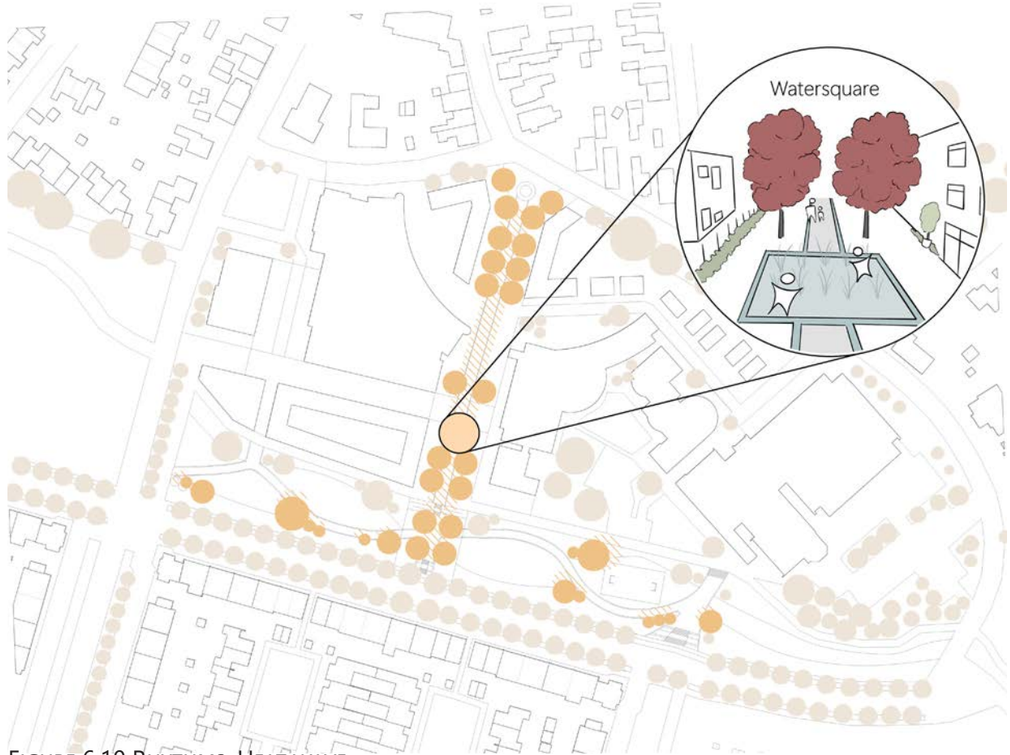


Figure 6.10 Rhythms: Heat wave

HEAT WAVE

All trees in the area help with evapotranspiration and help cool down the area, additionally some trees shown in the map above provide shadow to frequently visited areas. Apart from this there are also the water features along the lane which provide cooling, on hot summer days children can play around the fountains to cool down.

Legend

- Shaded walkways
- Trees providing shadow in frequently visited areas
- Other trees
- 25 m

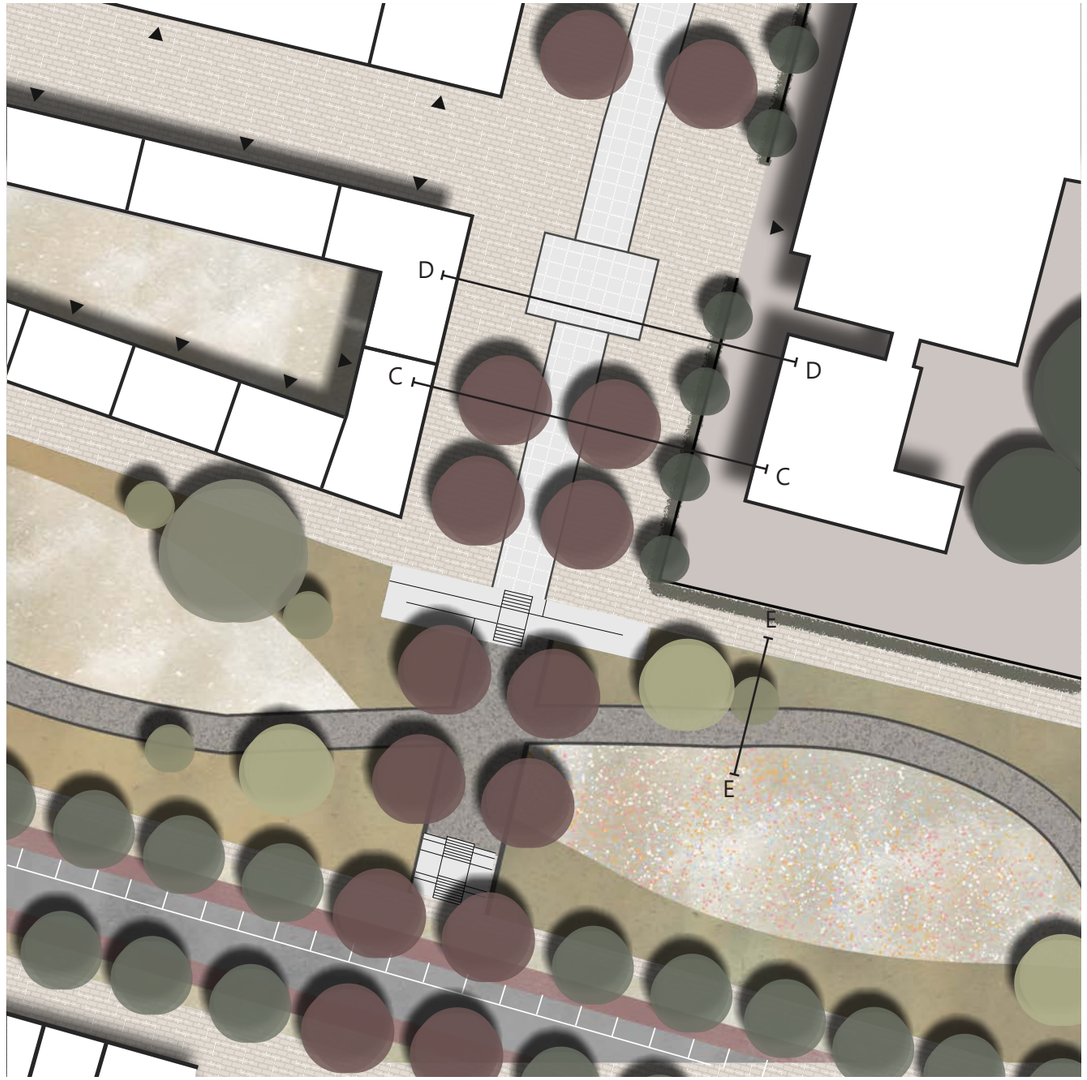


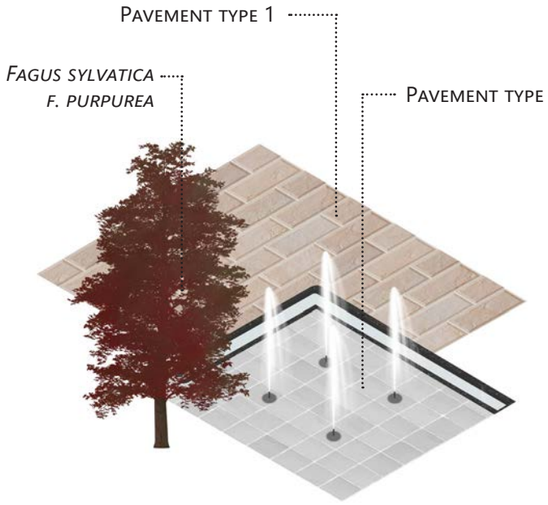
Figure 6.11 Zoom in of the design plan

6.5.1 Central location

Zooming in on key elements

The map in figure 6.11 shows a zoom in of the design, this zoom in shows the place where the central lane and the shopping street converge. It is the place within the design where most rhythms come together: People shopping or bringing their kids to school pass by this place, during floods the water square can store excess rainwater and during a heatwave the fountains cool down the place, the square and the surrounding lanes are also the location for the Merumer market and other similar events.

The map and the collage in figure 6.12 show the different materials used in the design. In the lane and the square another type of tile is used than for the rest of the public space and different trees are selected in different parts of the design. On the lane there are copper beeches, which form a contrast with the mostly green trees in the park and on the playground. The choices in vegetation are further explored in paragraph 6.5.4.



Legend

- Pavement type 1
- Pavement type 1
- Playground
- Green areas
- Green slope
- Flower field
- Bike path
- Road
- Building
- Diverse existing trees
- Plane *Platananus*
- Walnut *Juglans*
- Juneberry *Amelanchier lamarckii*
- Pear tree *Pyrus*
- Red beech *Fagus sylvatica f. purpurea*

Figure 6.12 Materials

Made with images from Architextures

6.5.2 Central lane

Zooming in on key elements

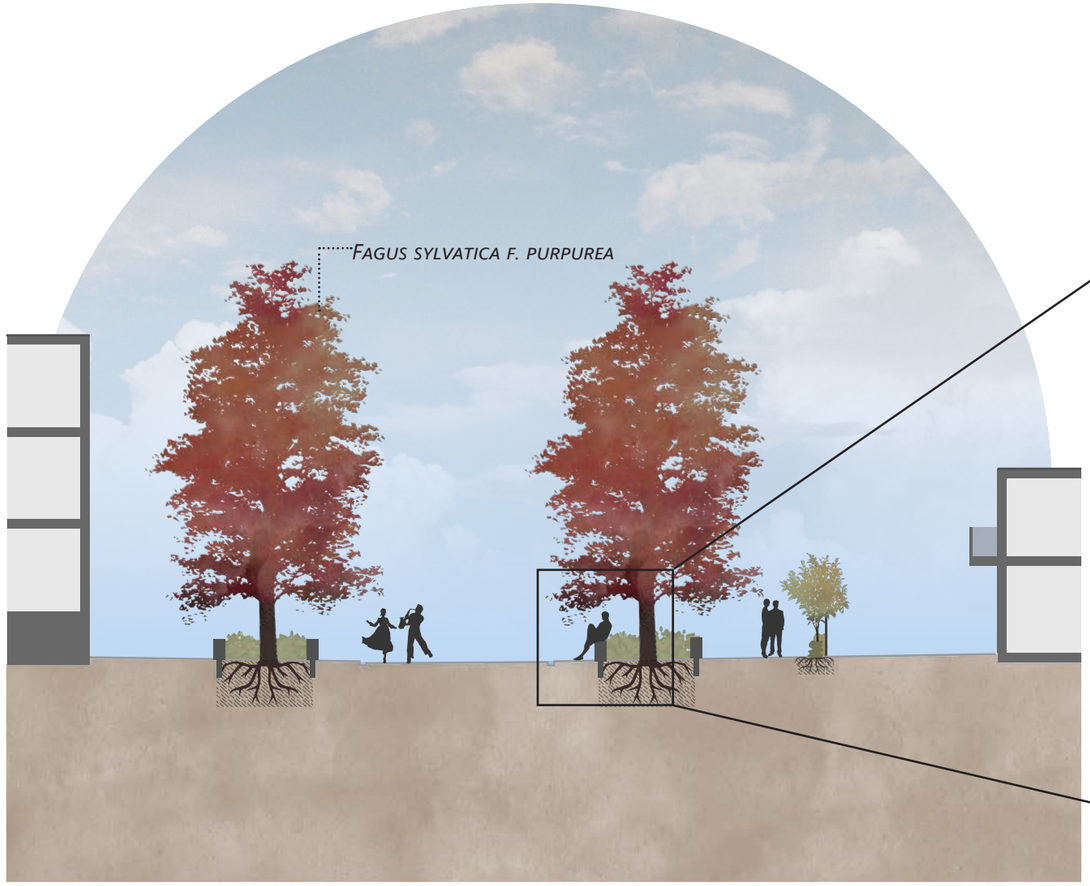


Figure 6.13 Section CC: Central lane

Made with images from (Pixelsquid, n.d. & Unsplash+, 2022)

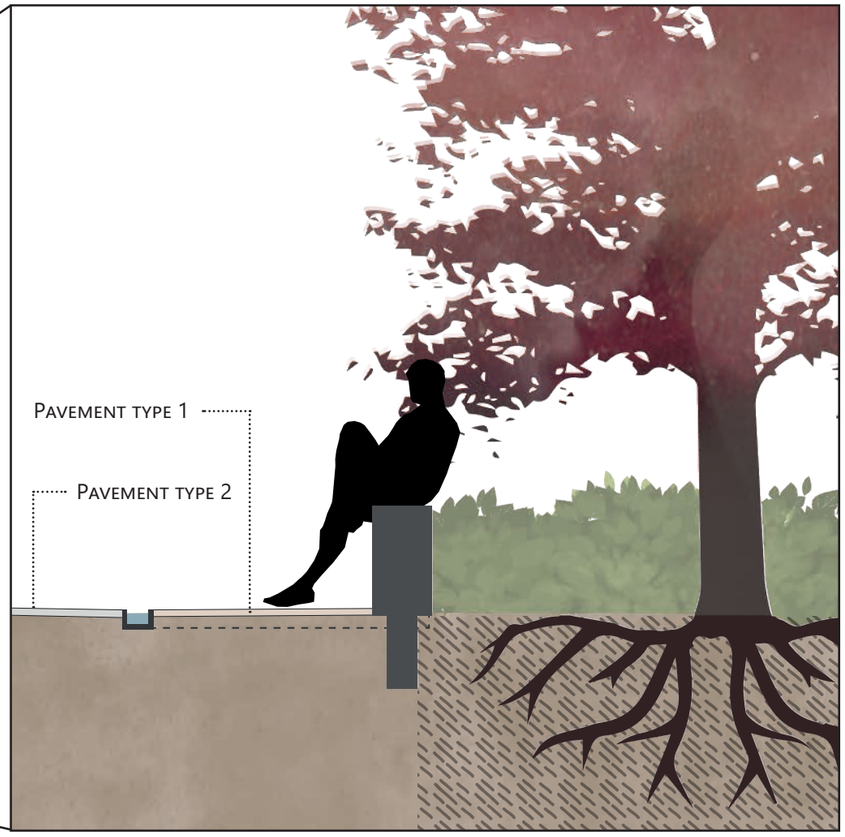


Figure 6.14 Detail section CC

Made with images from Pixelsquid (n.d.)

6.5.3 Water square

Zooming in on key elements

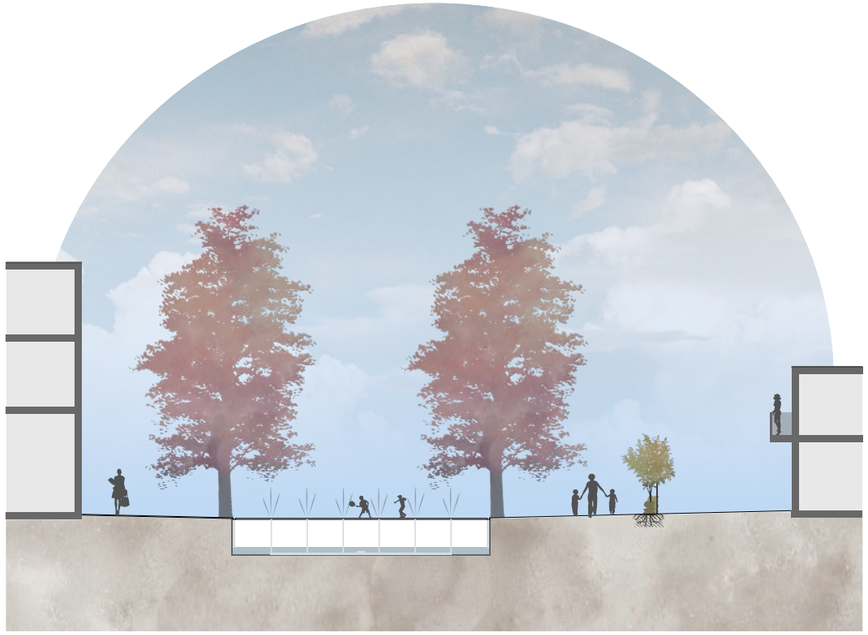


Figure 6.15 Section DD: Watersquare during summer

Made with images from (Pixelsquid, n.d. & Unsplash+, 2022)

The water square is one of the water features of the central lane. It is connected to several rhythms, in summer the fountains spray water and children can play in this water, it is a place where people come to cool down. The water used for these fountains is stored in the water basin below ground, which is filled with rainwater, in the case of heavy rainfall this basin can store extra rainwater. If this basin is full, the excess rainwater is transported into the water retention park via a pipeline.

Figure 6.16 Section DD: Watersquare during winter

Made with images from (Pixelsquid, n.d. & Farmani, 2021)

The square is a bit lower than the surrounding areas as seen in figure 6.17, this means that after recent rain, or when the fountains are running, a thin layer of water will remain on the surface of the area, similar the surface water streams that guide the lane. This way the square reminds people of the recent rainfall and emphasizes this rhythm.

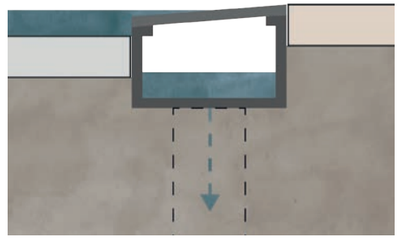


Figure 6.17 Detail watersquare

Figure 6.18 Vegetation changing throughout the year
Photos from (Eierman, 2021; Lindenbluette, 2013; Joustra, 2024; Powel, 2021; Robak, 2024; Tuma, 2018)

The new park is designed as a place where people can take their daily walk, have a lunchbreak or where children can play after school. It is also the place in the design where you can experience the natural rhythms throughout the year. The park is divided into several areas that cater to these different rhythms, some are open grass field that people can enter to play or to have a picknick while other areas are more overgrown with a wide variety of flowers that showcase the diversity in nature.

Figure 6.18 shows how the vegetation changes throughout the year, the fruit trees blossom in spring and provide fruit during summer and early autumn, after which the foliage changes color and eventually falls. More details on the choices in vegetation and their blooming periods are to be found on the next page.

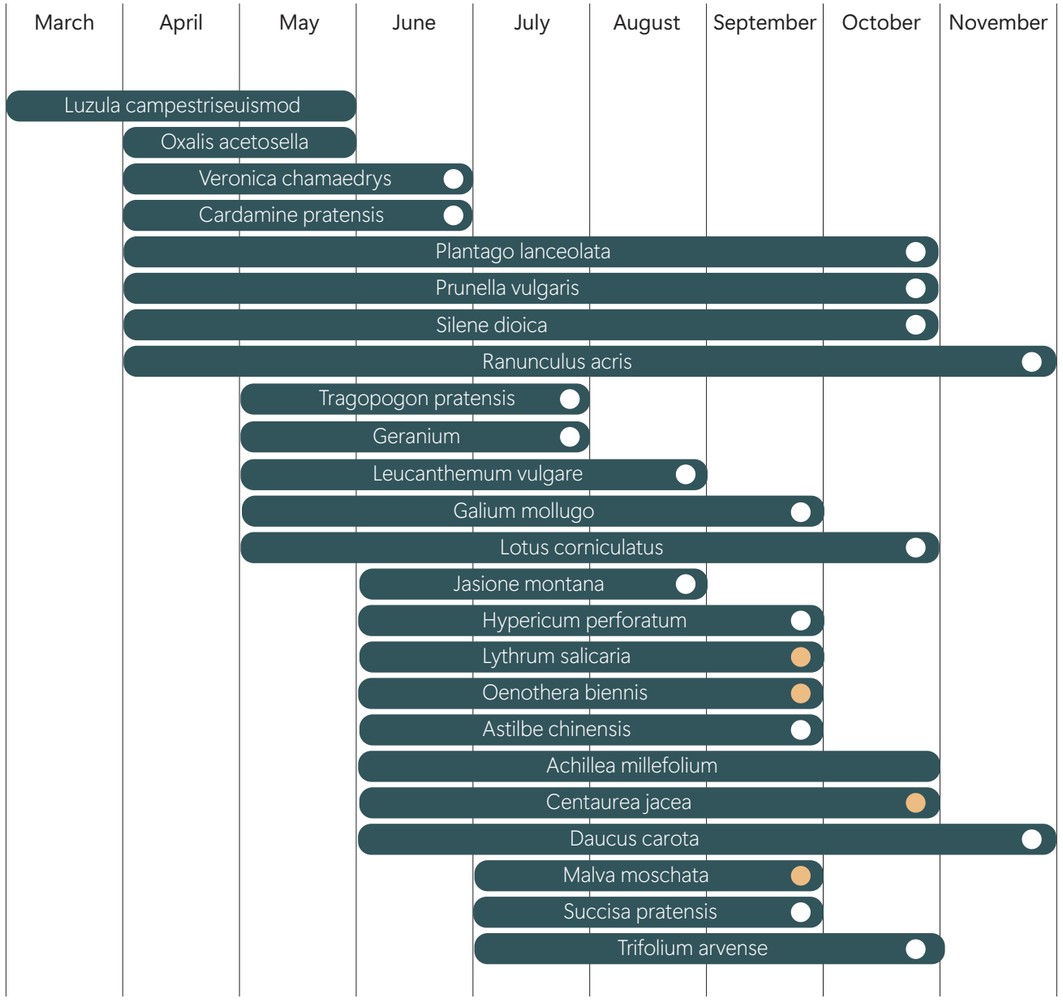


Figure 6.19 Blooming scheme flowermix
Information from cruydthoeck.nl

6.5.4 Blooming vegetation

Zooming in on key elements

Figure 6.19 shows the blooming periods for the flower fields, it shows that there is a variety of plants blooming between March and November, these plants showcase the changes in natural rhythms to visitors and improve biodiversity: most of the plants attract insects such as bees or butterflies and some attract birds as well.

Attracting these insects is important for the pollination of the fruit trees that are placed in the park. Three different types of fruit trees are chosen to have a variety in blooming and harvesting seasons, the trees offer visitors a variation of fruits during different months.

The pear tree, Pyrus 'Gieser Wildeman', and walnut tree, Juglans Regia, can both be harvested around September and October but are varied in the type of fruit and in size. For the pear tree a half standard tree was chosen with a height of around 3 meters so people can reach the fruits without the use of a ladder. The walnut tree is a lot higher, around 12 meters, this no problem as the nuts will fall to the ground and can be picked.

The Juneberry, Amelanchier Lamarckii, is the final tree that was chosen, it has a different harvesting period than the other two trees, the berries of this tree can be harvested in June and July. Another reason this tree was chosen is because the leaves of this tree turn a bright red during autumn which is another indicator that shows the seasons.

Legend

Attracts insects

Attracts insects and birds

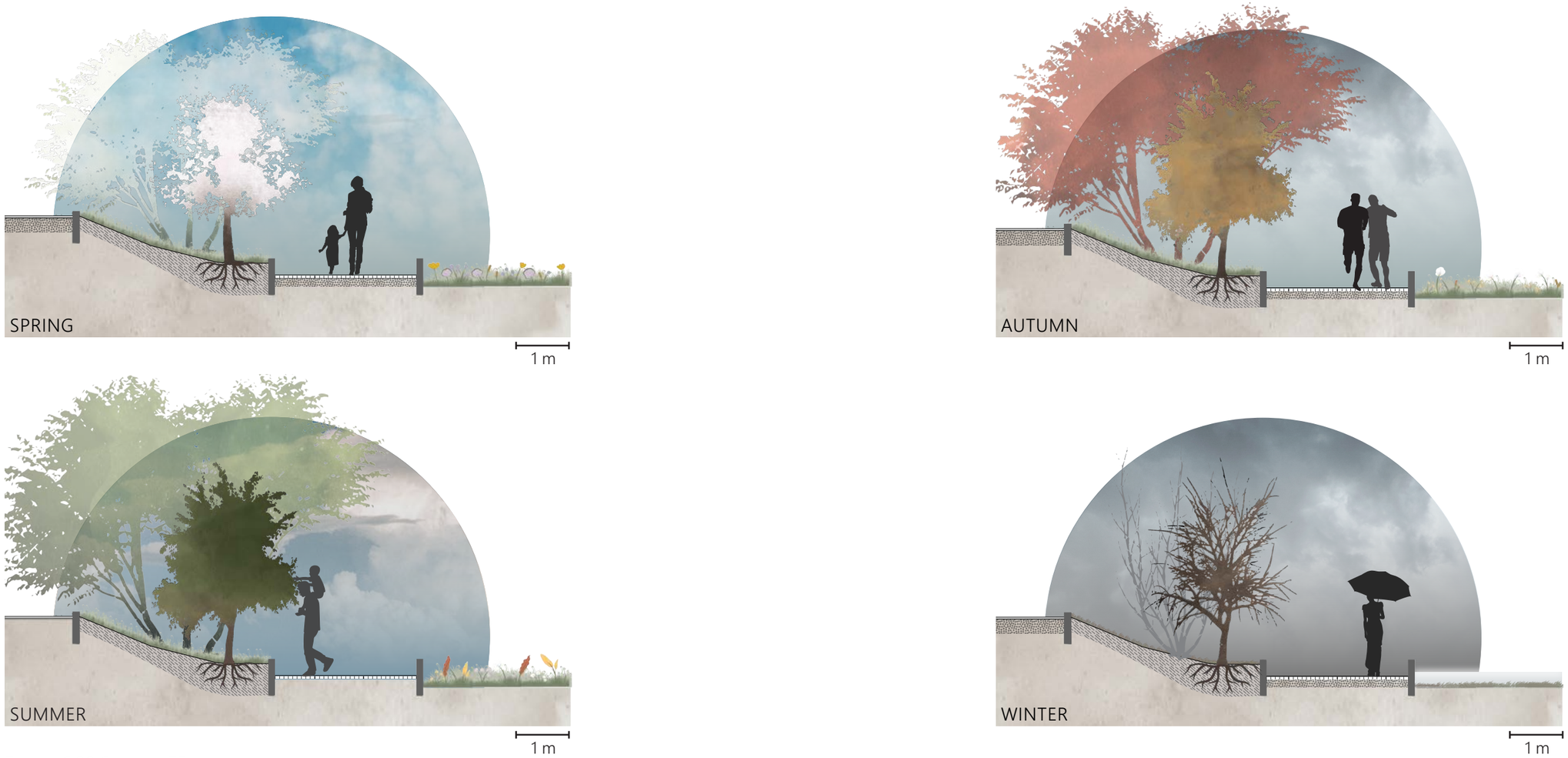


Figure 6.20 Section EE: the park throughout the year
Made with images from (Pixelsquid, n.d.; Unsplash+, 2022 & Farmani, 2021)

Figure 6.21 Oolderweg and view on Oolderveste

One of the main problems introduced in this thesis is the lack of activity in the neighborhood. This problem has been addressed in the design by adding more possible activities in the design area. However, the design area is located just outside of Oolderveste where this problem was most prevalent. The decision to make a design for this location, rather than for a location inside Oolderveste, has been made because Oolderveste currently lack the space to introduce bigger design interventions. Oolderveste is newly built and almost all the space in this core has been used to construct new houses, adding new functions and activities to this core is difficult without demolishing the homes of people. Therefore, a location close by Oolderveste was chosen, the next paragraph further explores how the design proposal could be part of a future strategy for the core.

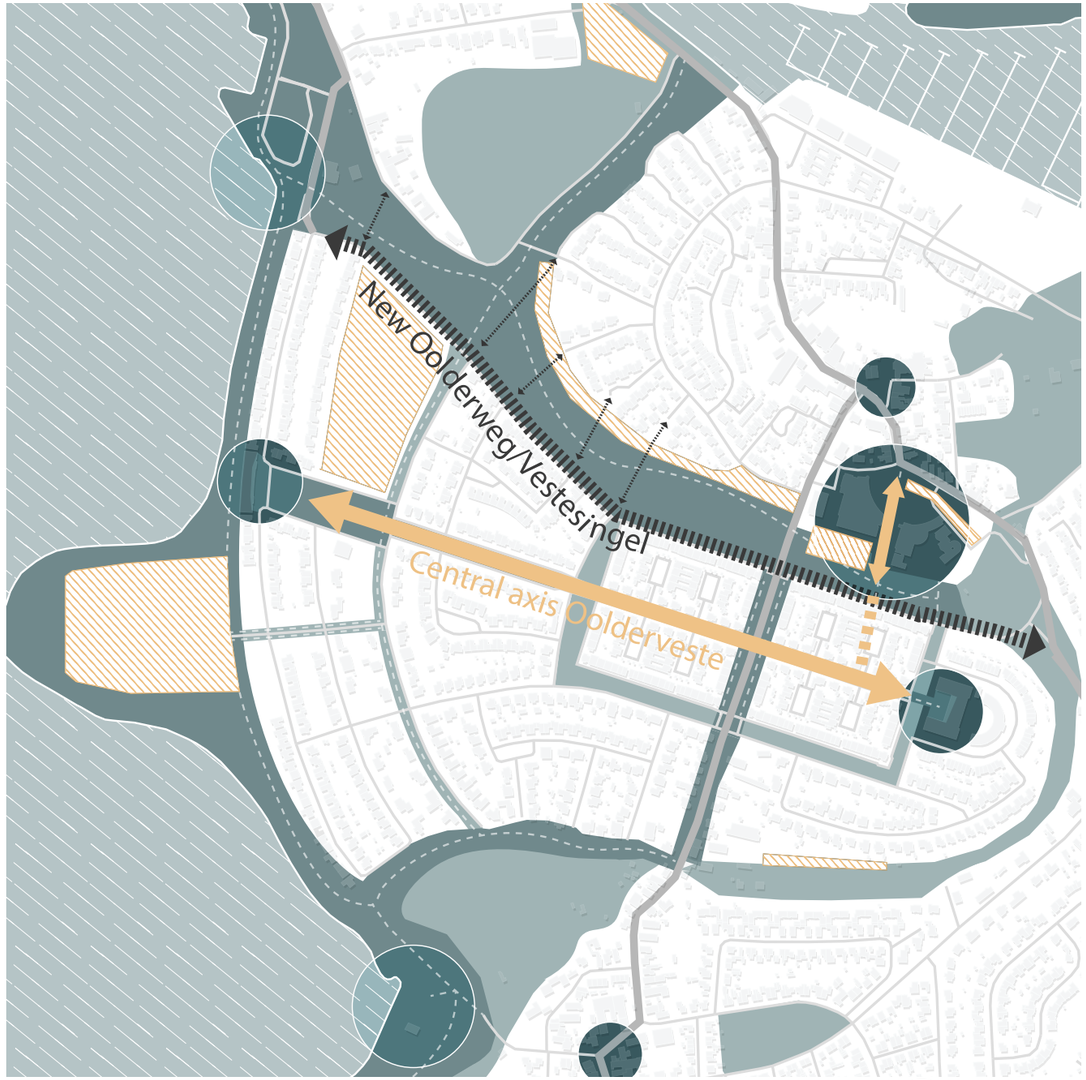


Figure 6.22 Strategy map Herten in 2070

6.6.2 Oolderveste in 2030

Strategy for Oolderveste

The map in figure 6.22 shows a strategy for Oolderveste and its surroundings for 2030. The key elements of this strategy are enhancing the green areas that surround the core, creating a new central axis of the core with a central place on each end, the addition of new slow traffic connections and the addition of new housing for elderly.

Many of the aspects of this design strategy continue from the design made for the amenity area in Herten. The park area is continued along the entirety of the water retention area, in this strategy these areas are meant to become places where people can experience natural rhythms and function as a structure that brings the existing nature -the Maasplassen- inside the neighborhood. The new green structure is also the place where slow traffic connections are added, this adds another layer of connections is the neighborhood that promotes walking and cycling. Another aspect that has already been introduced in the design for the central square is the addition of housing for the elderly, new housing for this demographic is needed as they often have special needs such as their house being a single floor and because this type of housing is currently lacking in the neighborhood.

The central axis in the strategy is based on the already existing street patterns of the core, the streets along this axis have a wide profile because they include some areas for water retention. Oolderveste is currently purely residential, in the future some places should be added where other functions can be found, in the strategy these are placed on both ends of the axis, an example of something that could be added here is local café or a small shop, similar to what is found in the other cores of the neighborhood. This creates some kind of center and strengthens the sense of place.

This axis in Oolderveste could also be connected to the central lane created in the small scale design, the lane from the design ends in Oolderveste but connecting it with the new axis proposed in this strategy would mean demolishing some buildings, this is therefore an intervention for further into the future when the street patterns are changing.

Legend

- Main green structure
- Secondary green
- New housing for elderly
- Maasplassen
- New connections
- Pedestrian paths

Figure 6.23 Changes to vinex
Made with images from (MrCutout, n.d; Skalgubbar, n.d & Skullkat, 2017)

6.6 The future of vinex

While the presented strategy was made for Oolderveste it includes many elements that could be valuable for the future of most vinex neighborhoods. Temperatures will rise everywhere in the country and creating more qualitative green places where people can go to cool down on a hot summer day will be important for most urban areas. Similar is the trend that shows an increase in elderly people, most vinex neighborhoods consist mostly of family friendly housing and thus lacks in housing suitable for the elderly; if more housing is built in these neighborhoods this demographic needs to be considered. The final element of the presented strategy which would translate well to other Vinex neighborhoods, is the addition of some kind of center or central place. One characteristic that many vinex neighborhoods share is that they are monofunctional, there is little diversity in the activities and rhythms that take place in these neighborhoods. Adding a more diverse program would increase the number of activities and rhythms which would lead to a stronger sense of place and more place attachment. If it is not possible to create more diversity inside the vinex neighborhoods, there is the possibility of adding activities to the surroundings of the neighborhood as is done in this thesis.

6.7 Conclusion

This chapter schowcased a design for the amenity area in Herten, the goals of this design were to create better connections to surrounding cores, to integrate rhythms in the design and to enhance the sense of place. These goals are achieved in the design through a few key interventions. The first of these key interventions is to create a central lane that connects the center of Herten to Oolderveste, this lane is emphasized on in the design through alternative colours and the addition of water features. Through this it becomes easily recognizable which is -together with the increase of activities along this lane- important to enhance the sense of place.

Another key intervention is the water retention park, this park gives people in the area a place to visit, people can sit down and relax, these are rhythms that were missing on the design location. The park also showcases natural rhythms: diverse vegetation blooms throughout the year changing what the park looks like. The park also has a role in preventing floods and mitigating heat waves, events which will happen more often in the future due to climate change.

The design is made for an area inbetween Herten and Oolderveste, it therefore also influences the future development of Oolderveste. Many of the elements of the design -such as the addition of qualitative green, creating some kind of central axis and adding the opportunity to host more diverse activities- can also be continued in Oolderveste or even in other vinex neighborhoods to enhance the sense of place.

CONCLUDING

Chapter 7 - Reflecting and concluding

Content

7.1 Introduction

This is the final chapter of this thesis report, in paragraph 7.2 a conclusion is given which summarizes the thesis and provides an answer the research question which was asked in chapter 1.

Paragraph 7.3 consists of a reflection on the topic, on the methodology used and on the results this thesis has brought.

Urban areas in the Netherlands have changed drastically over the last century, there have been many urban expansions: each one having its own design philosophy. The most recent expansion of the urban fabric has been the vinex neighborhood, these neighborhoods, located in between the city and the surrounding landscape are meant as a place for people who want to live in a quiet area while still having all the amenities that a city offers nearby. Over the years, these neighborhoods have grown, and many people enjoy living there. However, because they are designed as residential neighborhoods and because they are located near existing cities, they are often monotonous in function; there is only housing and there is a lack of diversity in activities. People travel elsewhere for work or leisure. The lack of diversity in activities and functions, together with the lack of opportunities to meet others has a negative effect on the sense of place of these places.

This thesis combines the sense of place and time, it assumes that the sense of place is not something which is constant but something which constantly changes. A literature review has shown that the sense of place is closely connected to the sense of time through static elements that rarely change, through dynamic elements that change continuously and through collective elements that include the experiences and memories of people in the place. This thesis focused on the effect of urban rhythms, these rhythms are one of the dynamic elements that link the sense of place and the sense of time together in a specific location.

The chosen location for both the research and the design for this thesis is the neighborhood Herten; this neighborhood -and especially the core Oolderveste- shares many characteristics with the typical vinex neighborhood. Like many of these neighborhoods Herten is currently lacking in sense of place and sense of community. The goal of this thesis is to create a design which can enhance the sense of place in Herten. To do this it uses urban rhythms, these are the changing, or dynamic elements that can be observed in a place, these rhythms are used to both understand the place better and to inform design decisions. The main research question asked in the beginning of the thesis is: *How can urban rhythms be used in an urban design to enhance the sense of place in Herten?*

To answer this main question several sub questions are asked. First of which is: *How has the sense of place in Herten changed due to previous expansions?* Herten has existed as a settlement for hundreds of years, it used to exist as three separate villages that were characterized by their agriculture and religion. Because the population was so small, most people knew each other. They would also see each other daily, as everyone was required to visit the local church before work or school. The Herten of today is very different, it has grown through numerous expansions and has become a neighborhood that is part of the city of Roermond. It is a residential neighborhood where most people keep to themselves, the feelings of community that defined the place a century ago have become more difficult to find, they are limited to the few village associations that organize local events.

With the change in sense of place, the urban rhythms that can be found in Herten have also changed.

The second subquestion: *what are urban rhythms in Herten?* Looks into which rhythms currently define Herten. To see what rhythms define Herten it is important to first further define what urban rhythms mean for this thesis. As stated before: urban rhythms are part of the dynamic elements that link the sense of place and time. They are changing but repeating elements that are categorized based on their cause -which is either natural or social- and based on their scale in time: they are expected to repeat along either the daily cycle, the yearly cycle or when specific events happen. Herten is defined by a combination of rhythms from different categories, this includes rhythms that can be found in most urban spaces such as people traveling during rush hours or taking a walk through the neighborhood but also rhythms that are more place specific. An example of more place-specific rhythms are rhythms related to the waterside.

The final sub question: *How can rhythms be translated into a design?* is about creating a design for Herten, rhythms are the tools used in this design to inform design decisions. The process to do this was twofold: firstly, rhythms which need to be given space in the design need to be selected and secondly a decision needs to be made on how they will be incorporated.

The selection of rhythms is location specific; the chosen location is an area which near most of the amenities of the neighborhood. As such, social rhythms play an important role in this location, the design will focus on creating spaces to cater to rhythms that can already be found in the area such as people doing their groceries and picking their children up from school. It will also attempt to increase the natural rhythms to the south side of the location, this area is currently meant for water retention in case of a heavy rainfall or a flood. However, it has the potential to host a wider range of activities and rhythms.

Incorporating the rhythms in this design and enhancing the sense of place in Herten is done through two key interventions. First is the creation of a central lane along where many of these rhythms can share the same place and where most of the activities happen. Second is transforming the water retention area into a park: this park is still capable of storing water but is also a place for people to go to and relax, it introduces new rhythms to the design area.

The design shows through these interventions how existing rhythms in an area can be strengthened and how new rhythms can be introduced. Many of the rhythms used in the design are connected to activities, strengthening the rhythms in a place therefore also causes more activities to happen in a place. This in turn strengthens the sense of place.

The design was made for an area where there were many rhythms could already be found while the problem stated in this thesis was about the lack of rhythms in a place. However, because the chosen location is central to the neighborhood it will influence surrounding areas and will therefore have a bigger effect on increasing the sense of place than a design elsewhere in the neighborhood. New connections have been added to ensure that people in the residential areas can easily visit the design location, the residential areas therefore also profit from this design.

The proposed design can also be used to create a strategy for the surrounding areas. Many of the elements such as increasing connections, introducing housing for the elderly, and adding qualitative green space would translate well to a larger scale and could be continued into these areas. Most of the elements would also be relevant to other vinex neighborhoods that aim to enhance their sense of place.

7.3.1 Reflection on the topic

Reflection

When I started the project, I wanted to look into how a place changes over a certain period of time. To me, this always included two types of change: permanent change that happens over a long period of time, and temporary changes that happen all the time. At first, I found it difficult to define my problem statement within this topic, it was a topic that I was fascinated by but it was a topic that I thought of as an opportunity for urban design and not as a problem that needed solving. The lack of a problem statement made it difficult for me to structure my thesis. While I did not have a clear problem statement in mind I did start my research into the history of a location, by doing this research I learned about how Herten has changed from a collection of villages to what could be called a typical Dutch vinex neighborhood, this finding made my interested in understanding the changes to identity in a place and set me on a new track for my research. To me the expansions in Herten caused the place to lose part of its identity which decreased the sense of place, finally I had found the problem statement I could use in this thesis.

My problem statement includes both elements of my research into how urban spaces change through time and the importance of having a sense of place, but it did not yet feel like these two concepts that I had been researching were truly connected; for this I ended up needing the theory by Wunderlich (2014) about time and rhythms in urban spaces. This theory was in line with my thoughts about time as something that causes both permanent as cyclical change, but it also introduced the concept of time as a sense to me. This way of looking at time matched well with the theories about sense of place that I read and is what allowed me to connect my two research topics. This is what led me to the topic of urban rhythms, which allowed me to combine the activities that are a key element to the sense of place to the dimension of time, it also allowed me to include the influences of natural processes in a space which is something that is not often included in theories about sense of place.

Although these urban rhythms were a new tool for me, they are closely related to what I have learned in my masters in urbanism at TU Delft. The topic within urbanism that I have always been the most interested in is looking at how people interact with the space around them and how different functions and values could be brought together in a design. The rhythms that I use in this thesis are a way to connect the human and natural values in a design. In the field of urban design, it is also important to think about possible futures as changes to urban spaces often take a long time to implement, this matches well with my chosen topics. While the rhythms of an urban place will change as the place itself changes, they can be used to anticipate what function the place should fulfill in the future, Looking at ongoing trends can help determine which rhythms will still be relevant in the future and what rhythms will gradually disappear.

7.3.2 Reflection on the methods

Reflection

The first method I used for my thesis was the historical analyses I did; this analysis was mostly done through desk research using old maps of the area and photos and texts available through the archive of the municipality.

After these initial historical analyses all my methods were based around the urban rhythms that have become the main topic of my thesis. In the analysis phase I used fieldwork to find what rhythms took place on my location. This fieldwork mostly consisted of observing the location and writing down or drawing my observations, important to this fieldwork was that I did it all throughout my thesis observing the same place at different times of the day and year to get a grasp of the different cycles which move along the rhythms. While observing the place as I did was great for collecting the different urban rhythms I could probably have found more specific rhythms related to the daily lives of people by interacting with the inhabitants, this is something which could have improved my thesis.

After the creating the initial collection of rhythms through fieldwork I started thinking about using them in a design, to do this I started sketching small conceptual design interventions that would either encourage or highlight the found rhythms when applied to an urban design, an example of this is placing extra benches for people having their lunchbreak outdoors. A lot of these design interventions are interventions or ideas that can be found in other urban designs, however by linking them to rhythms it became easier to argument what interventions should have priority and create a better connection to the analyses and differentiates this project from other design projects.

To strengthen the connection between the analysis and design I decided to create a pattern language. Originally my idea was to mostly make this pattern language with the small design sketches I made based on the rhythms to later translate them into a small-scale urban design, However, while developing this pattern language, I realized that the rhythms themselves were similar to the patterns I was trying to create, and I decided to base my pattern language around them. I then organized these rhythms along several themes which in turn were explained by either fieldwork or the design sketches. Making the pattern language like this also offers the opportunity to organize the rhythms differently and generate new themes which could lead to new design ideas.

A final way that rhythms played an important role in my process and methodology is through storytelling. In the design phase of my thesis, I used the rhythms related to the place to tell my story about the different aspects of the design, using the rhythms tied my story together and make the design more imaginative, it helped in understanding how the design would function.

7.3.3 Reflection on the results

Reflection

The result of my thesis is a small-scale urban design that was made by analyzing and incorporating the urban rhythms of Herten, the design showcases how these rhythms can be used to inform design decisions and explain the design. While it is a single design, showcases different rhythms, an example of this is the lane that was designed with the entry to amenities in mind while the park was designed to showcase natural rhythms. The method used to design these spaces could easily be replicated in other design projects while remaining location specific.

From the beginning this thesis focused on a specific location that I knew well personally; this does not mean however that the project cannot be placed in a wider context. Herten, and specifically Oolderveste, share many characteristics with the typical dutch vinex neighborhoods. Many of the rhythms and trends found in Herten can also be found in other neighborhoods, many of the decisions in the design, especially aspects from the strategy for Oolderveste would also fit well in other vinex neighborhoods. The project could therefore be seen as not only an exploration of how rhythms can be used as a method in design but also as a case study in designing the future of the vinex neighborhood.

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