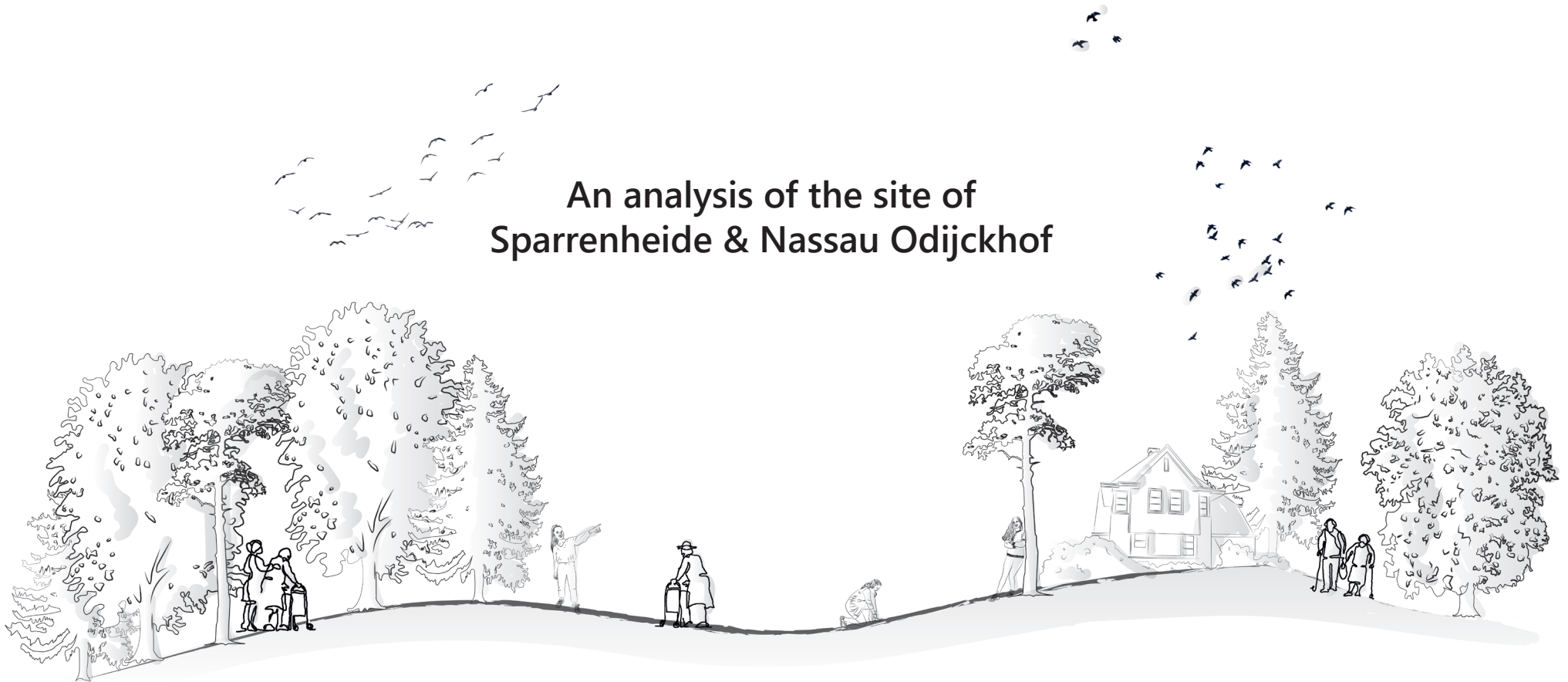


An analysis of the site of
Sparrenheide & Nassau Odijckhof



The site analysis

of Sparrenheide & Nassau Odijckhof

Site Analysis Booklet

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introduction

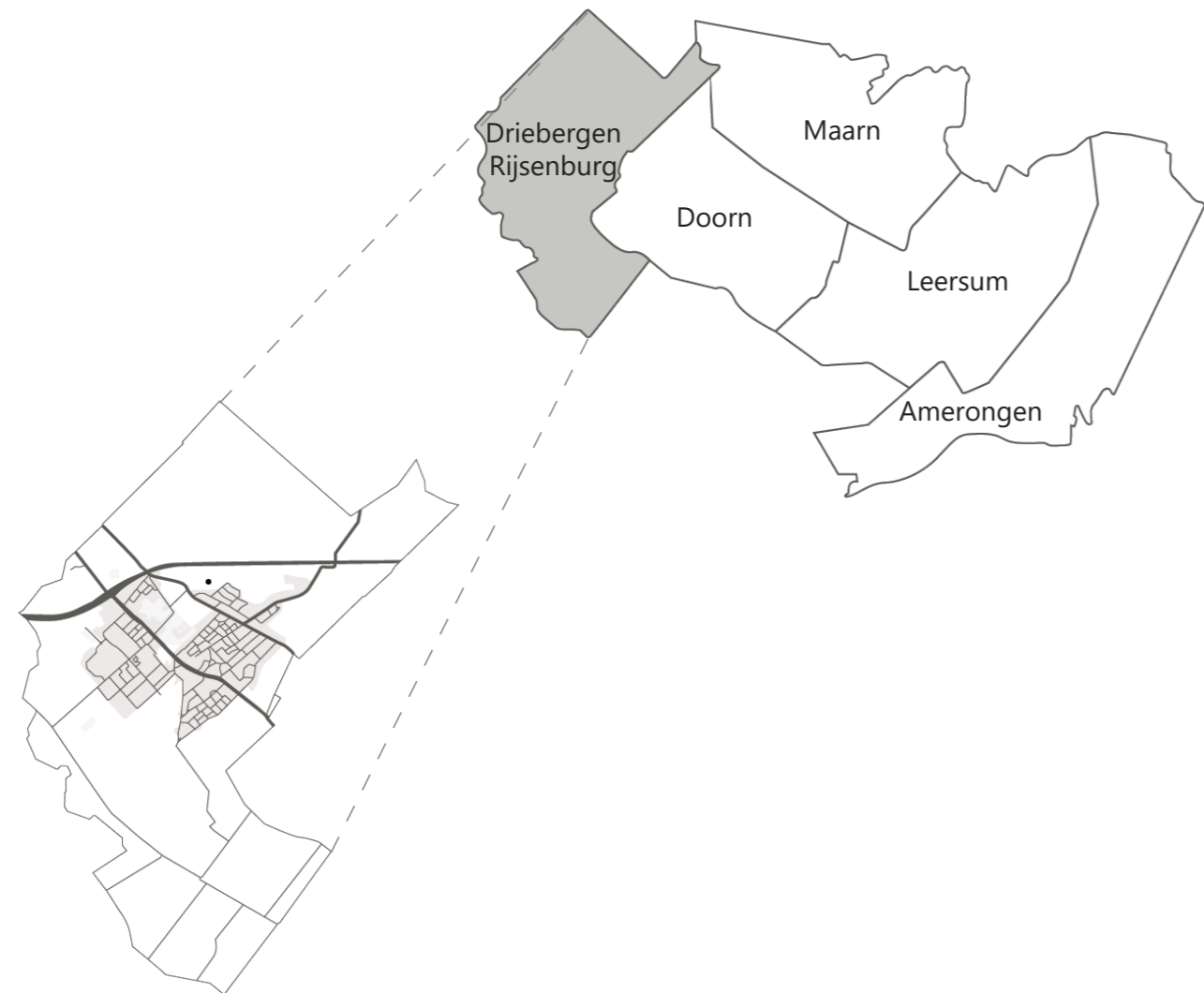




A bench located under the trees in the forest behind the site with the current elderly home in the background

I Introduction

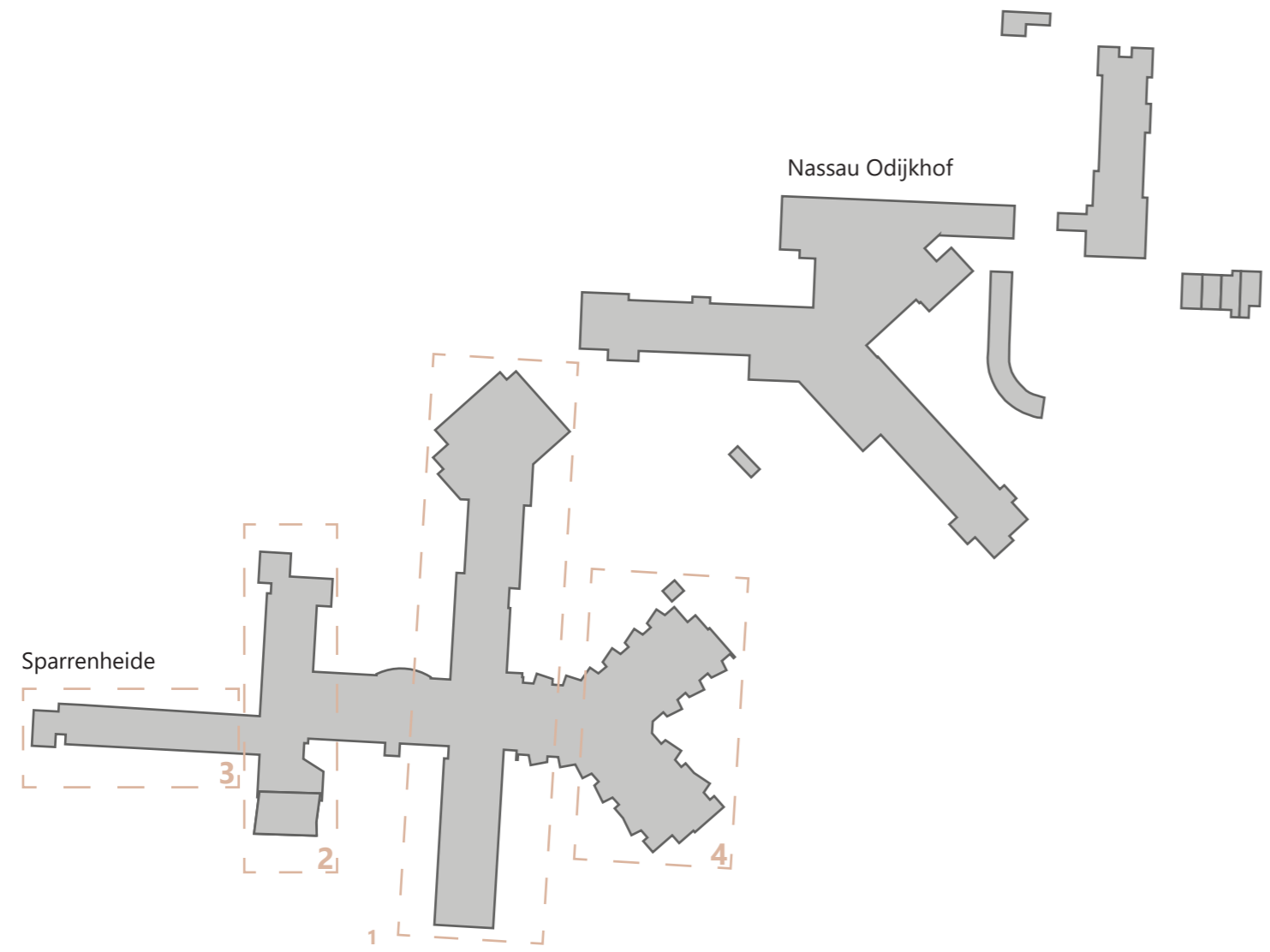
Characterised by beautiful pine trees embracing the sky in winter, red leaves flying through the autumn air, purple heather decorating the sloping hill landscape in summer and singing birds in the spring, is our site Sparrenheide in Driebergen-Rijsenburg. Through an analysis of the site we will bring you along our exploration of the historical, demographical, urban, climate and landscape aspects of the site and its surroundings. The analysis is followed by a written and visual conclusion on the strengths, weaknesses, threats and opportunities of the site. Lastly, the vision plan for the site of Sparrenheide and its surroundings is presented as a base for the further architectural design of homes for old people.



Location of the site

Our site is located in a Dutch village named Driebergen-Rijsenburg.

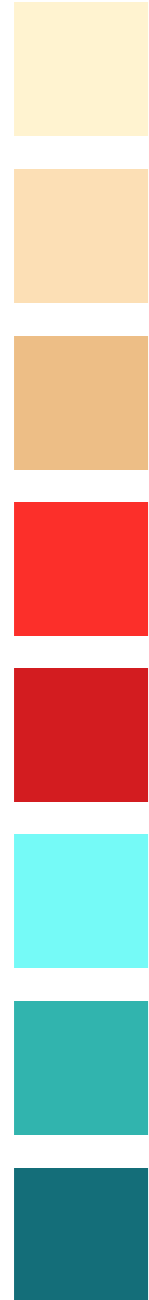
Driebergen-Rijsenburg is part of the province of the Utrechtse Heuvelrug, a beautiful national park located in the middle of the Netherlands and analysed in the next chapter. The location of our site (the dot on the image on the left) is currently named Sparrenheide and Nassau Odijckhof, the names of the lanes that surround our site.



Sparrenheide & Nassau Odijkhof

The site has two buildings named Sparrenheide and Nassau Odijkhof. The table on the left shows the surface, number of apartments, the building footprint, the Gross Floor Area (GFA) and the volume of both buildings.

		Parcel	Apartments		Building footprint	Gross Floor Area (GFA)		Volume	
Sparrenheide	1	23.662 m ²	92	157	6.210 m ²	9.338 m ²	15.900 m ²	25.680 m ³	34.725 m ³
	2		18			1.460 m ²		4.015 m ³	
	3		47			5.102 m ²		14.030 m ³	
	4								
Nassau Odijkhof		26.350 m ²	140		4.180 m ²	7.611 m ²		29.025 m ³	
Total		50.012 m ²	297		10.390 m ²	23.511 m ²		72.750 m ³	



Colours of Sparrenheide

Compared to the previous page with colours, the colours of the building Sparrenheide are totally different. The other colours were warm, this combination of colours give a more cold look. The blue colour contributes to contrast with nature, on top of that, red is used in the sunscreen that creates even more contrast.



Textures of Sparrenheide

Sparrenheide has different textures next to the building. It has a pond and an exercise track for walkers.



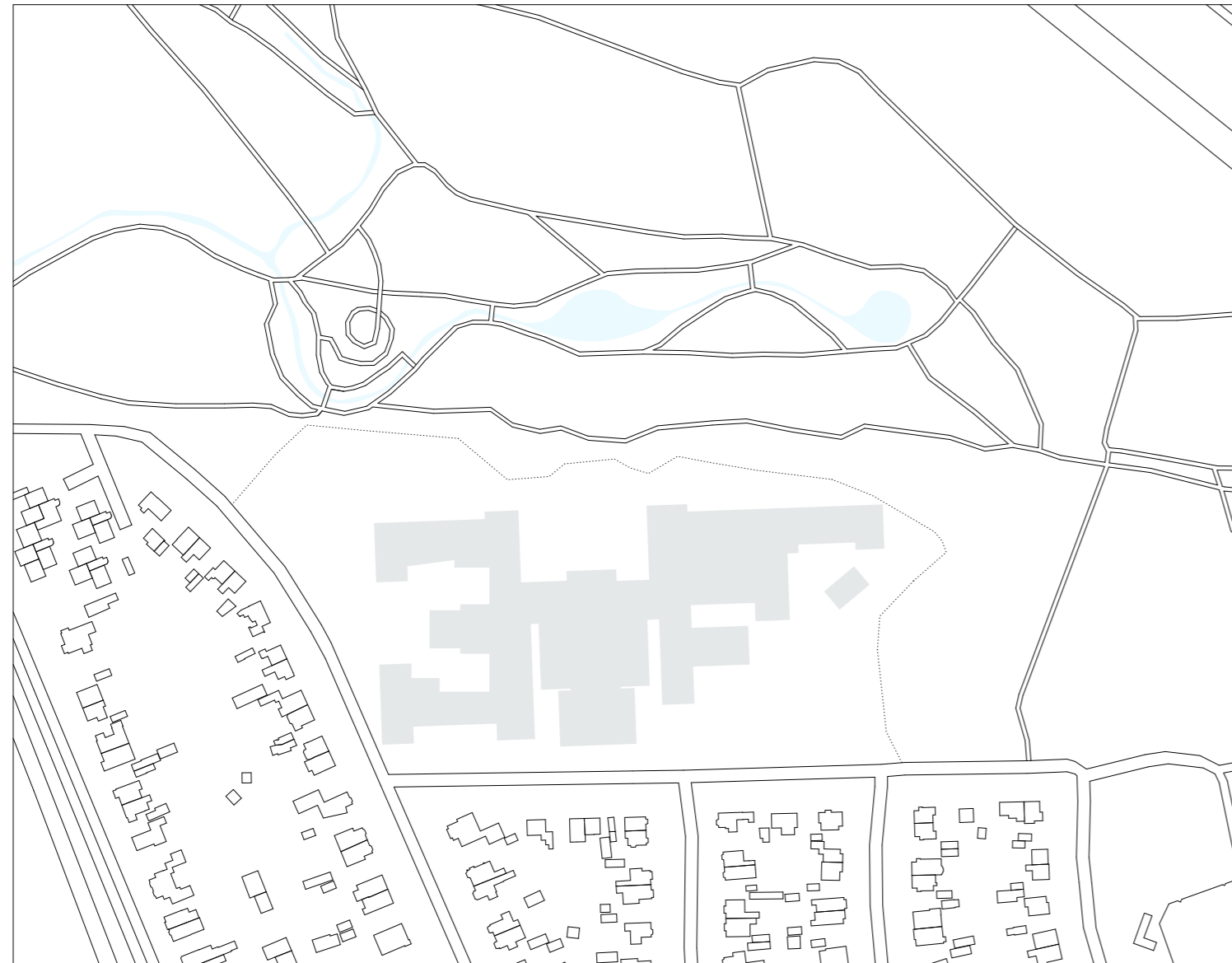
Colours of Nassau Odijckhof

The colours of the building Nassau Odijckhof differ a lot with Sparrenheide. This building has more warmer tones and are in the same spectrum with each other. In relation with the colours of nature, this will be more suitable if you are striving for one feeling, then it creates balance with nature.



Textures of Nassau Odijckhof

Nassau Odijckhof is made out of different kind of bricks. Some bricks even pop out of the facade, giving the building a more natural look.



Scale of the site

When wandering through the site we already noticed it was easy to get lost: the site appeared to be quite huge. In order to get grip on the size of the site we placed the building of the architecture faculty, a large building we are all very familiar with, into our site plot. The faculty fits exactly into our site plot and made us realise we had to make a master plan focussing on urbanism and landscape architecture first, before looking into architecture itself. In the next chapters these aspects will be analysed.

history



II History

Introduction

The village of Driebergen-Rijsenburg is signified by its situation in a Dutch National Park named the Utrechtse Heuvelrug, translating in English to the Utrecht Hill Ridge. Driebergen-Rijsenburg marks the southwest side of the centre of the landscape. The Utrechtse Heuvelrug is characterised by its hill ridge system that is some kilometres wide and a tenfold meters high, covered with forests and heather, as well as with buildings (Visscher, 2020).

The Utrechtse Heuvelrug is part of a province landscape of the province Utrecht. The province of Utrecht states three core qualities of the landscape; a robust unity, an experience of reliefs and extreme historic stratification. Next to the Veluwe, the Utrechtse Heuvelrug is the biggest consecutive forest area in the Netherlands and it differs in vegetation from forests with drift-sand and heather. The hill ridge is formed by a push moraine, a landform created by glacial processes, that stretches from the Grebbeberg in the South to the lake of the Gooi in the province of North-Holland (Okra Landschapsarchitecten BV, 2011).



Map showing Driebergen-Rijsenburg located on the Utrechtse Heuvelrug highlighted within the province of Utrecht

Introduction

In this chapter of the site analysis we will explore the history of the landscape of the Utrechtse Heuvelrug in which Driebergen-Rijsenburg is situated. It will provide an extensive insight in how the landscape of the Utrechtse Heuvelrug is formed throughout the years, and so explains the context of how the landscape of Driebergen-Rijsenburg is created as well.

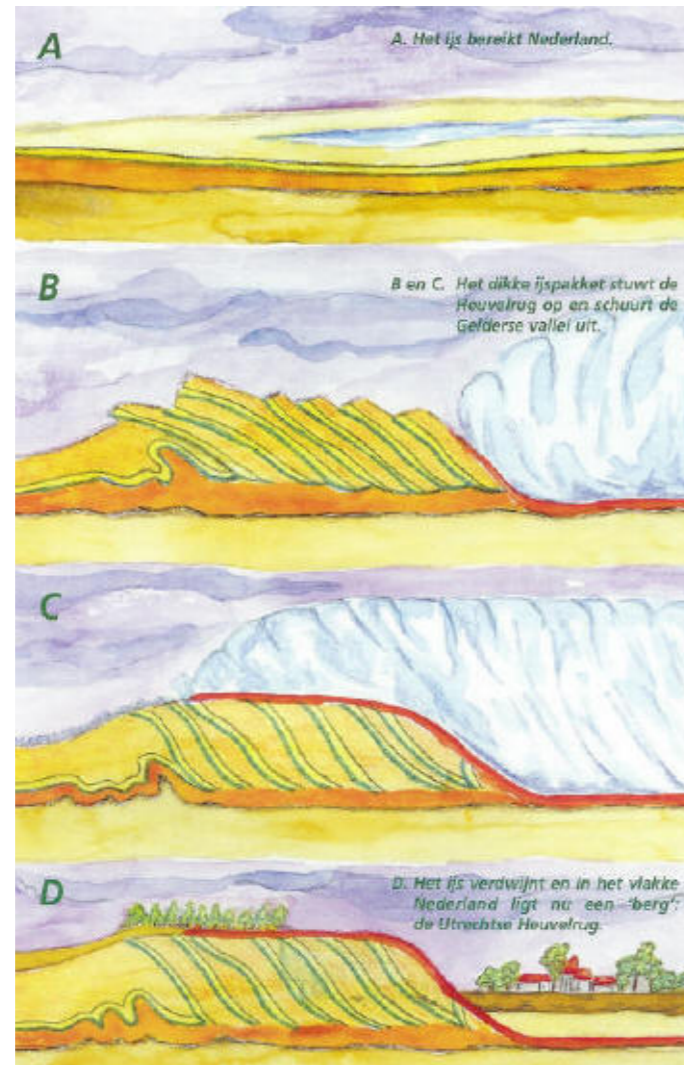


Figure 1 An illustration of the merge of the Utrechtse Heuvelrug

The merge of the Heuvelrug

The development of the Utrechtse Heuvelrug primarily originates from the Scandinavian ice cap volumes covering a large part of the Netherlands 150.000 years ago. Ice, ice water and wind deposited large amounts of sand along the bottom of the hill ridge, of which the surface of the southwest side of the Utrechtse Heuvelrug slightly leans towards the nearby river area. During the covering of the ground by the Scandinavian ice cap volumes the ice water caused the form and layering of the shallow underground with a package of gravel rich sands.

Ten thousand years after, strong winds covered this package with finely divided sand particles creating a flexuous surface. After the ice age forests appeared defined by oak and birch trees. These natural deciduous forests slowly turned into steppe and heather vegetations as a result of logging and grazing. As a result of the logging the upper layer of the ground turned grey, while the lower layers turned dark as banks of compost formed from an accumulation of washed away soils. This combination of soils, in Dutch called 'haarpodzolgrond', is known for its retention of moisture.



Figure 2 The cultivation of land into agricultural ground with ox

The merge of the Heuvelrug

During the Middle Ages the area was divided, starting from the river-are, into kilometres long parcels oriented toward the Southwest East. Some parcels were separated by roads directed towards grazing grounds higher up the Utrechtse Heuvelrug. Besides, cross connections for traffic were created of which the most important were the Hoofdstraat and the Arnhemse Bovenweg, both currently situated in Driebergen-Rijsenburg. Since the Middle Ages, as a result of the turfing of the 'haarpodzolgrond' soil, loose sand appeared to the surface. This human action of turfing caused sand-drifts in dry areas until the beginning of the 20th century and the emerge of a capricious relief.

The soil near the Hoofdstraat served as a good surface for agriculture and later on also served as a place for many houses surrounded in nature, which then expanded towards the Northeast. In the lower parts of the hill ridge in Driebergen-Rijsenburg, big decorative water elements were placed and sloping hills were created. In the higher parts several creeks were created (Visscher, 2020).

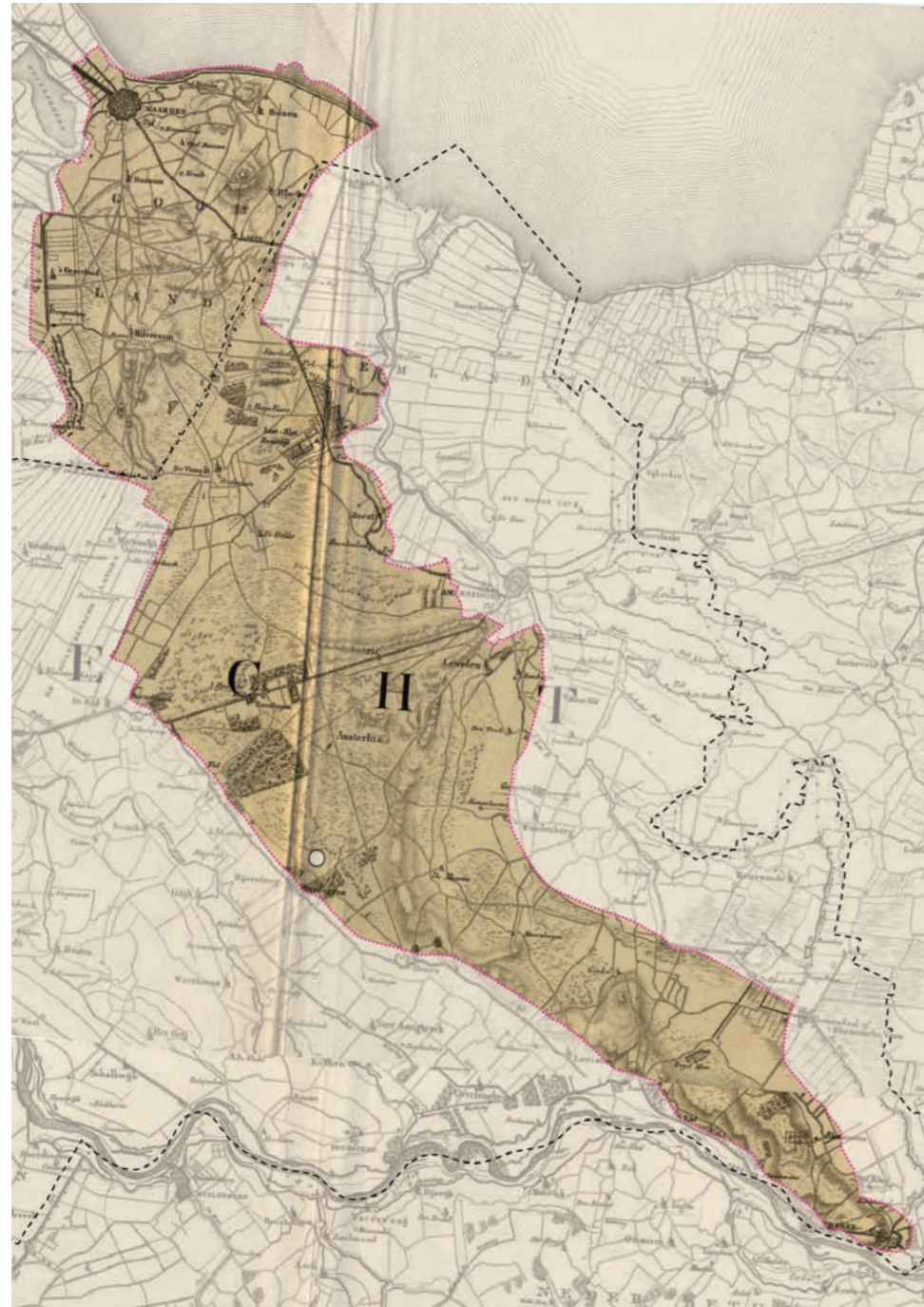





Figure 3 Map of Utrechtse Heuvelrug

-  Boundary of Utrechtse Heuvelrug in province Utrecht
-  Boundary of the province of Utrecht
-  Site of Sparrenheide in Driebergen-Rijsenburg

1820

Historical map of de Utrechtse Heuvelrug

The Utrechtse Heuvelrug mainly consists of heather and is a bare hill ridge with points of orientation at a far distance and barely any cultivation. The map shows a few of the estate forest parks. A small estate forest park in Driebergen-Rijsenburg can be found called Park Sparrendaal (Visscher, 2018). Reclamation of land can be clearly identified in the map as it forms a straight axis, on the Amersfoortseweg, right through the hill ridge (Okra Landschapsarchitecten BV, 2011).

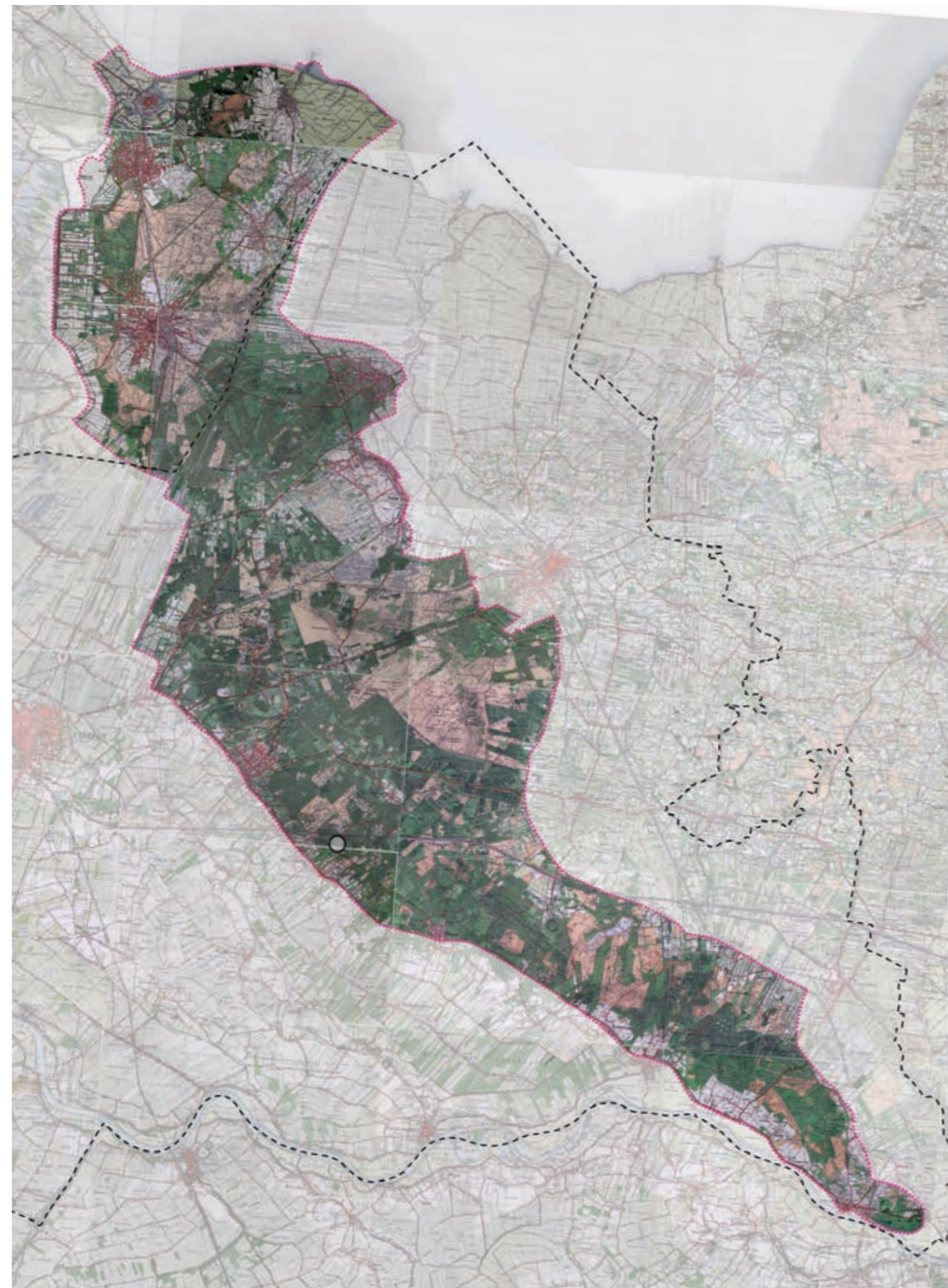





Figure 4 Map of Utrechtse Heuvelrug

-  Boundary of Utrechtse Heuvelrug in province Utrecht
-  Boundary of the province of Utrecht
-  Site of Sparrenheide in Driebergen-Rijsenburg

1920

Historical map of de Utrechtse Heuvelrug

When compared to the map of 1820, the long-drawn-out forests attract attention. From the large surface of heather in 1820 is only a small part left, these fields were used as a military airfield. Railways between Amsterdam-Amersfoort-Zwollen and Utrecht-Arnhem are placed, and along the Amersfoortweg many estates and outdoor places have been established. The first villa quarters have been developed on the sides (Okra, 2011).

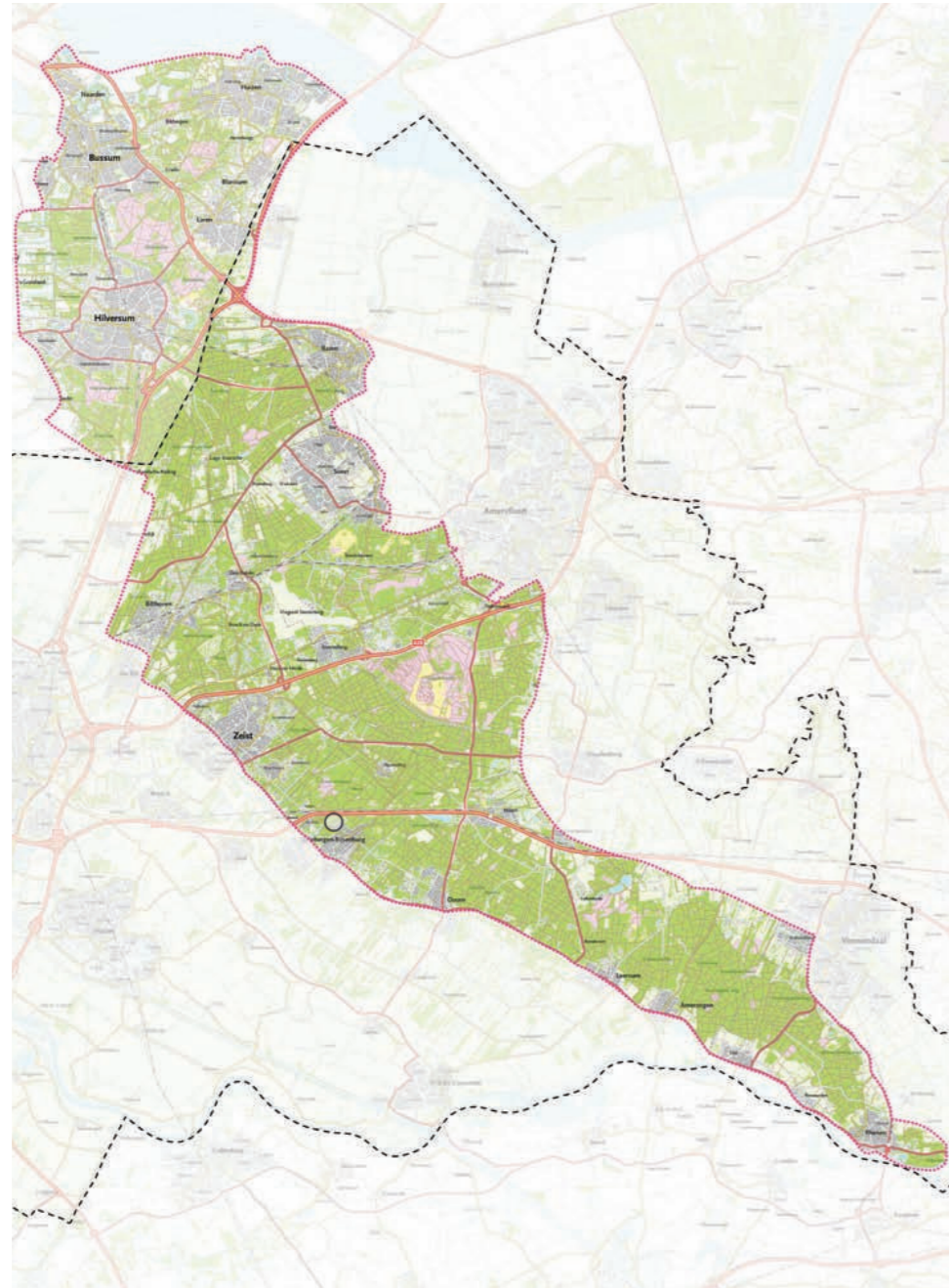





Figure 5 Map of Utrechtse Heuvelrug

-  Boundary of Utrechtse Heuvelrug in province Utrecht
-  Boundary of the province of Utrecht
-  Site of Sparrenheide in Driebergen-Rijsenburg




2000

Topographical map of de Utrechtse Heuvelrug

The construction of highways after the Second World War have changed the landscape of the Utrechtse Heuvelrug heavily. What used to be a well-connected area of forests, is now a number of several ecological separated areas. In an attempt to connect these areas ecologically again green bridges have been placed. In 2003 is the area south of the highway A12 officially named as the National Park Utrechtse Heuvelrug. Driebergen-Rijsenburg is located right under the highway A12. All cores of cultivation have been expanded greatly (Okra, 2011).



Figure 6 Map of Utrechtse Heuvelrug

-  Boundary of Utrechtse Heuvelrug in province Utrecht
-  Boundary of the province of Utrecht
-  Site of Sparrenheide in Driebergen-Rijsenburg

The present

Current air picture of de Utrechtse Heuvelrug

In the picture it becomes clear that the site of Sparrenheide in Driebergen-Rijsenburg is found at the intersection of cultivation and forest area near a busy high way.

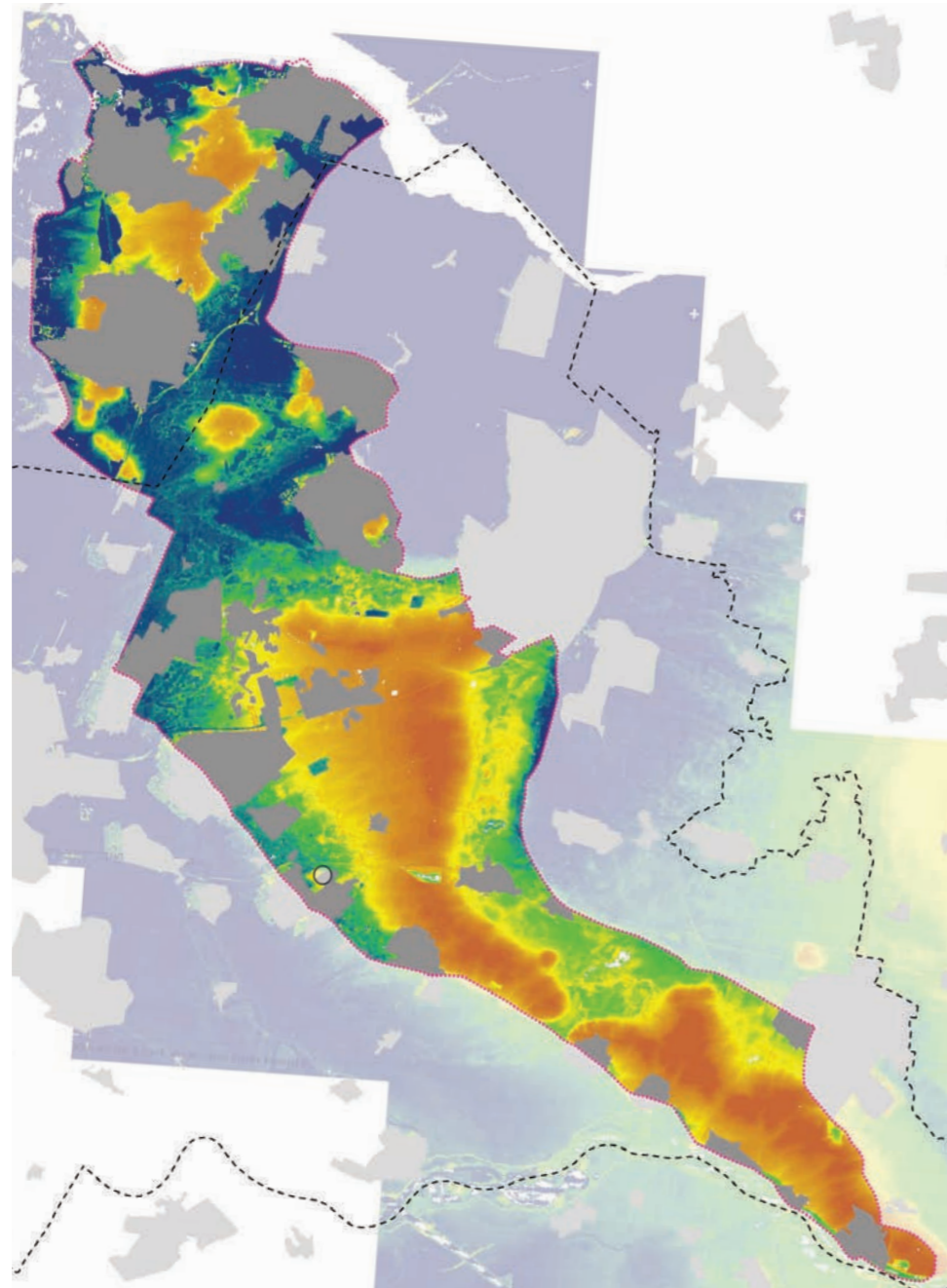
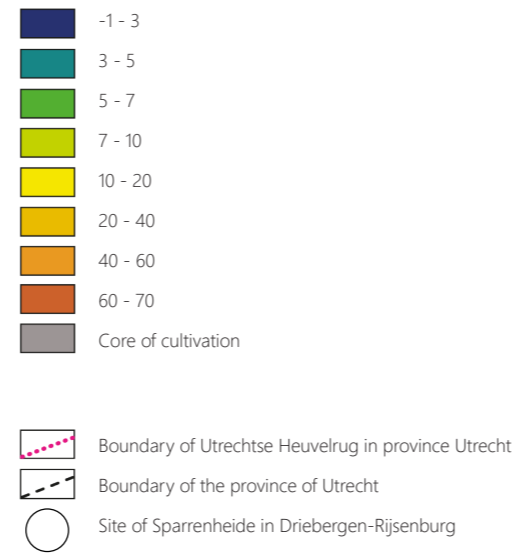


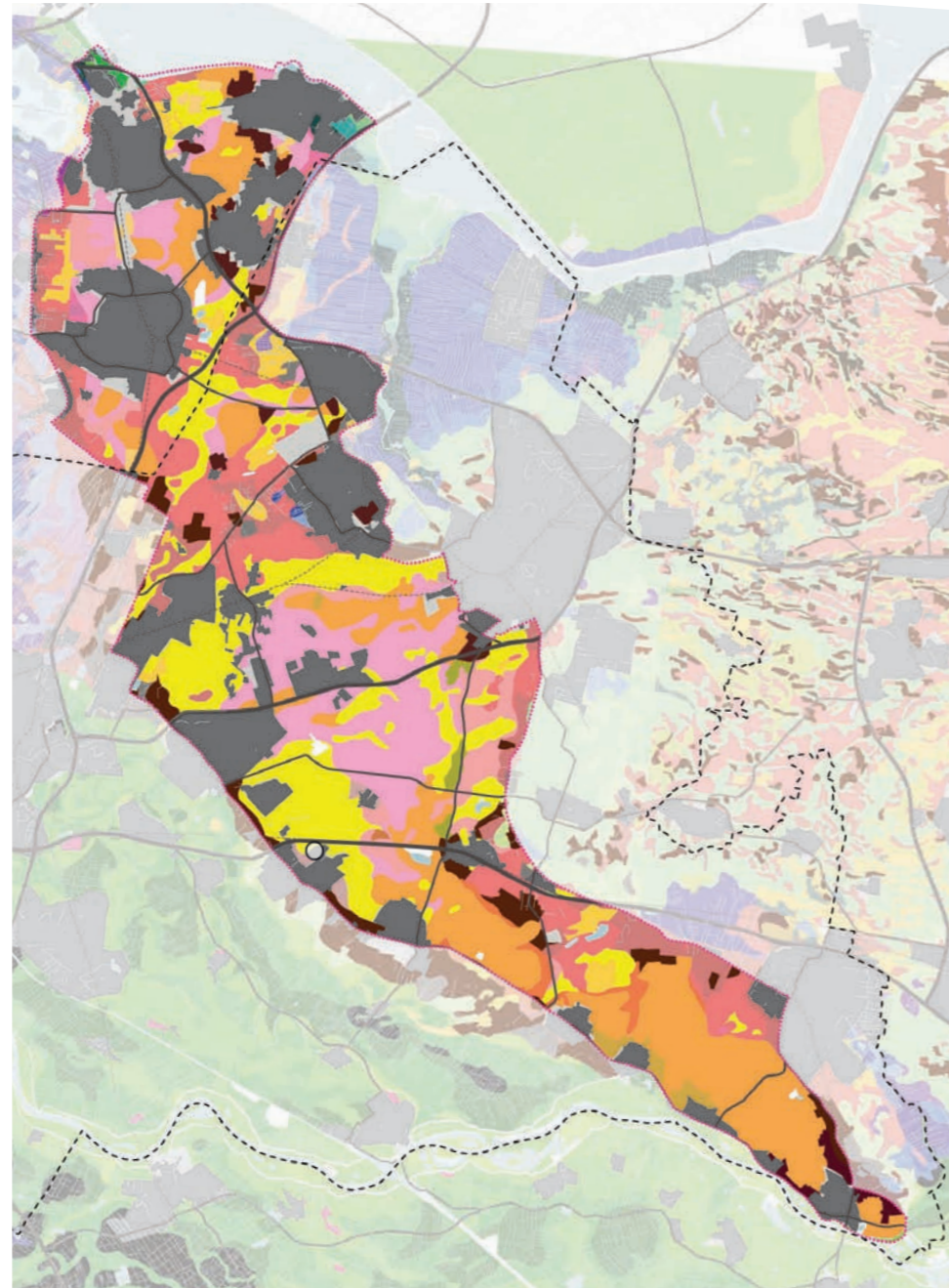
Figure 7 Map of Utrechtse Heuvelrug



Height map

Current height map of de Utrechtse Heuvelrug

In the height map the hill ridge becomes clearly visible with the orange and red colours showing the highest part of the ridge that mainly occurs in the south part (Okra, 2011). Sparrenheide is found at the intersection of cultivation (grey) and forest area within the height range of 5.0000 to 7.0000 meters (green) till 10.0000 to 20.0000 meters (yellow) (AHN, 2020).



- 'enk' earth soils
- 'Holt' podzol soils
- 'Veld' podzol soils
- 'Haar' podzol soil
- 'Loo' podzol soils
- Drift-sand soil
- Old dwelling places
- Core of cultivation
- Main infrastructure
- Boundary of Utrechtse Heuvelrug in province Utrecht
- Boundary of the province of Utrecht
- Site of Sparrenheide in Driebergen-Rijsenburg

Figure 8 Map of Utrechtse Heuvelrug

Earth and Soil map

Current soil map of de Utrechtse Heuvelrug

The earth and soil map shows an evident correspondence with the height map. In the higher areas podzol soil (red and orange) and drift-sand (yellow) are found while in the lower areas sandy and loamy soils are found near the rivers and creeks (green), and turf (purple) near the sides of the hill ridge and the polders (Okra, 2011). Besides cultivation (grey), Sparrenheide also is located at a surface with drift-sand soil (yellow).

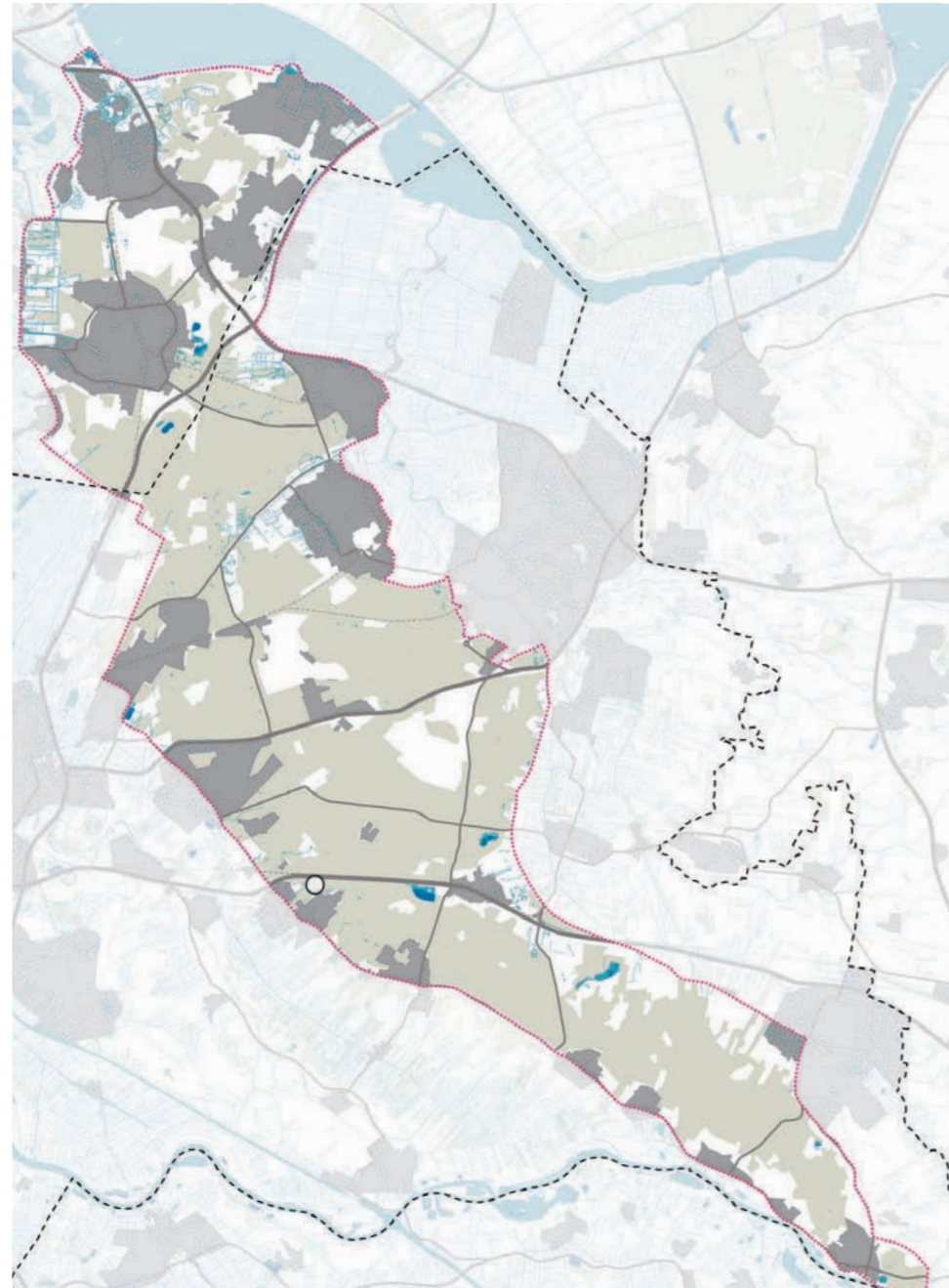










Figure 9 Map of Utrechtse Heuvelrug

-  Water ways
-  Water ways
-  Forest area
-  Core of cultivation
-  Main infrastructure
-  Boundary of Utrechtse Heuvelrug in province Utrecht
-  Boundary of the province of Utrecht
-  Site of Sparrenheide in Driebergen-Rijsenburg

Water map

Current water map of de Utrechtse Heuvelrug

There is not much water present in the area. In the transition from higher to lower grounds a few water sources are found. In the higher grounds there are a few turf ponds and quarry ponds. In Driebergen-Rijsenburg no big water ways are found. In Sparrenheide a little creek is found called 'De Grote Kom' (Waterkaart, 2020).



Figure 10 A painting of heather in Driebergen with flock between 1905-1910



Figure 11 A picture of sand-drift in Maarn on the Utrechtse Heuvelrug between 1930-1940

Conclusion

on the (historical) landscape analysis

The Utrechtse Heuvelrug is a landscape that has had many different identities, layers of culture and history, and a variety in land use. The landscape offers many height differences in a relatively short distance. The differences in height, differences in wet and dry soil, in open and closed areas result in a rich diversity in landscape spaces. We have seen that the landscape has transformed heavily as a result of natural causes as well as a result of human action. The agriculture system with grazing sheep and the clearing of land has changed the landscape from a forest area to a heather area. From the 19th century the forest areas returned to the Utrechtse Heuvelrug as a result of change in type of agriculture and the upcoming of estates and outdoor places in the area.

Sparrenheide is found at the intersection of a cultivation area (grey) and a forest area that is within the height range of 5.0000 to 7.0000 meters (green) till 10.0000 to 20.0000 meters (yellow). It is located at a surface with drift-sand soil, nearby the highway A12 and has no big water ways.

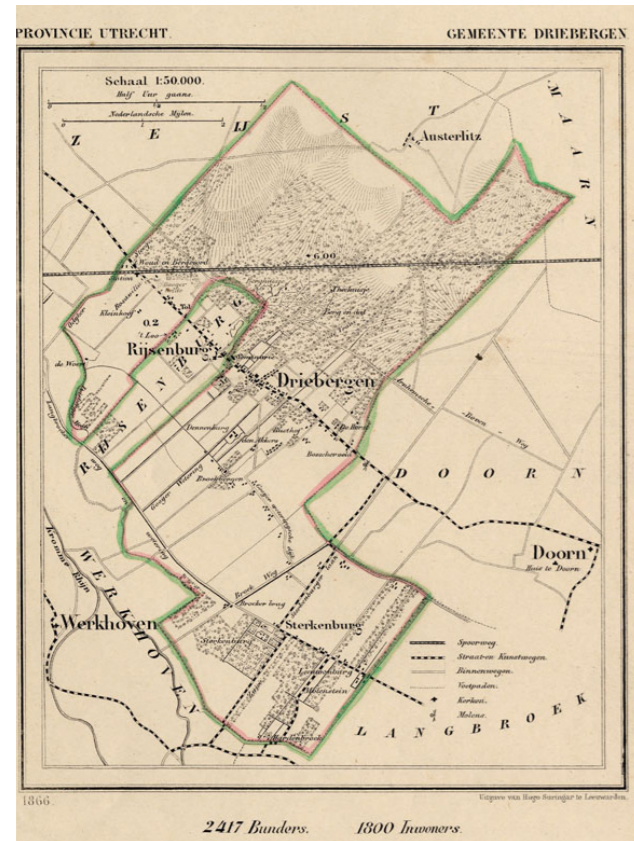


Figure 12 Around 1870 - Map of municipality of Rijsenburg

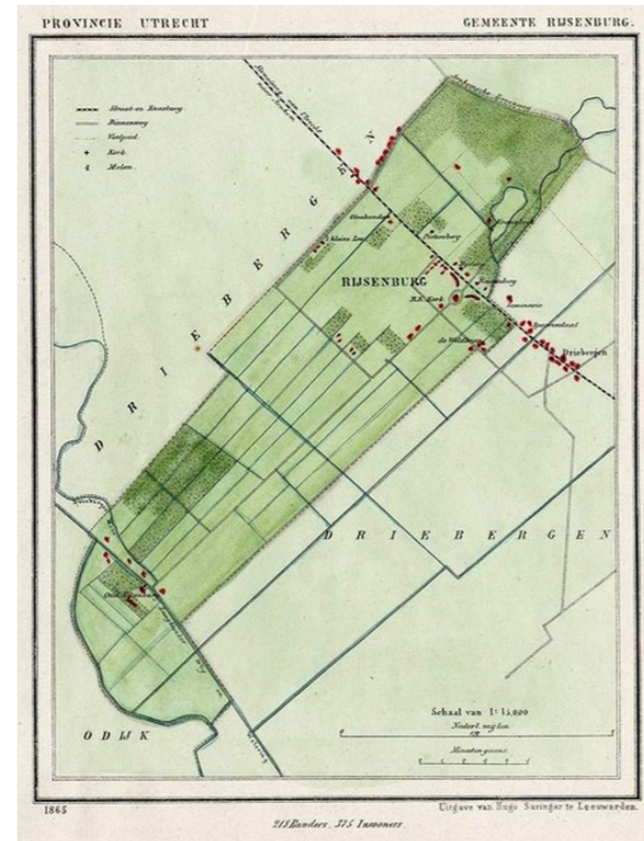


Figure 13 Around 1870 - Map of municipality of Driebergen

History of Driebergen-Rijsenburg

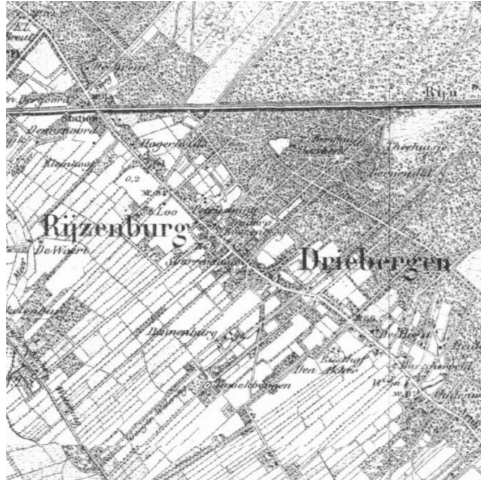
Driebergen-Rijsenburg is a village in the province of Utrecht situated in the middle of the Netherlands. Driebergen-Rijsenburg has only relatively recently been part of the municipality of the Utrechtse Heuvelrug as up until 2005 it belonged to its own independent municipality named Driebergen-Rijsenburg. The municipality of Driebergen-Rijsenburg emerged in 1931 from the union of the separate municipalities Driebergen and Rijsenburg. Already from 1818 both municipalities appeared to be too small to function on their own and in 1829 the first proposal for a merge of the municipalities was made. However, the Dutch Parliament decided in 1857 to remove Rijsenburg from the redesign of the Dutch municipalities, preventing it from merging with the municipality of Driebergen (Berkel and Samplonius, 2018).

For centuries Driebergen-Rijsenburg used to be connected to Amersfoort, a city up north, via a sand road functioning as a sheep drive. Parts of this sand road used to be referred to as the 'Driebergs' or 'Drieberger Spoor'. In the 20th century the connection disappeared with the redesign of a largely stretched out area as a military function (Visscher, 2018).

Driebergen-Rijsenburg through the years



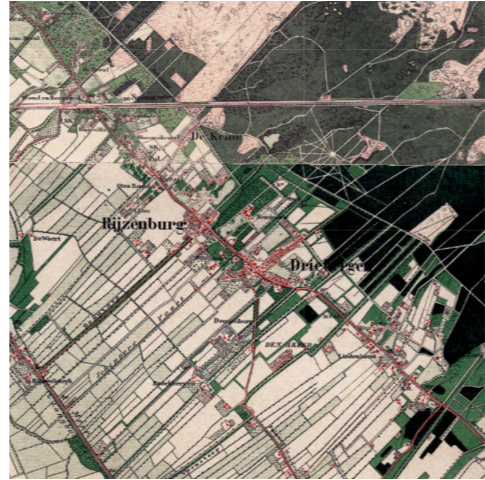
1815



1850



1860



1870



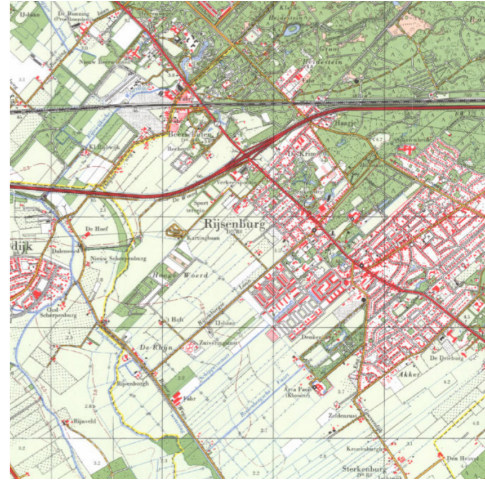
1950



1960



1970



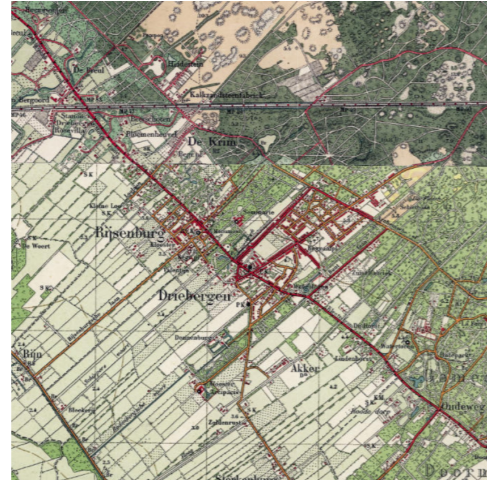
1980



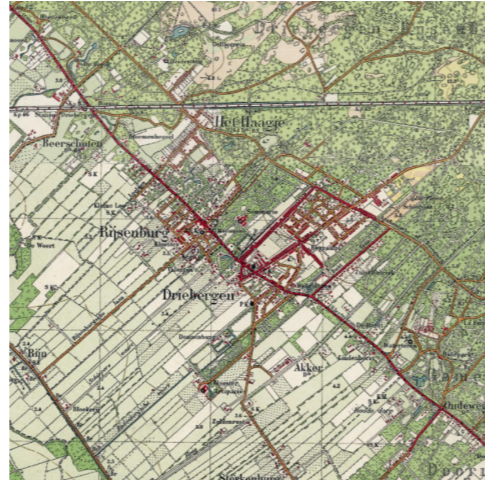
1890



1910



1930



1940



1990



2000



2010



2020

Figure 14 Topografische kaarten door de tijd



Figure 15 A souvenir card with a picture of the Arnhemse Bovenweg between 1940 – 1960

The origin of Sparrenheide

The street at which the site is located named Sparrenheide has a history of its own. In the search for a building site for luxury dwelling by mister Valk Lucassen from the Hague, the forest above the Arnhemsebovenweg road appeared as a perfect place. In the forest pasture, between 'sparren' and 'heide' and with a distance from the road, Lucassen built a villa named Sparrenheide in 1921 which he permanently resided. Years later in 1931 he designed the municipal arms for the then just separated municipality of Driebergen-Rijsenburg.



Figure 16 View from the entrance way of the front façade of the Villa Sparrenheide around 1921

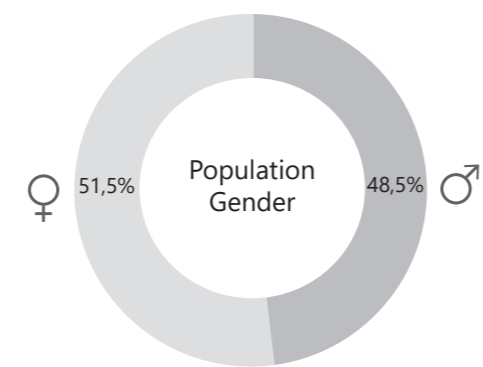
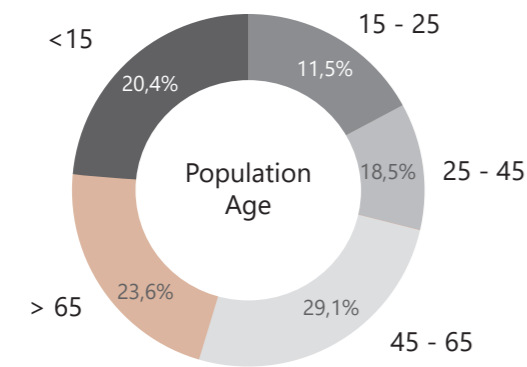
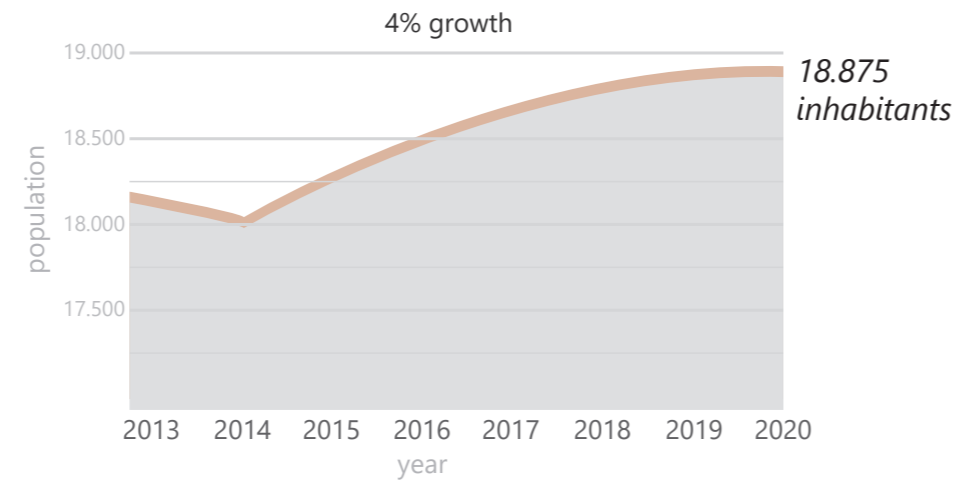
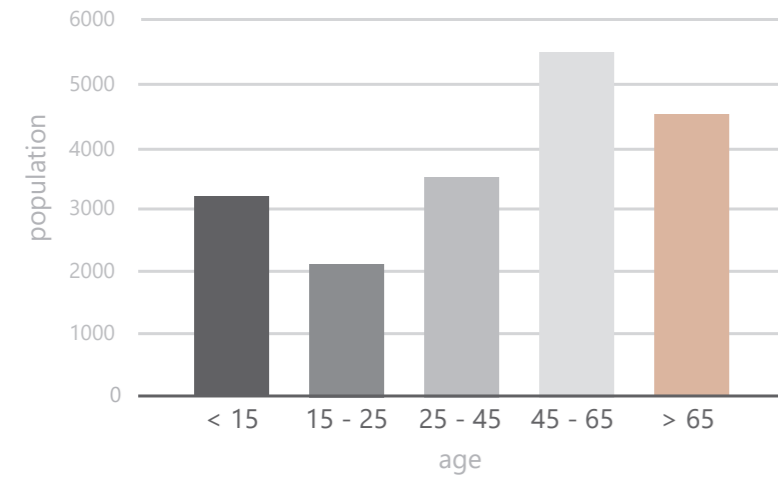
The origin of Sparrenheide

Through the years villa Sparrenheide found itself to be surrounded more and more with dwelling as two lanes were built: in 1921 the lane Melvill van Carnbeelaan and in 1936 the Nassau Odijcklaan. During the Second World War in 1941 Lucassen had to leave the villa as the German occupation used it as a centre for repatriation. After the war the villa served several functions such as a boarding school for girls and remained a centre for repatriation.

Eventually the villa and its accompanying buildings were demolished, making place for new building development. In June 1969 the design of the building for a nursing home 'Sparrenheide' started along the lane Nassau Odijcklaan. The Lane Nassau Odijcklaan was named after Willem Adriaan van Nassau-Odijk by the municipality in 1936. In 1996 the nursing home was accompanied by 66 so-called sheltered homes (in Dutch 'aanleunwoningen'), a type of housing with support. In reaction to the expedition the municipality board gave the complex its own mailing address (Steenwijk, 2000).

demography

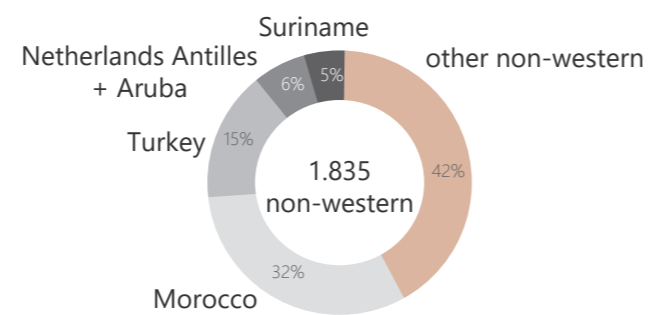
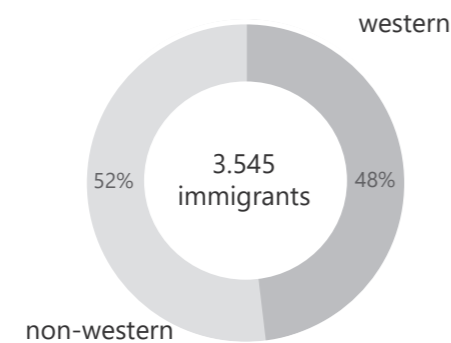
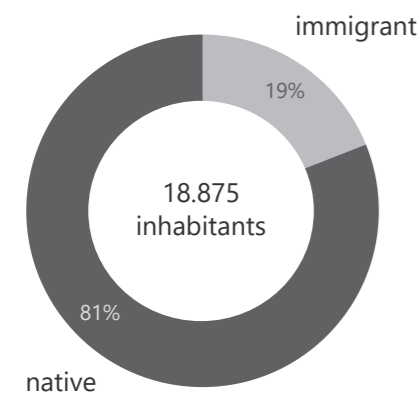




III Demography

Data | population

Driebergen-Rijsenburg has 18.875 inhabitants and has grown in number of inhabitants in the last couple of years. There are more women living in this village than men and 23,6% of the population of Driebergen-Rijsenburg are aged above 65 years old, and therefore fall under the group of elderly. Compared to the average number of elderly living in the Netherlands (19,6%), Driebergen-Rijsenburg has a higher percentage of elderly. The second oldest group in Driebergen-Rijsenburg, that of 45 - 65 years old, are the biggest group. These people are the next generation elderly, an important fact to keep in mind while creating an inclusive living environment (AlleCijfers, 2020; CBS, 2020).

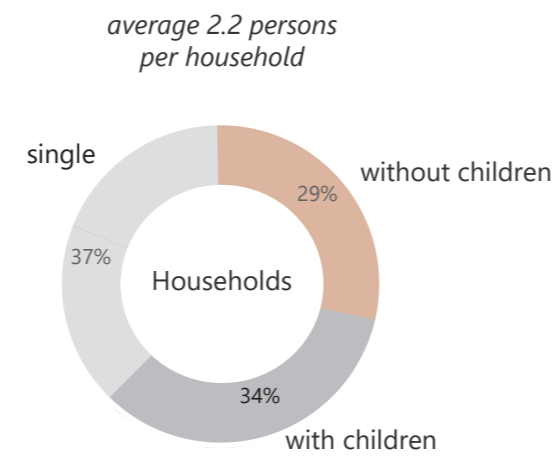
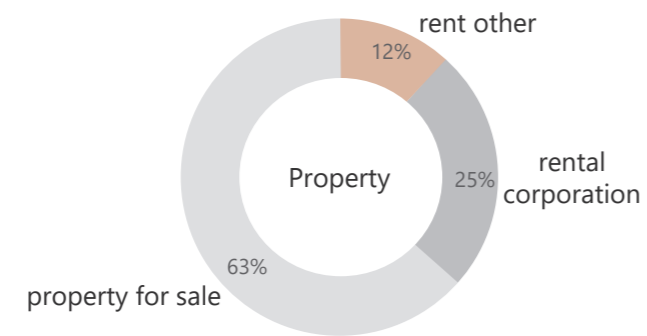
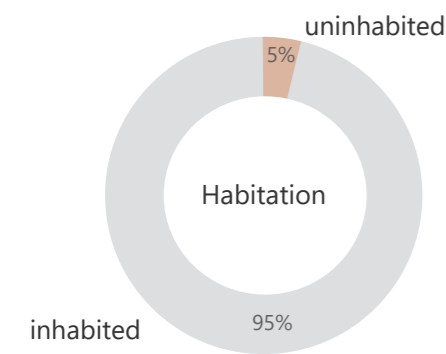


Data | background

From the 18.875 inhabitants, 19% has an immigrant background. This entails people who themselves or at least one of their parents are born in a country outside the Netherlands.

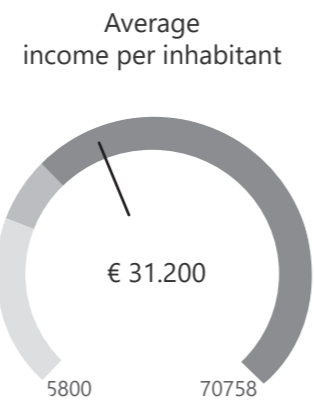
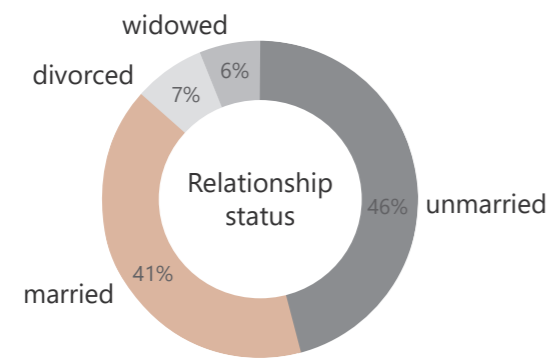
In the diagrams Western means people from Europa (excluding Turkey), North America, Oceania, Indonesia and Japan.

Non-Western people are people from Turkey, Africa, Latin America and Asia (excluding Indonesia and Japan) (AlleCijfers, 2020; CBS, 2020).



Houses

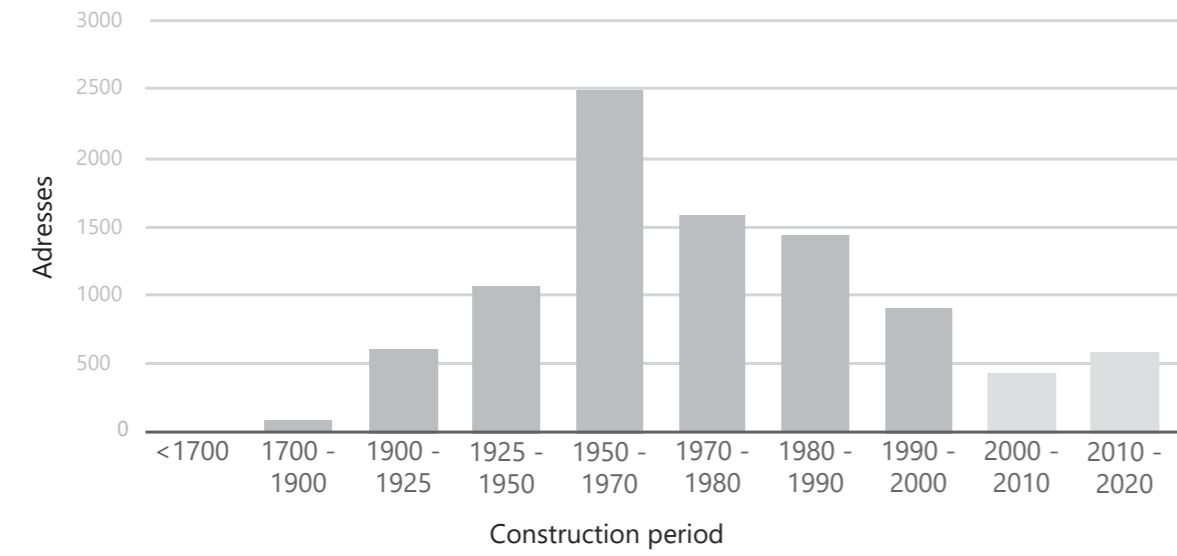
Almost every building with a dwelling function is habited. The average of property for sale is high as it is 63%. The average household is 2.2 persons per household in Driebergen Rijsenburg, compared to 2.1 persons in the Netherlands. In the group of single households, elderly in nursings homes are placed (AlleCijfers, 2020; CBS, 2020).



Relationship | Average income

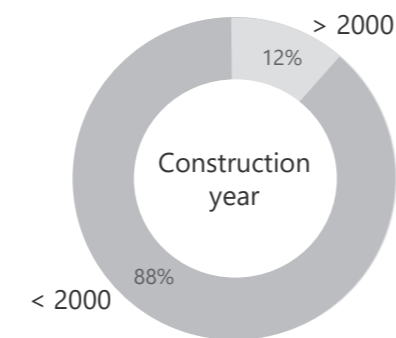
Looking at the relationships number for people above 18, it can be concluded that not many people are divorced (7%). About 33% of Dutch people divorce, so 7% is quite a low percentage.

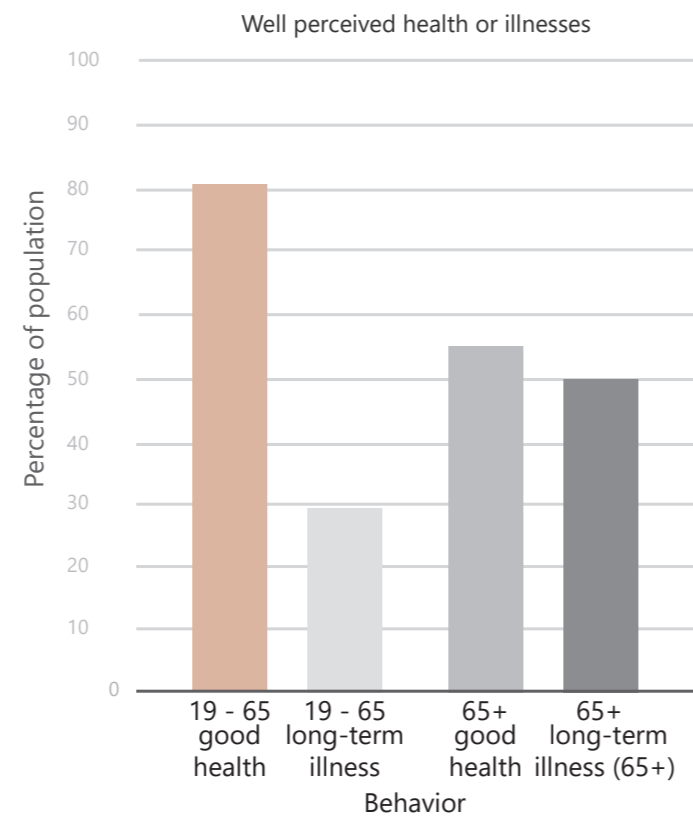
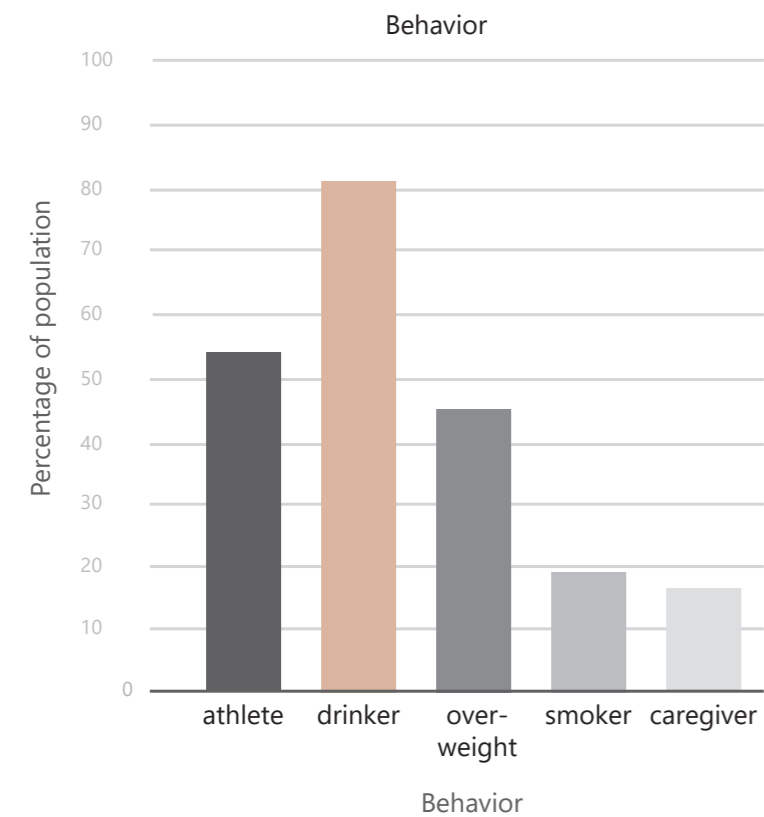
The scale shows the distribution of the average income per inhabitant for all places of residence in the Netherlands. The lowest household income group, 10% and 25%, will be in the most left areas. The highest income households, with a percentage of 25%, are in the darkest grey area. The black line shows that Driebergen Rijnsburg (€31.200) is quite rich since the average falls in the 25% of highest household income (AlleCijfers, 2020; CBS, 2020).



Construction Period

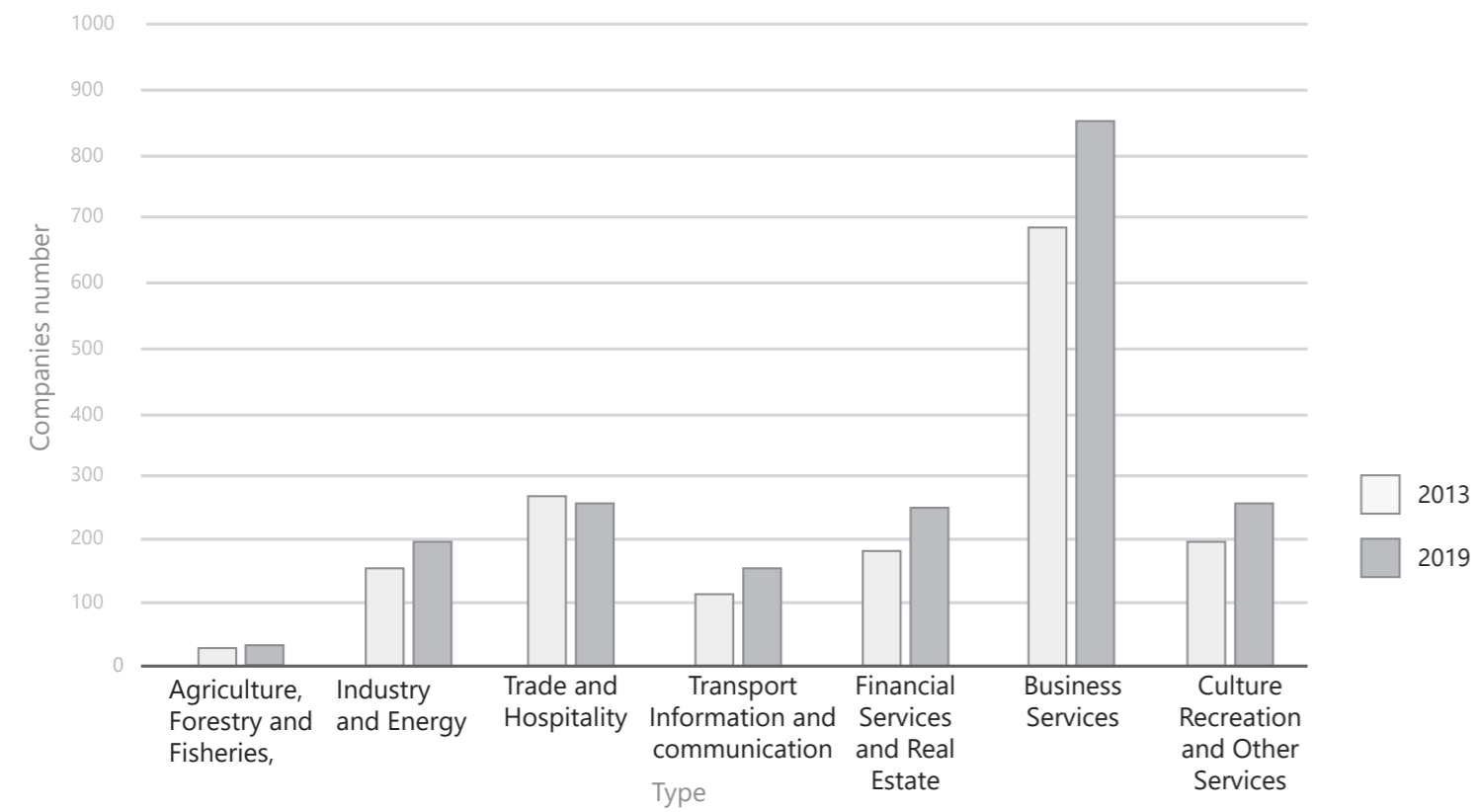
Most buildings are built between 1950 and 1970, followed by buildings built between 1970 and 1990. This means that a lot of buildings are at least 50 years old. In that time the buildings were not as well insulated as newly built buildings are nowadays (AlleCijfers, 2020; CBS, 2020).





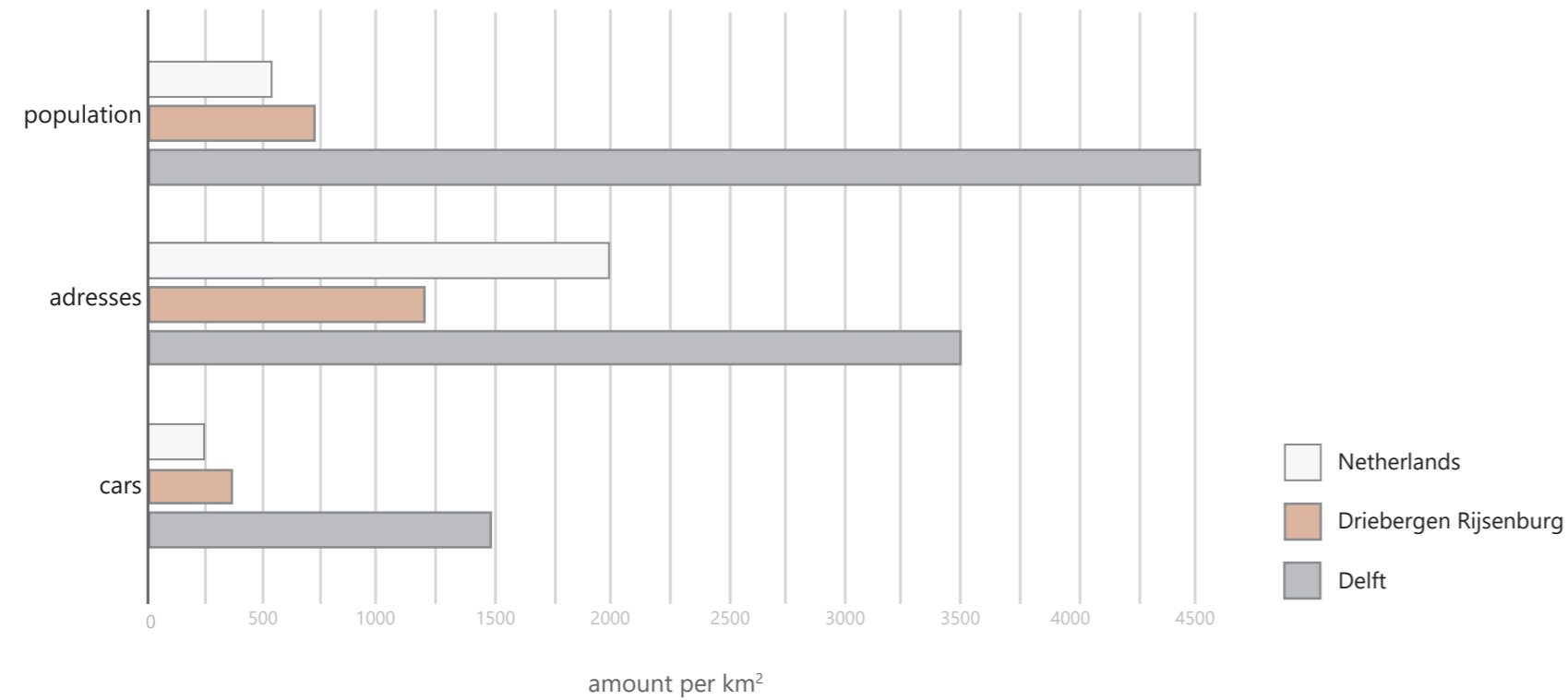
Health

In Driebergen people are active (athlete) but they also like to have a drink. The number of overweight people is around the same as the average of the Netherlands, but is still too high. Looking at the well perceived health or illnesses, the younger people experience their health well who are in good health. The younger people who have a long-term illness have a lower percentage of how well they perceive it. Looking at the elderly the number gets down of the people who are in good health but do not experience it in that way. The elderly with long-term illness perceive their health better than it was before (AlleCijfers, 2020; CBS, 2020).



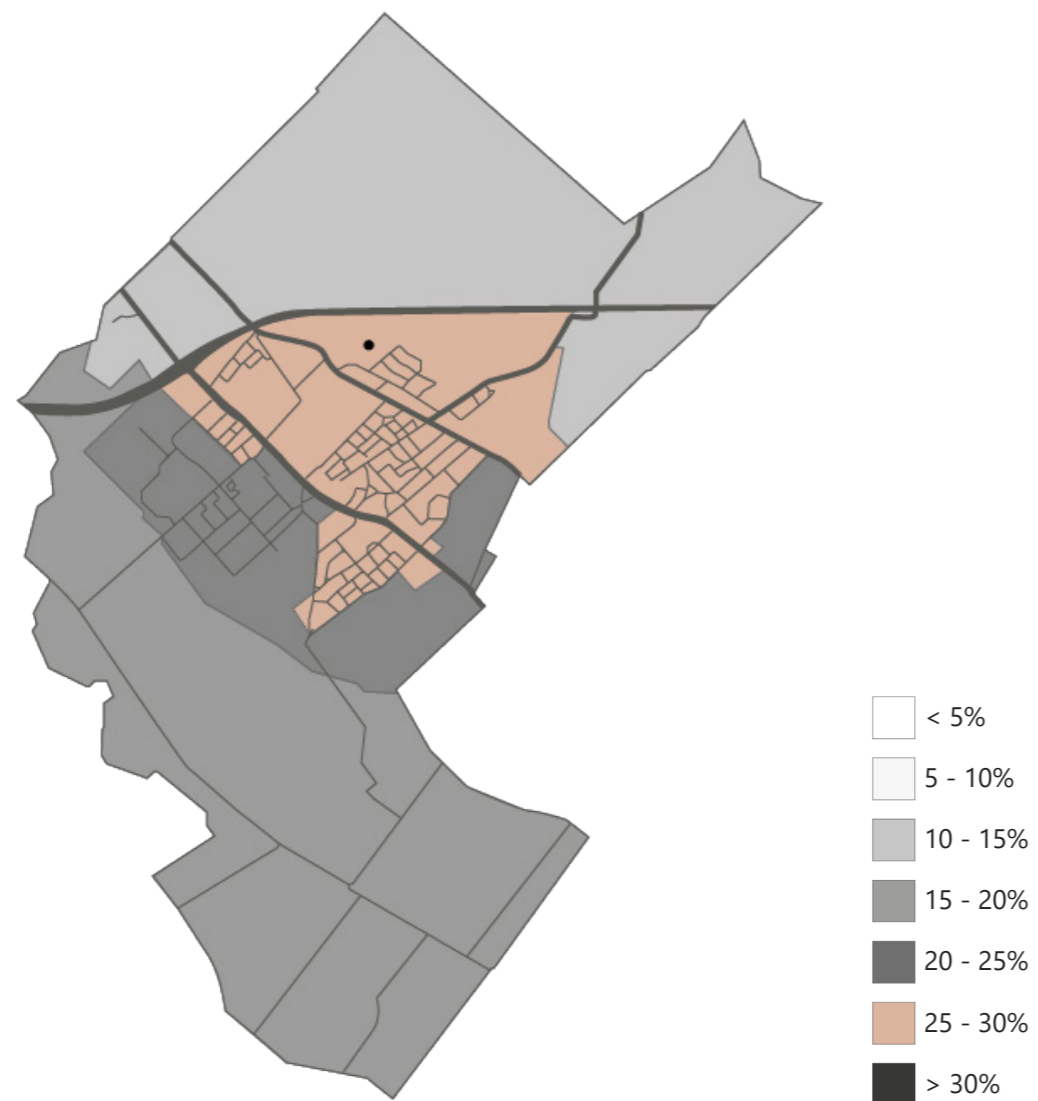
Companies growth

The biggest industry in Driebergen Rijzenburg is the Business Services. This type of company has grown the most over the six years (AlleCijfers, 2020; CBS, 2020).



Density per km²

The population of Driebergen Rijsenburg lives more densely than the population of the Netherlands in general. However, the average density of population in the Netherlands is very low when comparing it with the population density of the city of Delft. Looking at the amount of addresses, Driebergen Rijsenburg has more addresses than population density compared to the Netherlands and Delft. In the Netherlands and Delft it is reversed. This means that Driebergen has a lower average of people in a household than the Netherlands, or Driebergen has bigger houses. The ratio cars and population is quite high comparing with Delft and the Netherlands (AlleCijfers, 2020; CBS, 2020).

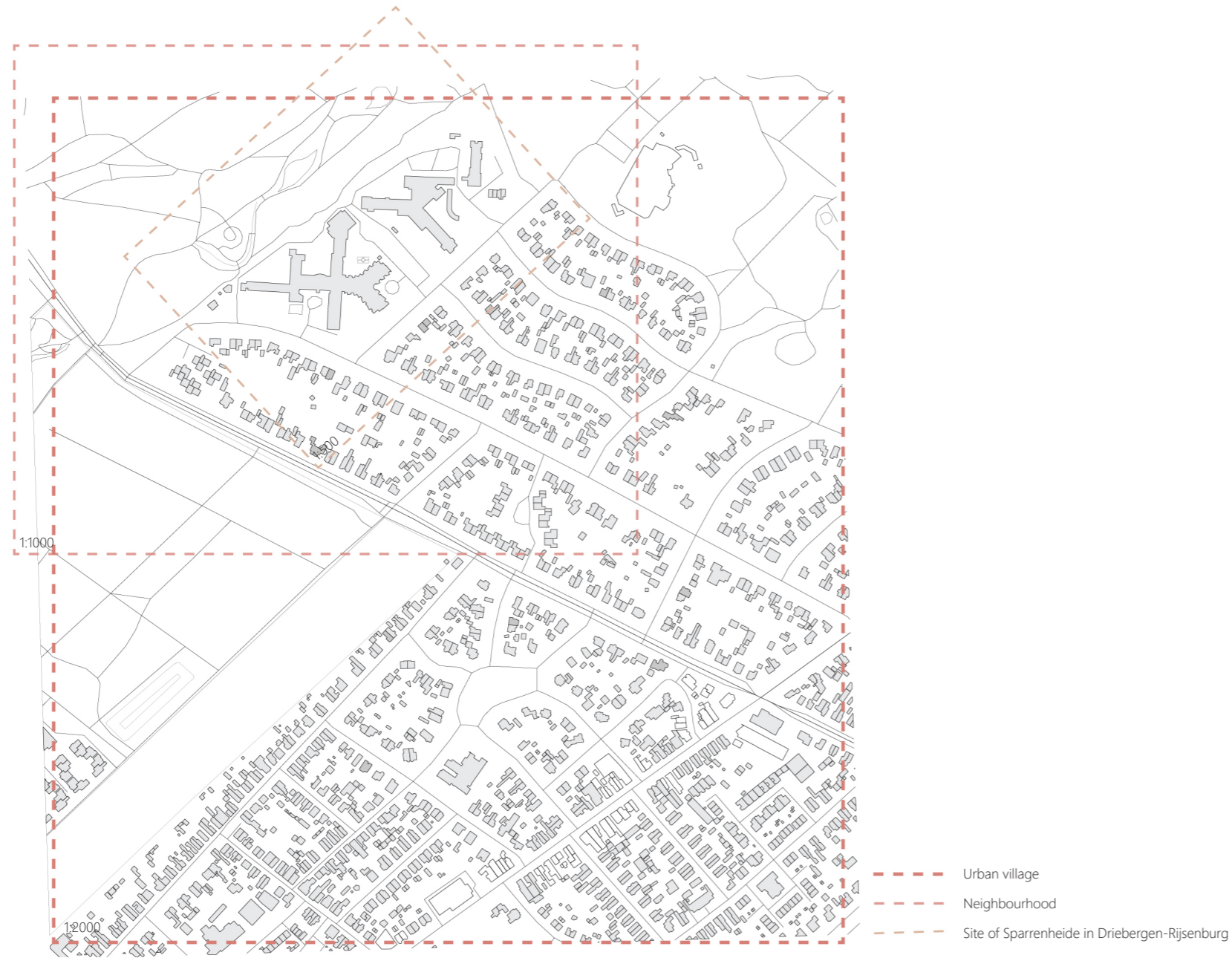


Percentage elderly

This map of Driebergen Rijsenburg shows the percentage of elderly in the neighbourhood. At our site and in the surrounding neighbourhood the percentage of elderly is very high, 25 - 30%. Since 19,6% of the population of the Netherlands is above 65%, one would expect Driebergen to be around 19,6% as well (CBS, 2019).

urban analysis





IV Urban

Introduction

This chapter zooms in on the urban analysis of the site. It is viewed from different scales to gain insight into different urban themes in the immediate vicinity. The figure on the left page shows the three scales that we used in this analysis:

- 1 Village/urban map (1:2000)
- 2 Neighbourhood map (1:1000)
- 3 The direct surrounding site and the site of Sparrenheide (1:500)



Nolli map | Village

The black colour represents all outdoor spaces and the white colour represents the buildings. Concluded from this figure can be that the location of the nursing home (the area framed by the pink lines) is surrounded by lots of outdoor space; the forests of the Utrechtse Heuvelrug.

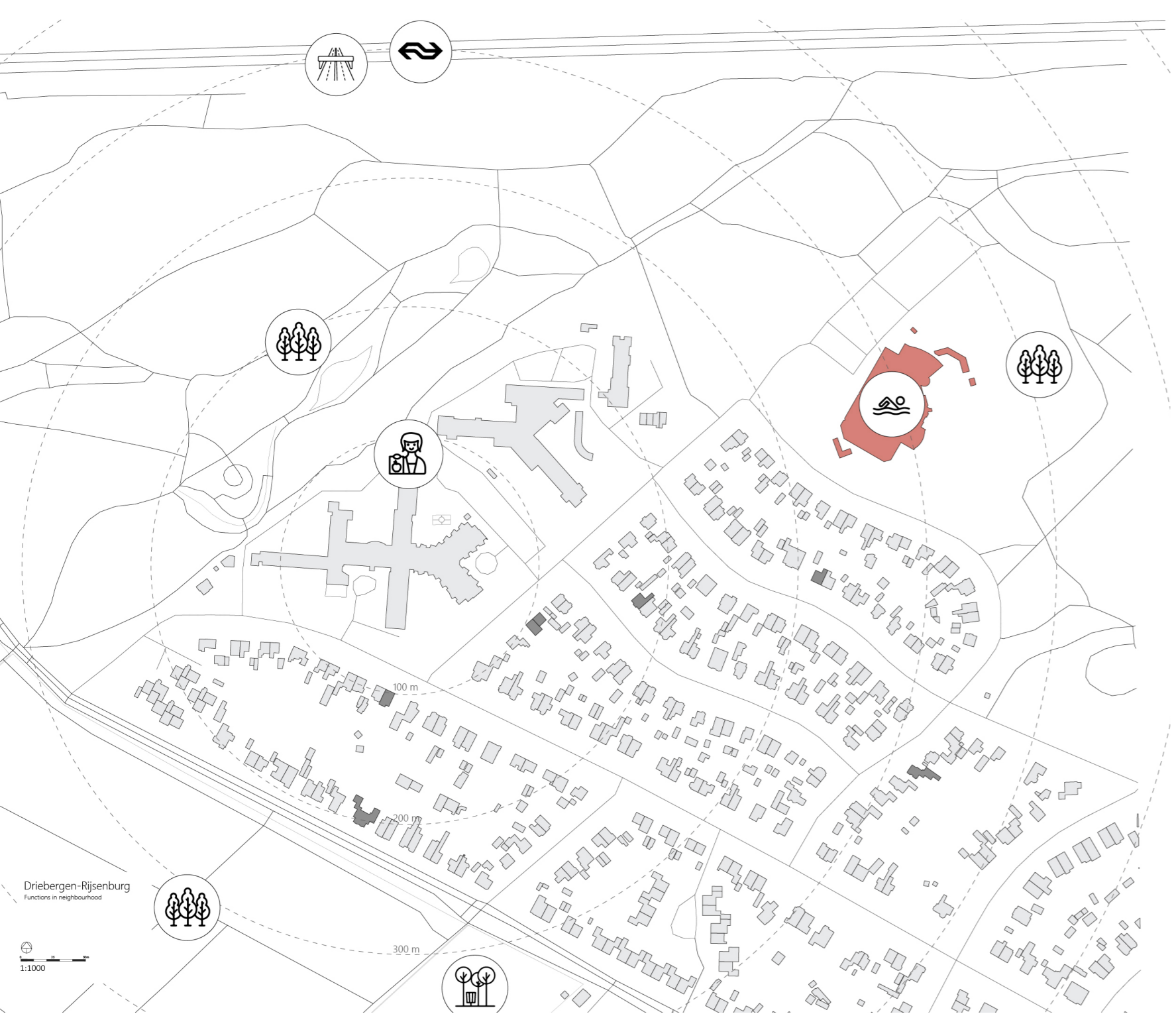











-  Dentist
-  Dietitian
-  Exercise therapy
-  Forest
-  Hair dresser
-  Park
-  Physiotherapy
-  Restaurants or cafes
-  Supermarket
-  Shops
-  Swimming halls
-  Functions + facilities
-  Private companies (BV)
-  Regular houses

Functions | Village

The nearest functions in the area start in the main street of the city centre. Here are the supermarkets, bakery, butcher and other shops located. These facilities are distanced more than 1 kilometer from the design area. Only the swimming hall is close to our design area.

There are many walking and cycling paths through the forests and parks. There are no public outdoor spaces in the direct area around the nursing home's neighbourhood (besides the forest).

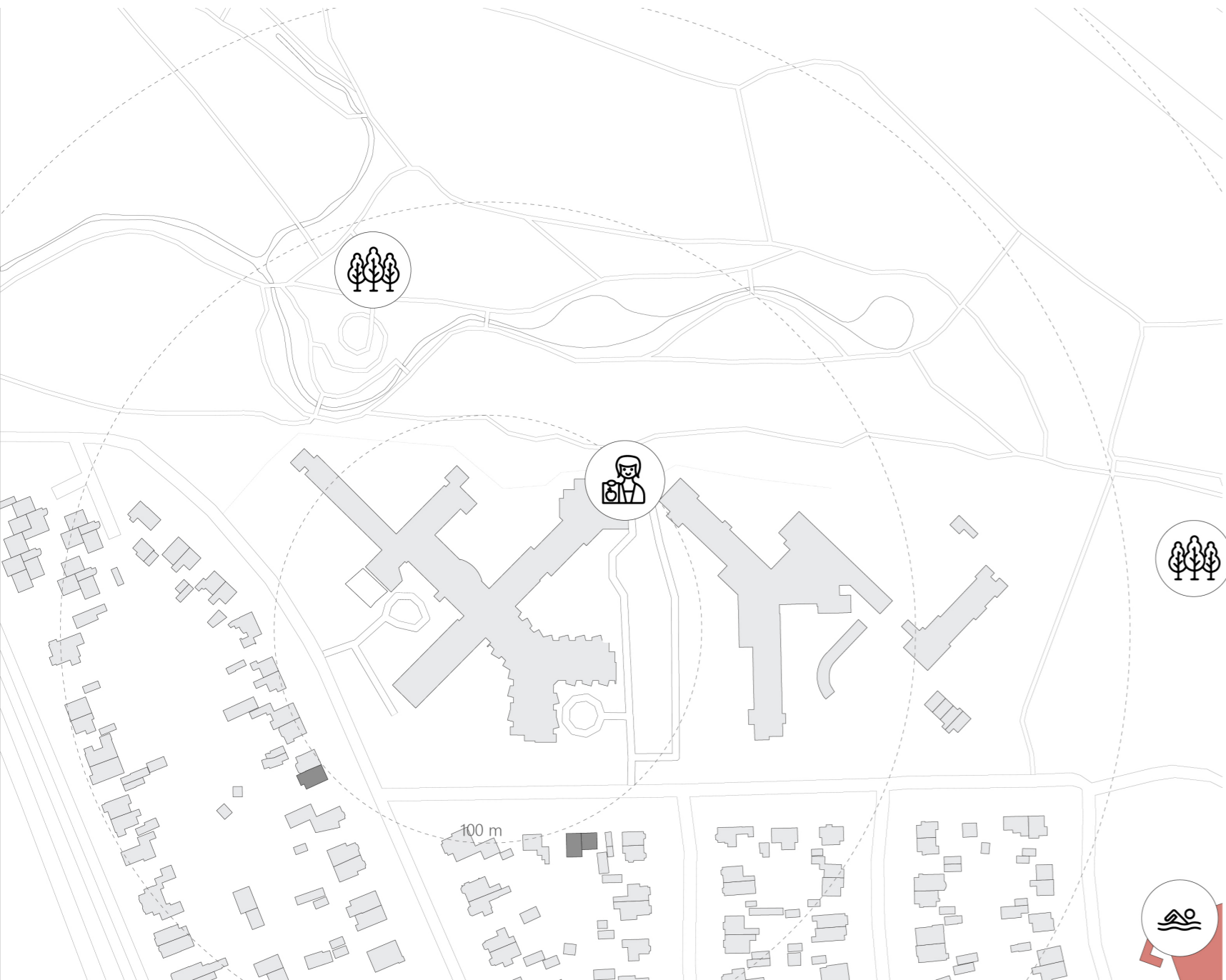








-  Dietitian
-  Forest
-  Motor way
-  Park
-  Train tracks
-  Swimming halls
-  Functions
-  Private companies (BV)
-  Regular houses

Functions | Direct surrounding site

The site is surrounded by woodland surroundings. The forests are popular for hikers and mountainbikers. This makes the north side of site popular for tourists and locals. The forest on the north side of the nursing home is interrupted by the motorway and a train track. This pollutes the forests with car noise and air pollution.

There are few facilities in the immediate vicinity of the nursing home. Only the swimminghall is located within walking distance for the residents of Sparrenheide.



-  Dietitian
-  Forest
-  Swimming halls
-  Functions
-  Private companies (BV)
-  Regular houses

Functions | The site

Besides the enormous forest and the swimming hall there are not many facilities in the immediate vicinity.



Swimming hall | East of the site



Bridge in the forest surrounding | North of the site



Neighbourhood | South of the site



Connection with Sparrendaal | West of the site

Functions | Around the site

On the left page are photos of different functions located in the area around the existing nursing home Sparrenheide and Nassau Odijkhof.



Mailbox in centre.



Mailbox at Sparrenheide.

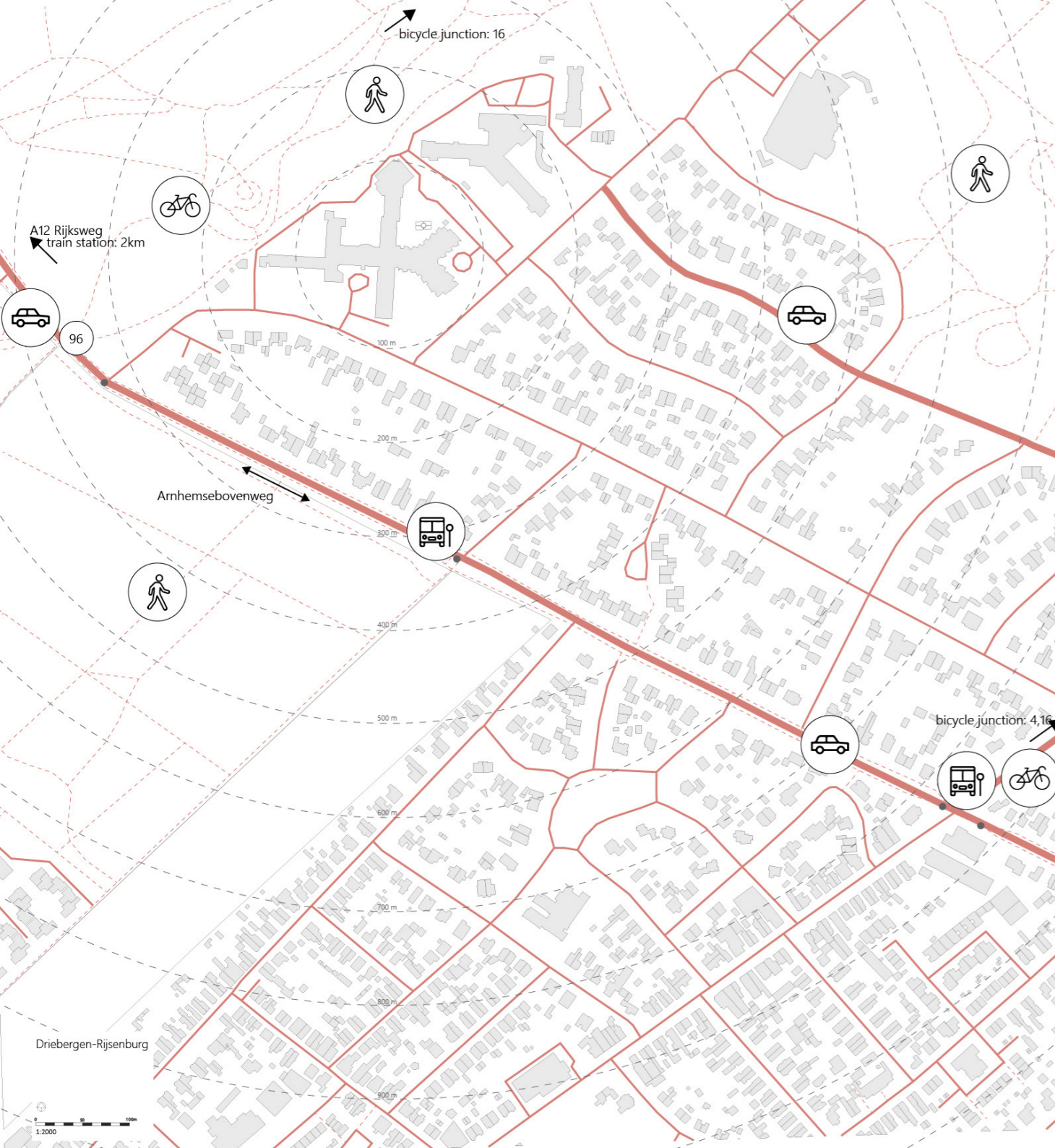
Functions | Around the site

A mailbox is placed around the corner of Sparrenheide. The height is suitable for someone who is sitting in a wheelchair. Although a smaller child with smaller arms cannot reach the mailbox.



Care institutions | Village

At the moment Sparrenheide is equipped with a dietician. The nearest general practitioner and pharmacy is not within walking distance for the residents of the nursing home: namely 1.4 km walk from Sparrenheide. In the centre of Driebergen other care institutions are situated such as a dentist, physiotherapy and an exercise therapist.

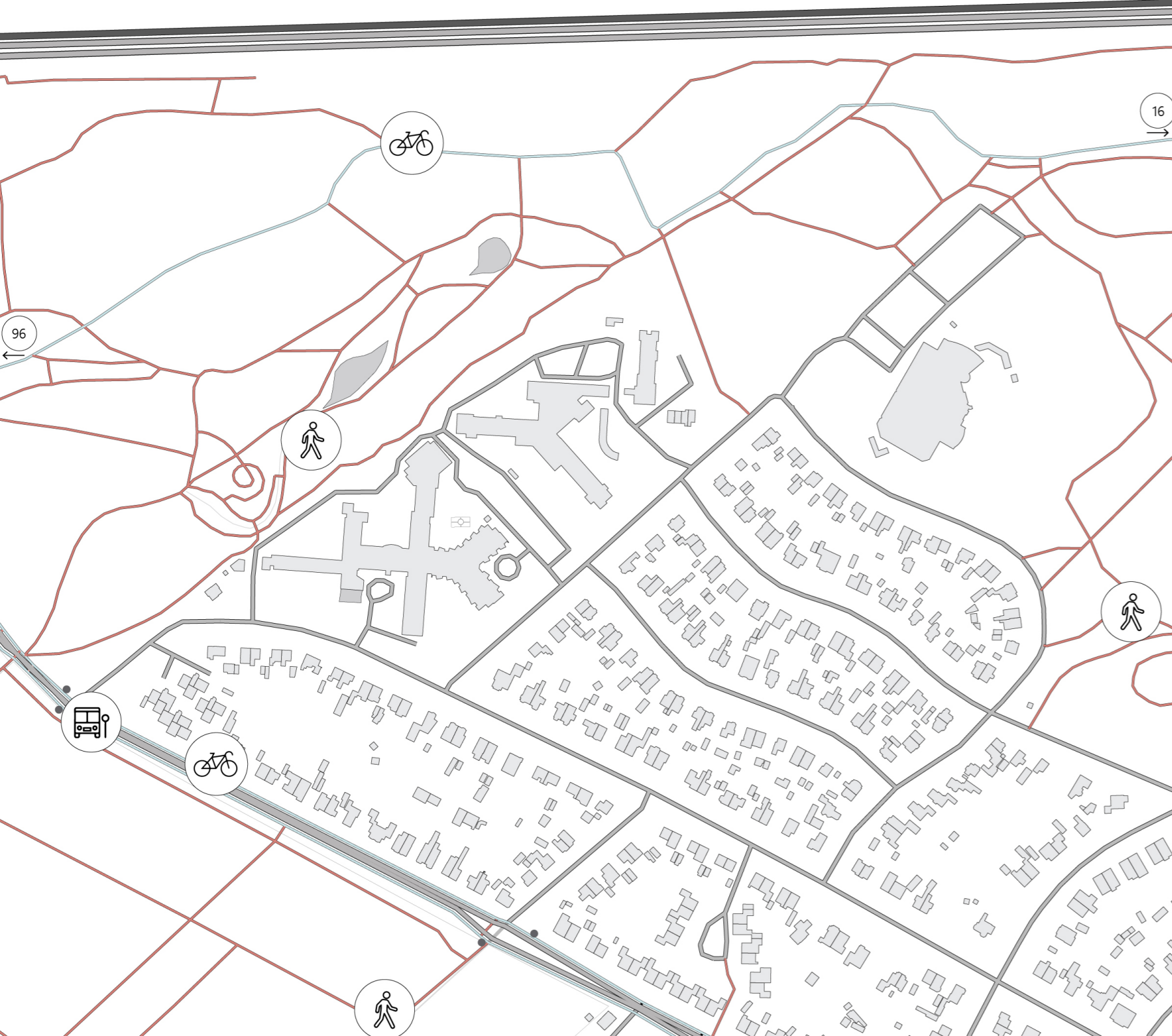


-  Major car roads
-  Cycle roads
-  Walking paths
-  Bus roads
-  Bicycle junction: 96
-  Major roads
-  Minor roads
-  Paths
-  Busstops

Traffic | Village

The site is easily accessible by car, bicycle and on foot. The direct connection with the motorway A12 ensures the residents of the nursing home easy access by car to the hospital of Utrecht, it takes less than 20 minutes. Public transport in the area is provided with a bus stop 450 meters from the design area and the train station is 2.6 km away.

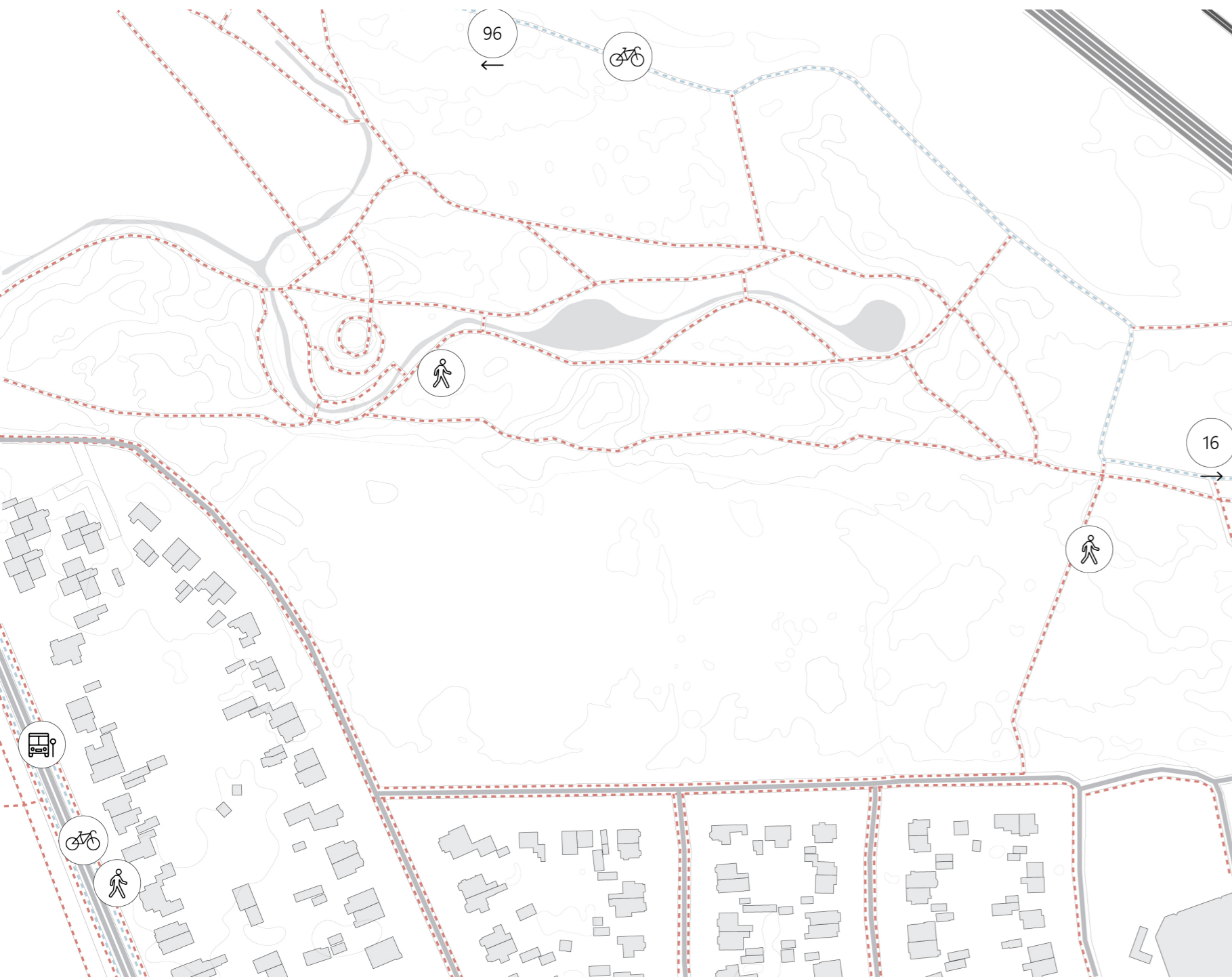
The motorways A12 and railways cause humming noise and air pollution. The nature around the site is often used for recreation of the Utrechtse Heuvelrug. During the weekends, the forest and bicycle paths are equipped for mountain bikers, hikers and other recreationists.



-  Major car roads
-  Cycle roads
-  Walking paths
-  Bus roads
-  Towards the cycling junction
-  Major roads (cars)
-  Train tracks
-  Minor roads (cars and pedestrians)
-  Pedestrian paths
-  Cycle paths
-  Busstops

Traffic | Direct surrounding site

The site makes a connection between nature and the residential area in the south. The road that connects to the nursing home Sparrenheide and the residential area features a wide road profile with cars parked on both sides. The road around the site forms a barrier between the site and the neighbourhood.

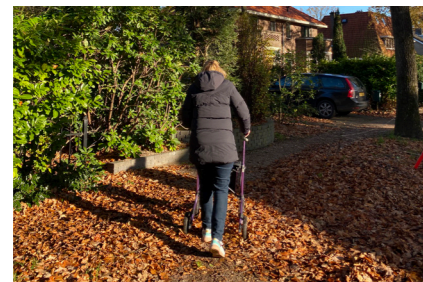


- - - Pedestrians path
- - - Cycle path
- Car road
- Motorway
- Train tracks
- 96 ← Towards the cycling junction 96
- 16 → Towards the cycling junction 16

Traffic | The site

The neighbourhood in Driebergen-Rijsenburg is surrounded by walking paths and cycle paths in the forest. The different paths intersect at some moments. The cycle path does not interfere with the site itself.

The nearest bus stop is on the road of the Arnhemsebovenweg. The bus stop is 500 meters from the nursing home.



Traffic | Walker friendly?

While walking with a walker around the site, it comes to notice that many pathways in the surroundings are not suitable for walkers or wheelchairs. There are many thresholds and the pedestrian path is too small to walk with a bigger walker. Walking with your friend besides you is not an option. During fall, mountains of leaves are in the way. Walking on unpaved path takes an unnecessary amount of energy and the road can get interrupted by a fallen tree.



Sound map | Direct surrounding site

From the highway up north and the busy car road, which goes from the east to southwest, comes the most sound. In the neighbourhood there is less sound pollution. The trees in front of the highway provide a sound barrier (Atlas Leef Omgeving, 2020).



Impression of highway in the woods (own picture)



Car signs are visible from walkway (own picture)

Noise disturbance | Direct surrounding site

Close to the highway, the feeling of the forest is less present. A constant noise of cars alternates with intercity train noise.



Sections | Direct surrounding site

In order to understand the use of the streets around and near the site in relation to the surrounding houses, the next pages show different street profiles from the surrounding areas of the site.

Section A shows the street profile of Jacob van Gaesbeeklaan.

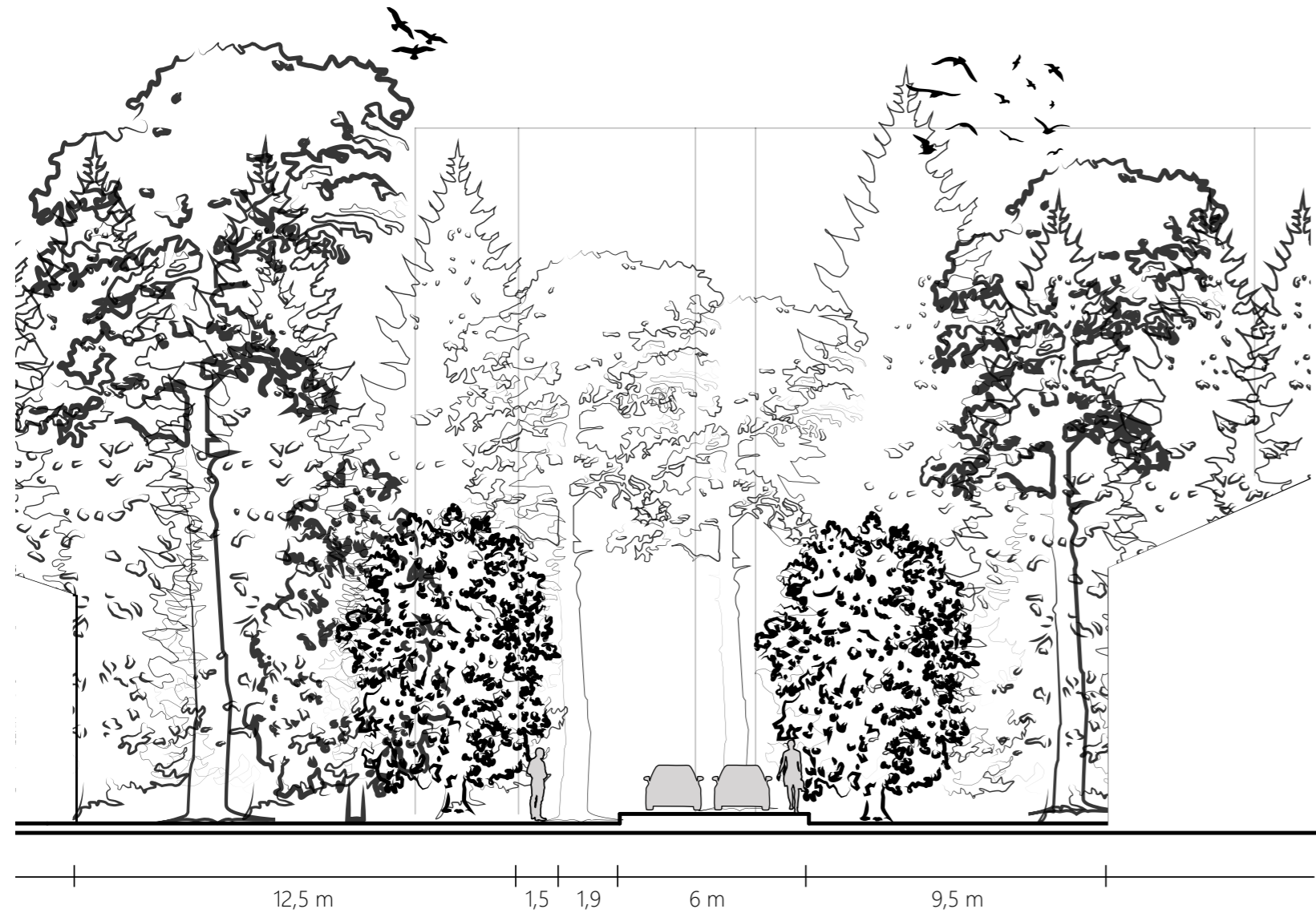
Section B shows the street profile of De Wetstein Pfisterland.

Section C shows the street profile of Schellingerland.

Section D shows the street profile of Melvill van Carnebeelaan.

Section E shows the street profile of Nassau Odijcklaan (Sparrenheide building).

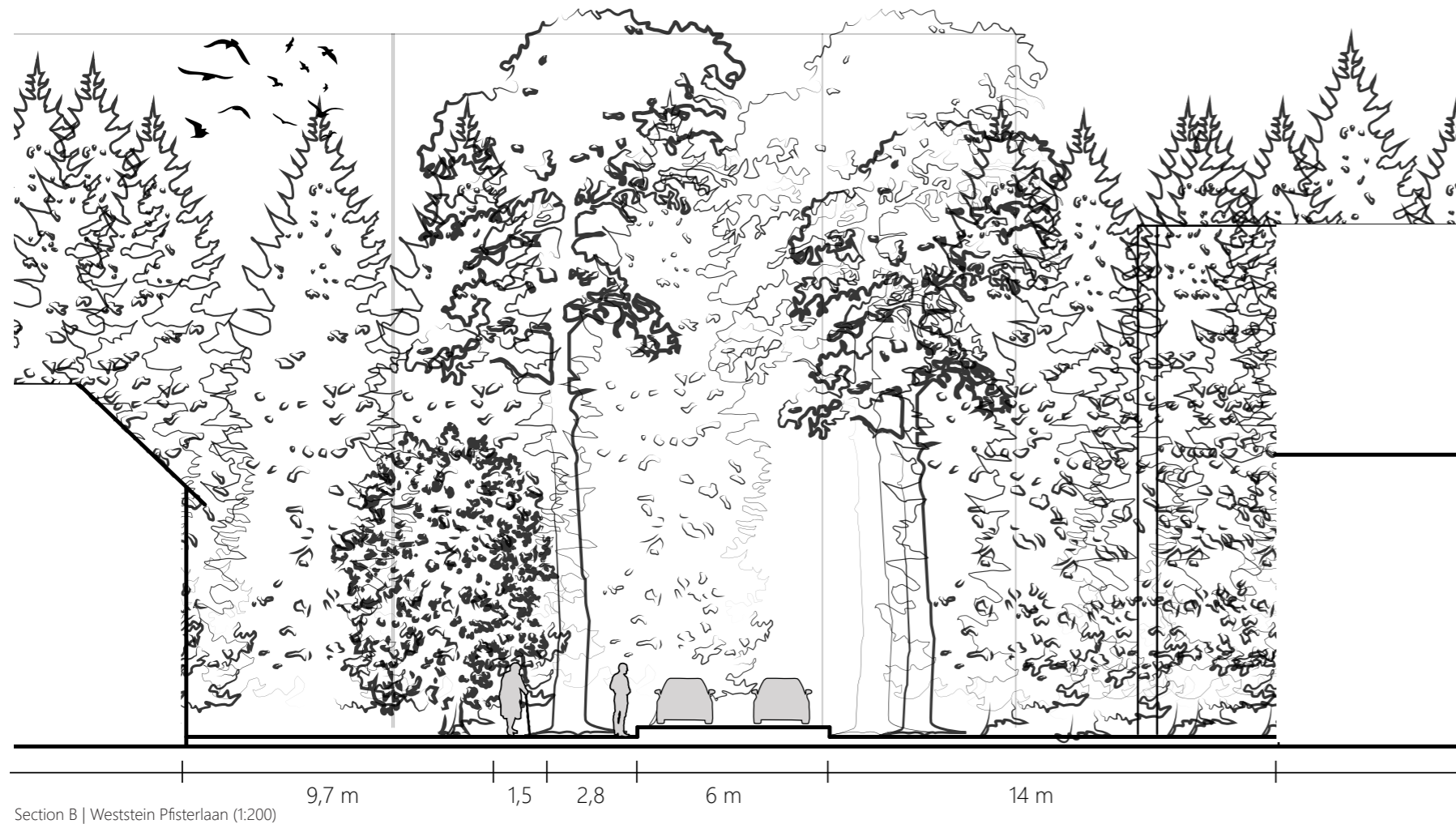
Section F shows the street profile of Naussau Odijcklaan (Nassau building).



Section A | Jacob van Gaesbeeklaan (1:200)

Section A | Direct surrounding site

The buildings on the right side and on the left side of the street are the houses of the residents of the neighbourhood. The street in between makes a connection with the houses of the neighbourhood across the street.



Section B | Direct surrounding site

The figure on the left page shows the street profile of the houses of the residential area at the height of the current Nassau Odijcklaan.



Section C | Schellingerlaan (1:200)

Section C | Direct surrounding site

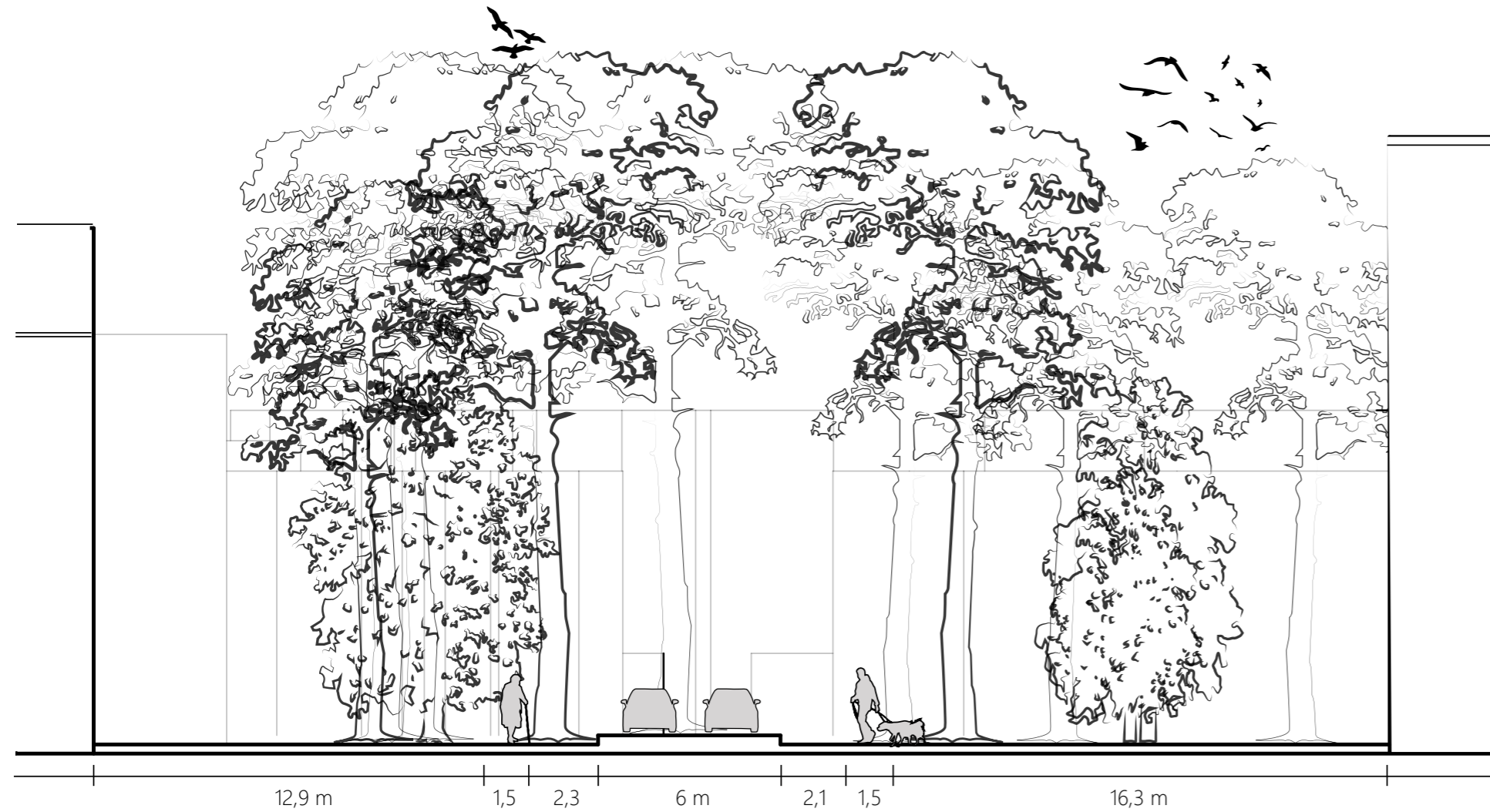
The buildings on the left are the houses of the residents of the neighbourhood. The street in between makes a connection with the residents' houses and the parking place of the swimminghall surrounded by high trees.



Section D | Melvill van Carnebeelaan (1:200)

Section D | Direct surrounding site

The buildings on the left are the houses of the residents of the neighbourhood. On the right starts the Nassau Odijcklaan where the nursing home is located. The street in between makes a connection with the residents' houses and the nursing home.



Section E | Nassau Odijklaan (Sparrenheide building) (1:200)

Section E | Direct surrounding site

The building on the right side of the street is the current sheltered housing (in Dutch 'aanleunwoningen') of the nursing home of Sparrenheide. The building on the left are the houses of the residents of the neighbourhood. The street in between makes a connection with the nursing home and the neighbourhood's houses



Section F | Nassau Odijcklaan (Nassau building) (1:200)

Section F | Direct surrounding site

The building on the right side of the street is the current sheltered housing of the nursing home of Nassau Odijcklaan (The Nassau Building). The building on the left are the houses of the residents of the neighbourhood. The street in between makes a connection with the nursing home and the neighbourhood's houses, and it is surrounded with tall trees.



Section G | Nassau Odijklaan (1:200)

Section G | Direct surrounding site

The building on the right side of the street is the entrance of the nursing home of Sparrenheide. The building on the left are the houses of the residents of the neighbourhood. The street in between makes a connection with the nursing home and the neighbourhood's houses, and it is surrounded with tall trees.



1 | Houses in neighbourhood



6 | Swimming hall



2 | Weststein Pfisterlaan



7 | Parking place of the swimming hall



3 | Nassau Odijklaan street



8 | Houses and hedges in neighbourhood



4 | Jacob van Gaesbeeklaan street



9 | Motorway A12



5 | Nassau Odijklaan street



10 | Bridge forest



11 | Forest surrounding



13 | Electricity pylons



14 | Cycle path



12 | Open field in the forest surrounding



15 | Bridge in forest

Impression | Direct surrounding site

The site makes a connection between nature and the residential area in the south. The road (3 and 5) that connects to the nursing home Sparrenheide and the residential area features a wide road profile with cars on both sides. The road of the site forms a barrier between the site and the neighbourhood.

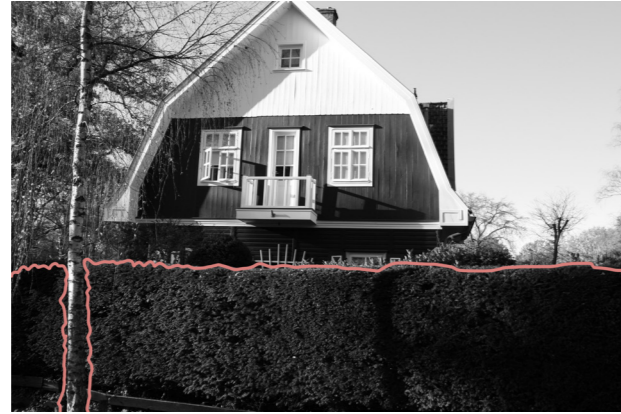
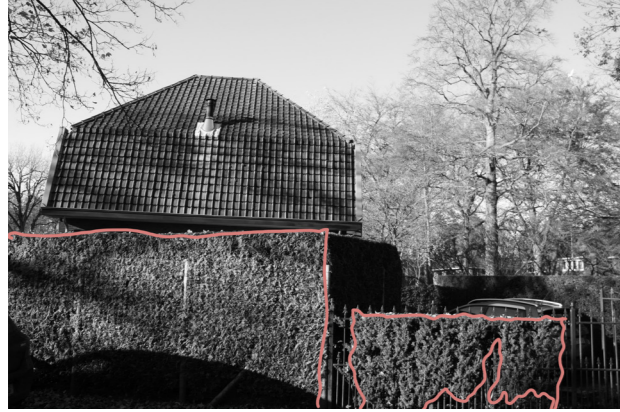
Electricity cables run above the forest (13) and the high way can be seen from the forest (9).

The forest has active elements such as a cycle path (14) and a walking bridge (15).



Hedges | Neighbourhood

A short analysis is shown on the next pages on the influence of hedges or other boundaries between gardens of houses and the neighbourhood. It shows often a harse gradient between interaction and privacy.



Impression of different gardens (own pictures)

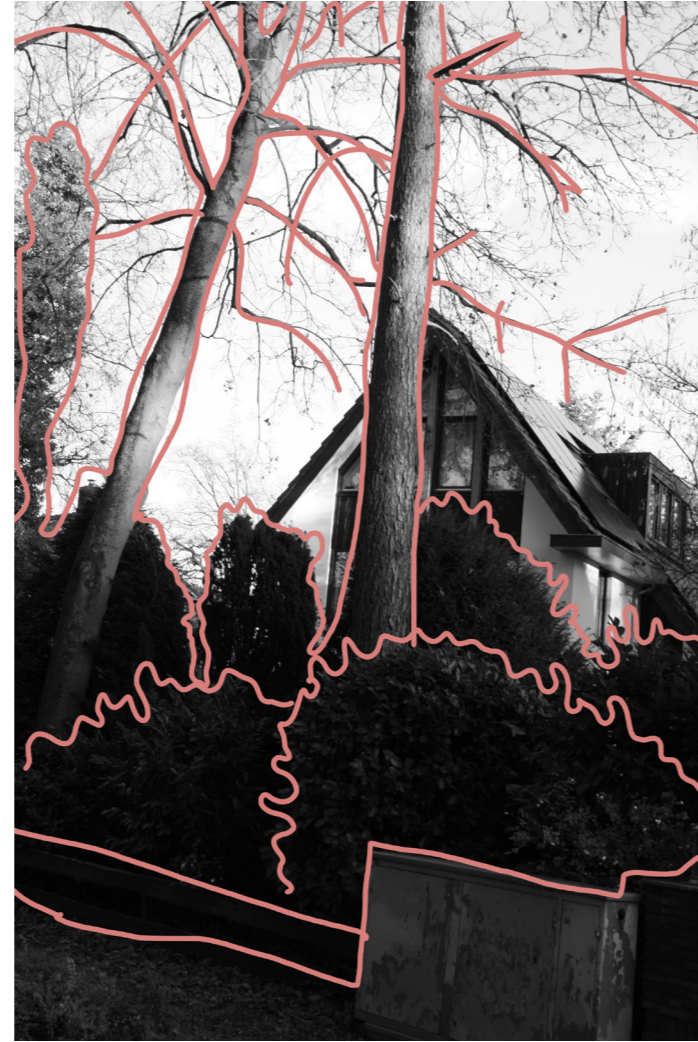
Hedges | Neighbourhood

The density and height of the hedges determine the amount of privacy of the gardens. Most of the gardens of the surrounding houses have high hedges. Some gardens have low railings/hedges.



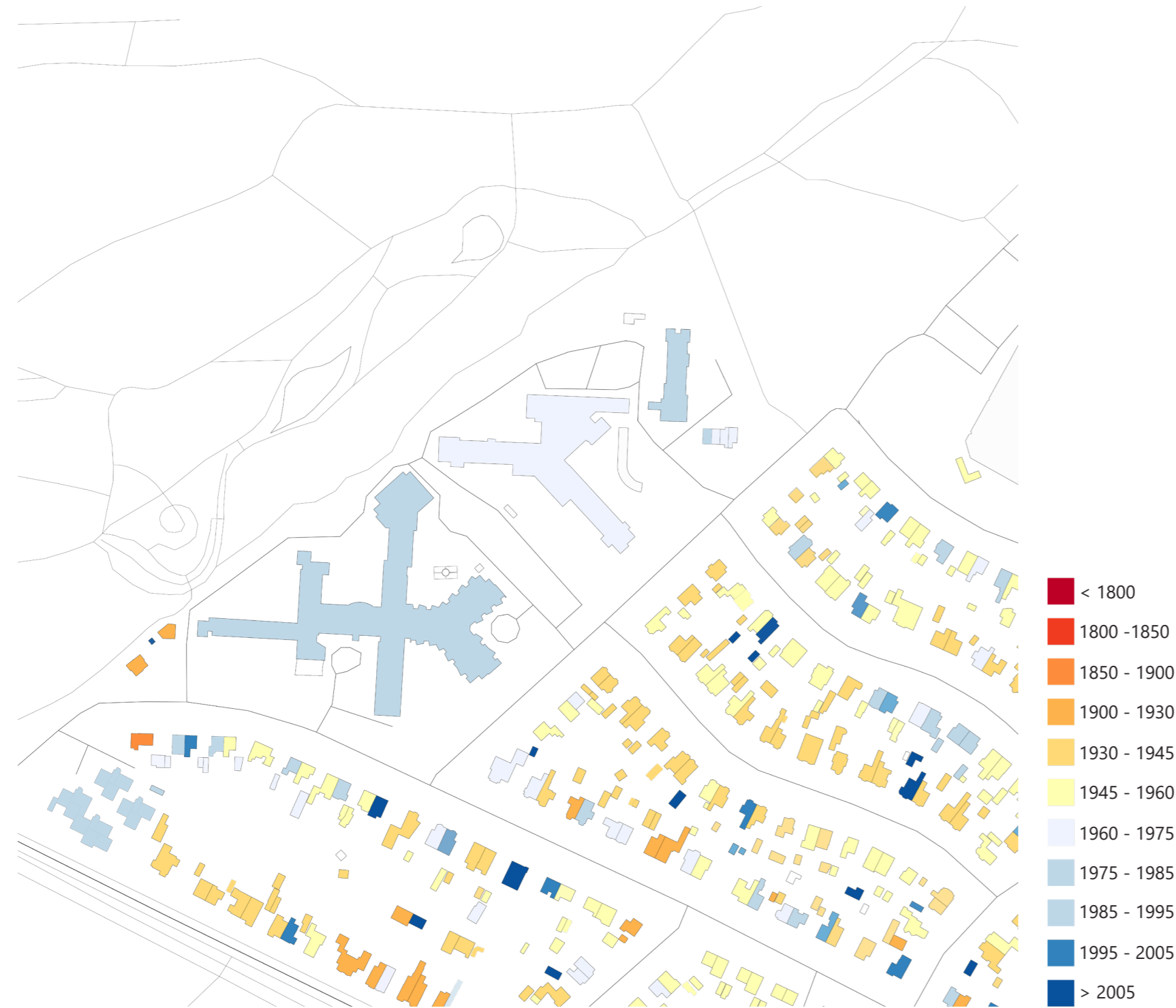
Own pictures

open versus closed



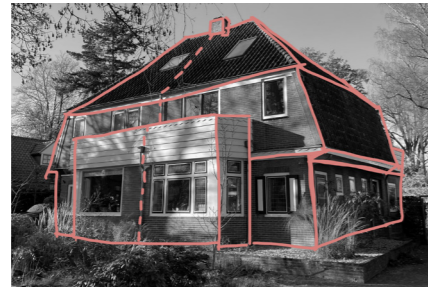
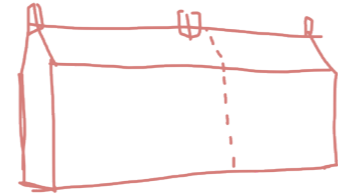
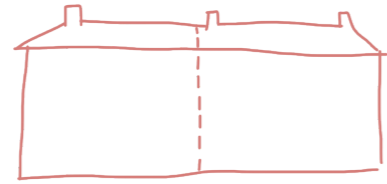
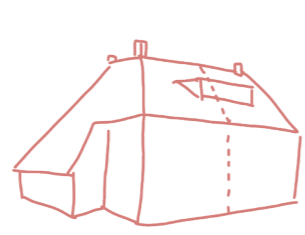
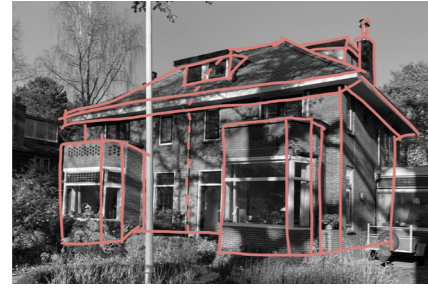
Hedges | Neighbourhood

Depending on the choice of demarcation of the gardens the owner determines the amount of privacy. Dense hedges give the owner more privacy without prying eyes of the neighbours. At the same time, the dense hedges and high fences provide a great barrier for small talks with other residents living in the environment.



Building age | Neighbourhood

The houses surrounding Nassau Odijkhof and Sparrenheide are built earlier than the buildings on our site. Sometimes houses are renovated or an addition is built to the house (Atlas Leef Omgeving, 2020).



Own pictures

Abstracted sketch of the houses typology

Typology | Neighbourhood

The houses around the care home consist of semi-detached houses or large detached houses. The houses are surrounded by large gardens.



Identity | Neighbourhood

The surrounding neighbourhood of the site is equipped with large single villas or semi-detached houses. These houses are sometimes provided with a title, like a name tag. This addition gives identity and a sense of pride to a house.

climate analysis

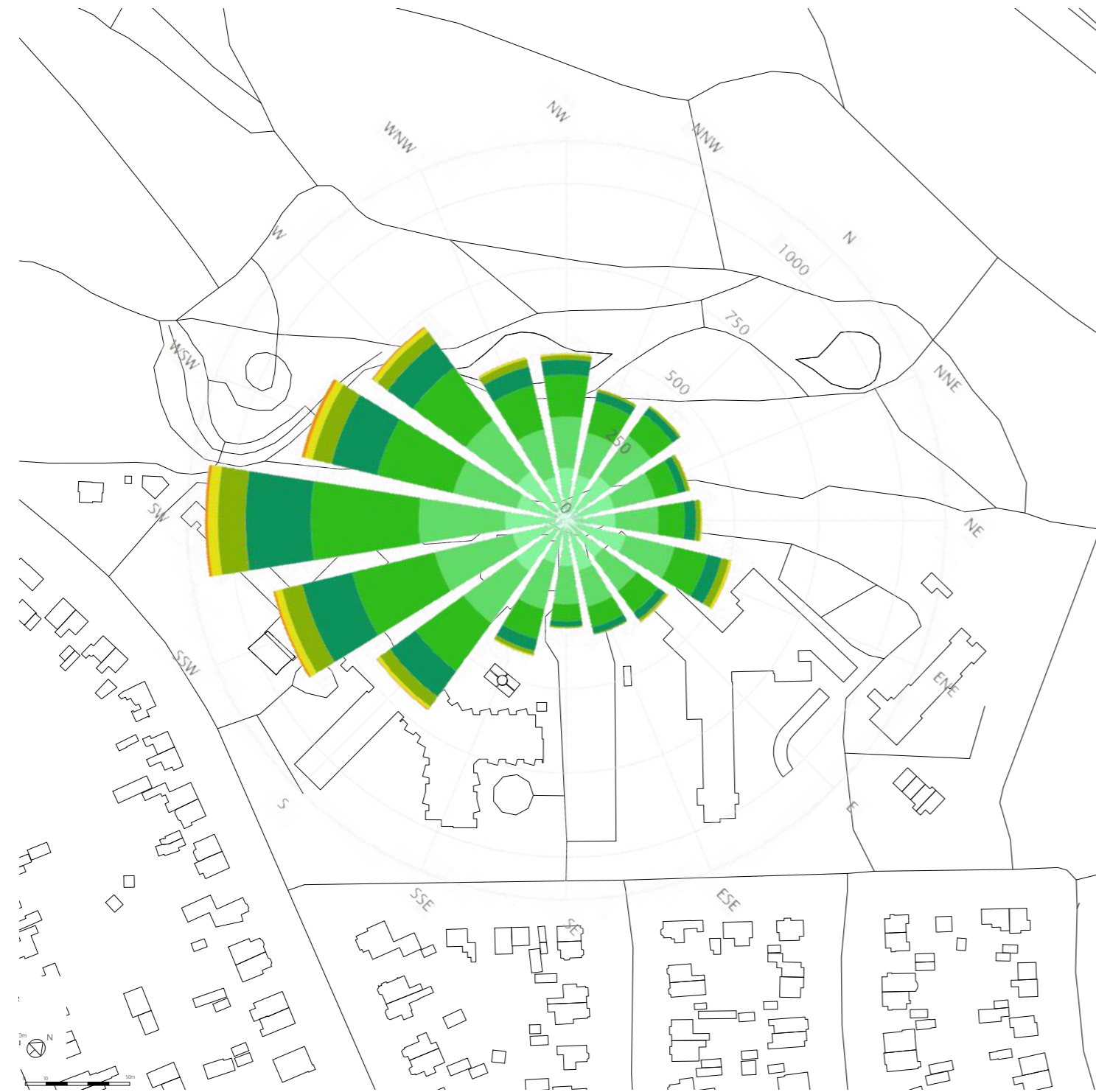




V Climate

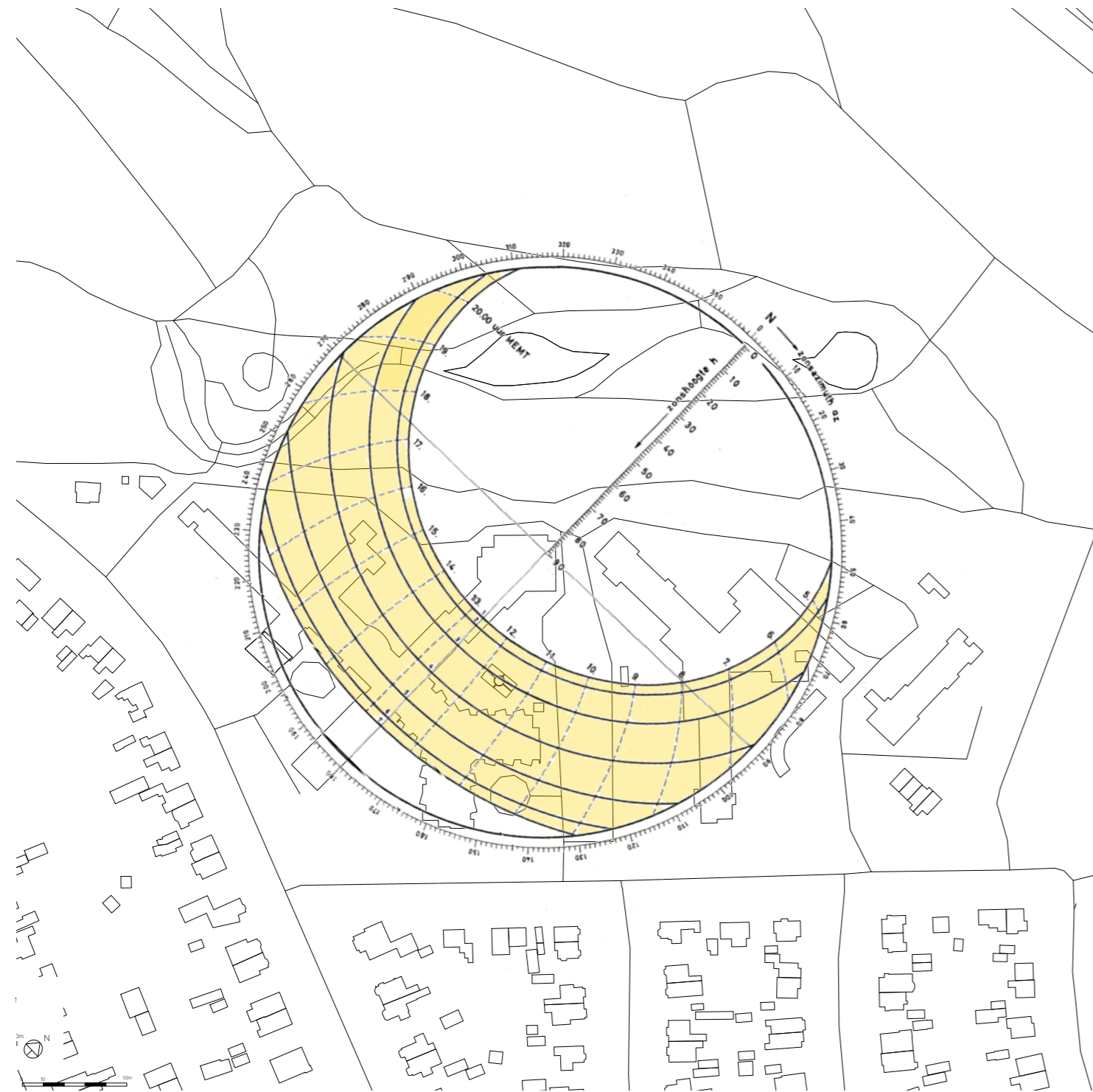
Heat stress map

Sparrenheide and Nassau Odijckhof are in the more hotter zone when looking at the heat stress. Above the site, the trees provide a colder climate (BOOT, 2020).



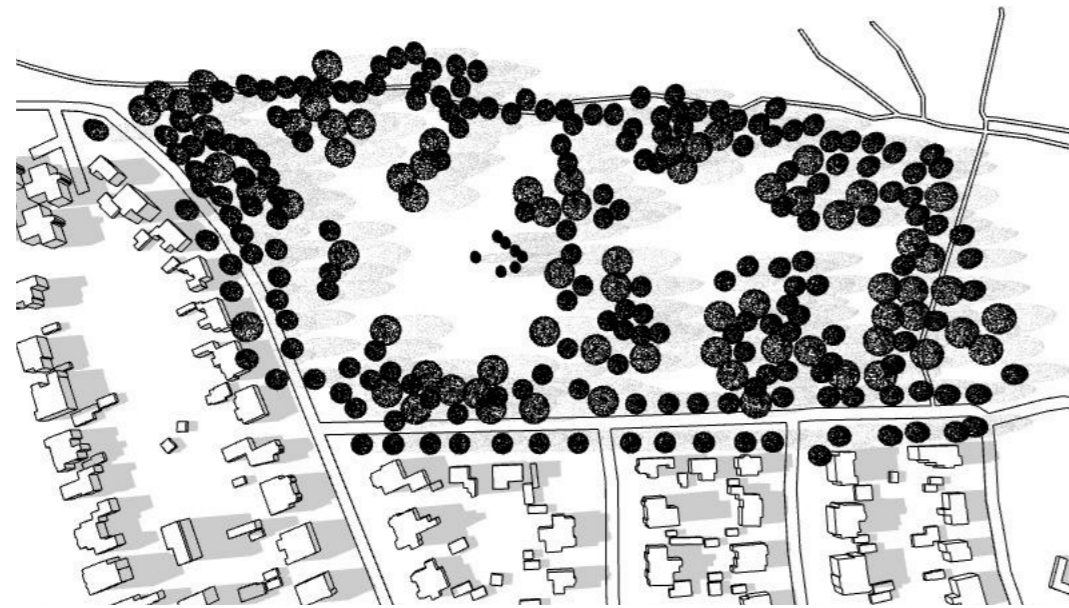
Wind diagram

The wind diagram shows that mostly wind comes from the south-west side. The wind from the north and west side will be blocked by the many trees the forest up north contains (Meteoblue, 2020).



Sun diagram

Regarding the sun path, the site is located perfectly: the sun is not blocked by the forest as the forest is located on north. The surrounding buildings are usually eleven meters high and situated from a distance from the site so they will not block too much sun (BK TU Delft, n.d.).

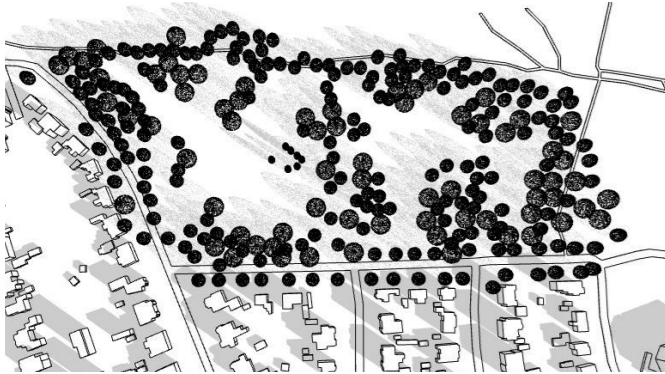


Daylight through the seasons

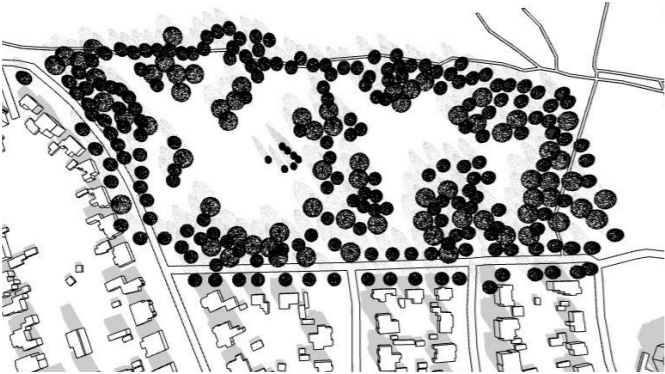
The site is surrounded by many trees and plants, as well as with dwelling. This has a major impact on the amount and direction of daylight entering the site. The trees cause most shadow as most trees surrounding the site are 20 meters high or higher. Most surrounding dwelling is around 11 meters high. In the upcoming pages the daylight through the seasons is shown. Only the trees on the site are modelled and were put at 20 meters high.

Daylight through the seasons

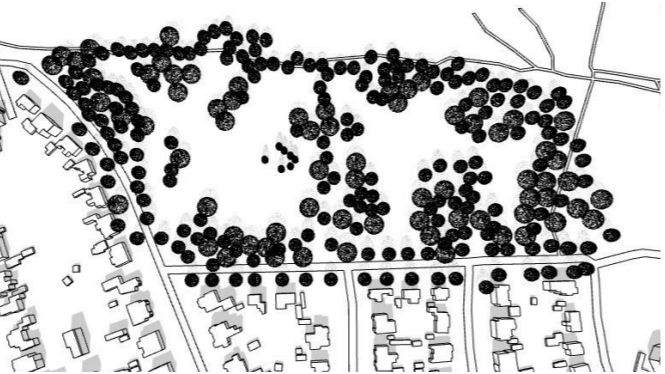
Summer



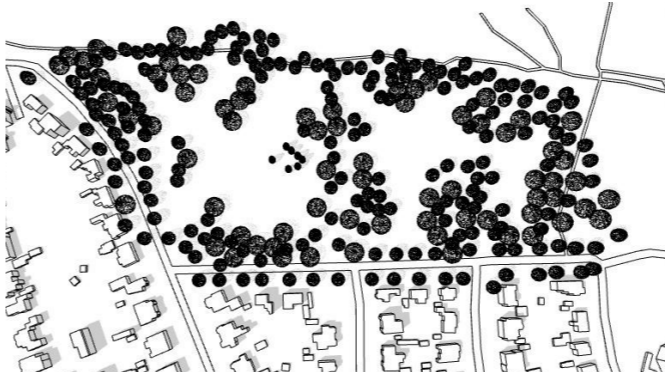
08 am



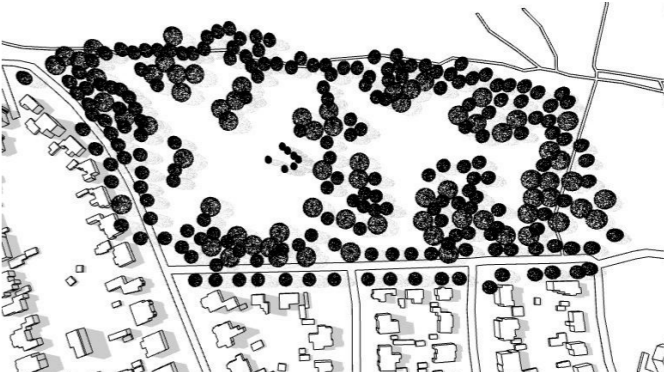
10 am



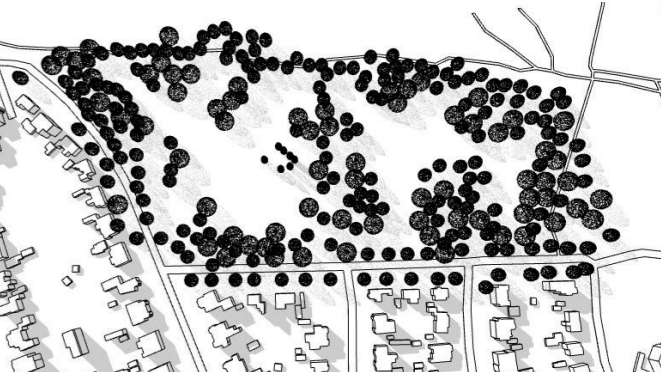
noon



2 pm



4 pm

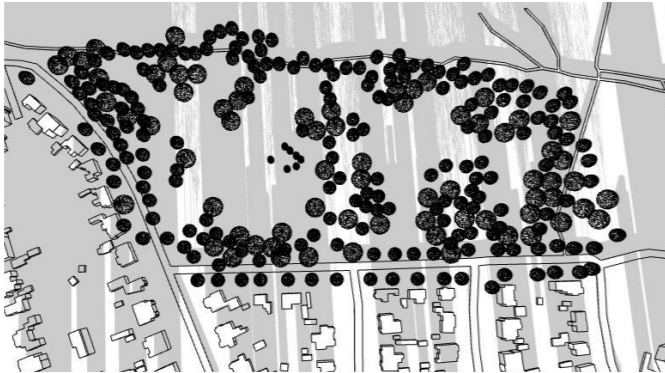


6 pm

Winter



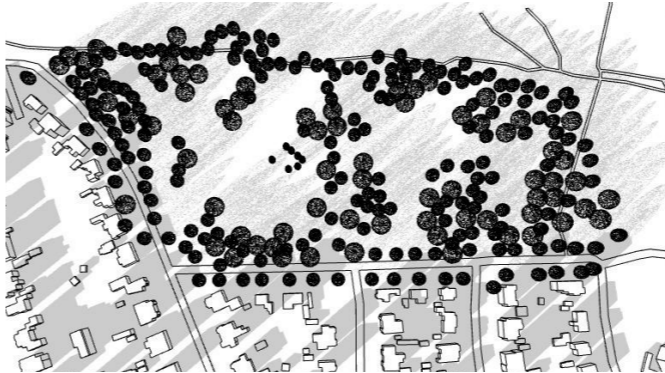
08 am



10 am



noon



2 pm



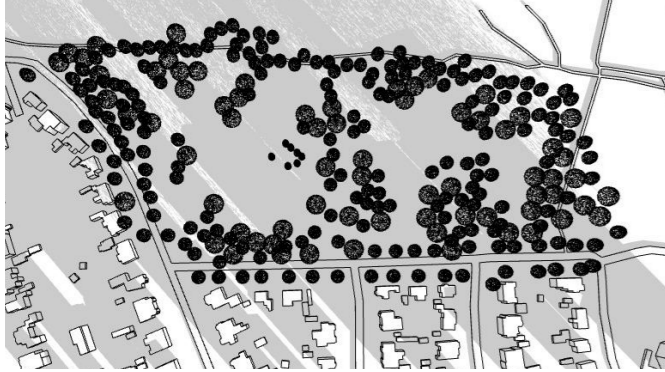
4 pm



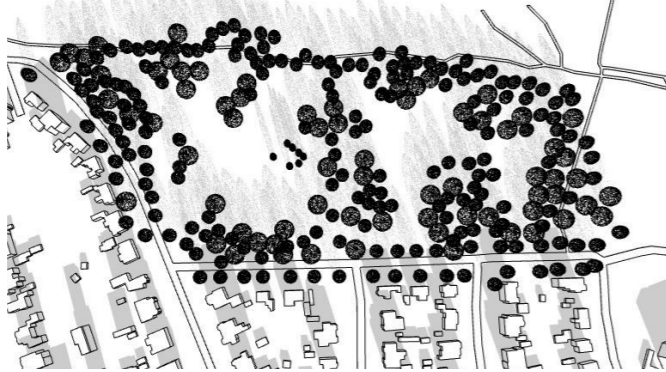
6 pm

Daylight through the seasons

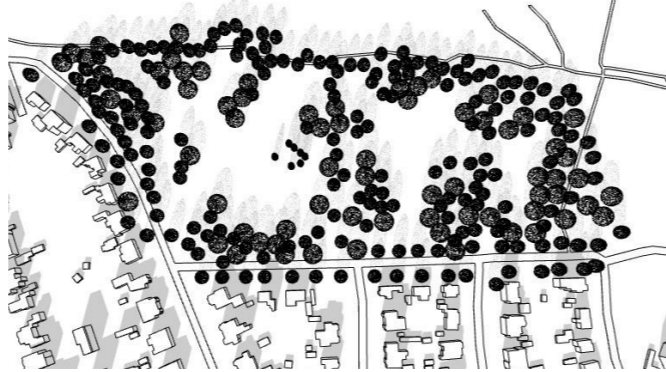
Spring



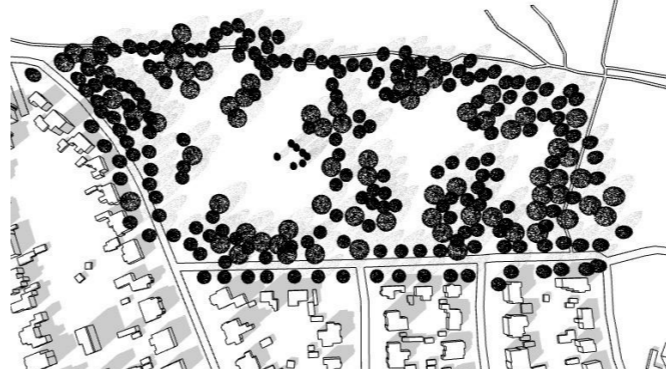
08 am



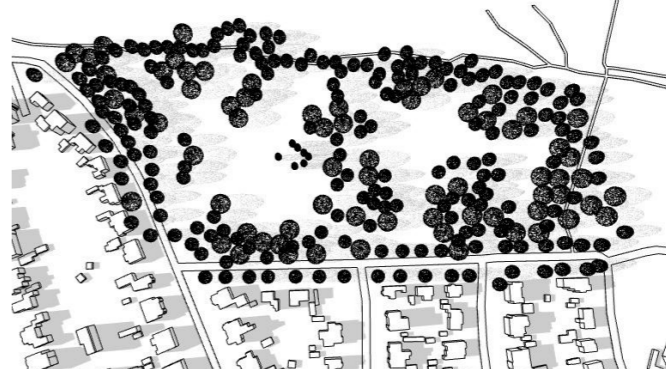
10 am



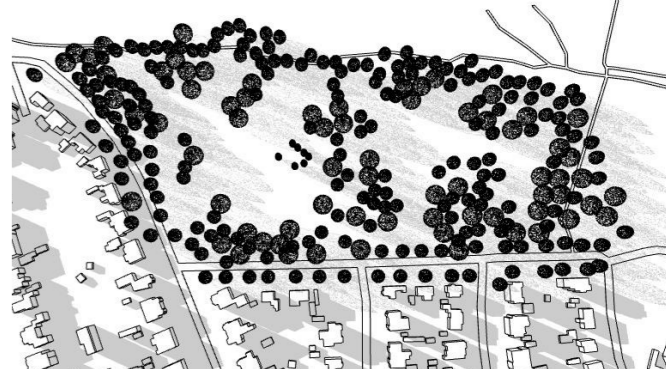
noon



2 pm

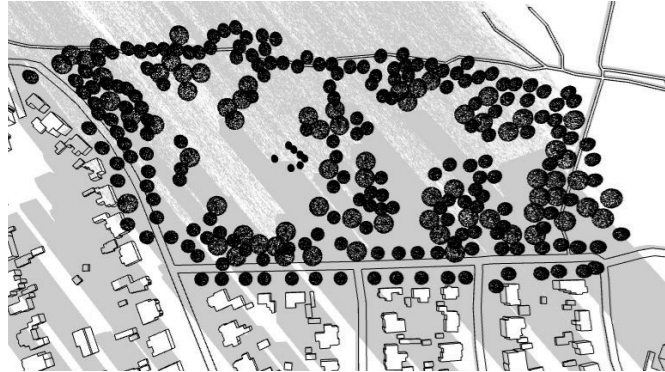


4 pm

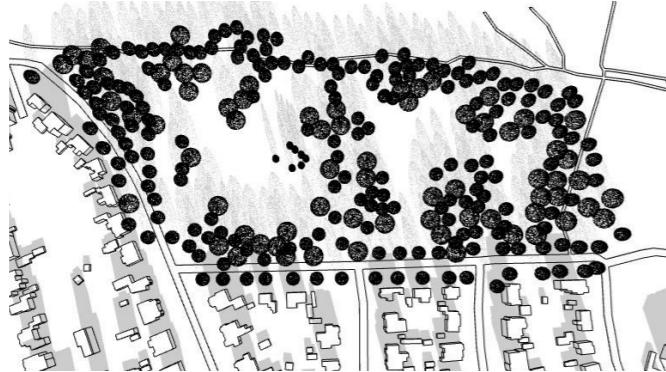


6 pm

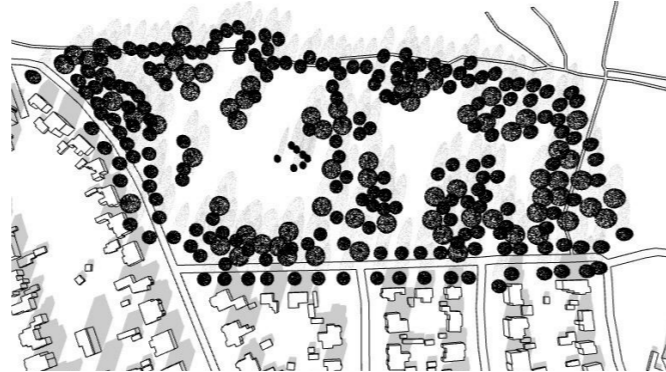
Autumn



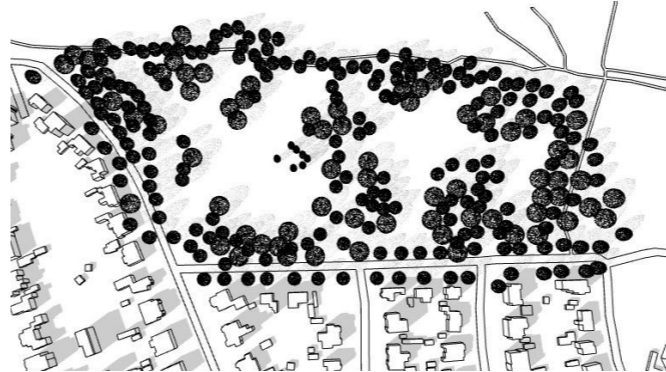
08 am



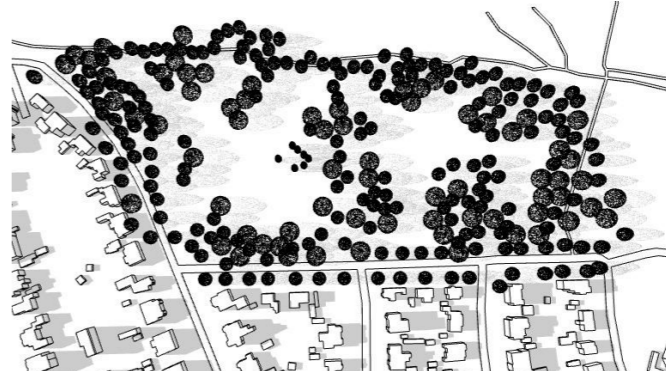
10 am



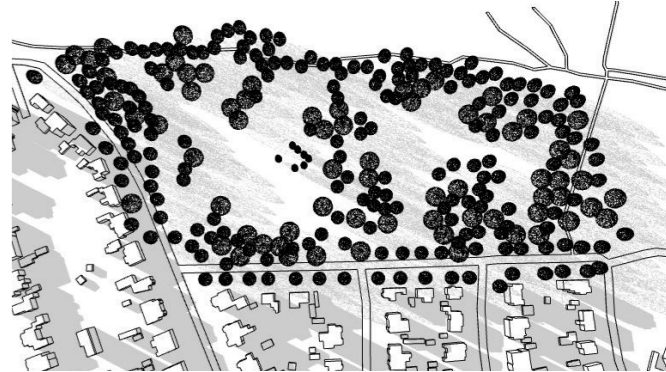
noon



2 pm



4 pm



6 pm



Trees and light in a nearby park called 'Sparrendaal'



Daylight through the leaves

During our day visit to Driebergen-Rijsenburg we noticed that light played an essential role in the experience of the site. When one moves, light entering one's eyes changes as well as when leaves move caused by wind. When leaves move, suddenly some sun rays become apparent or a shadow is cast. The upcoming photo collage shows how one small single movement immediately changes the experience of light at the site and its surroundings.



Trees and light in a nearby park called 'Sparrendaal'



Trees and light at the Northern area of the site





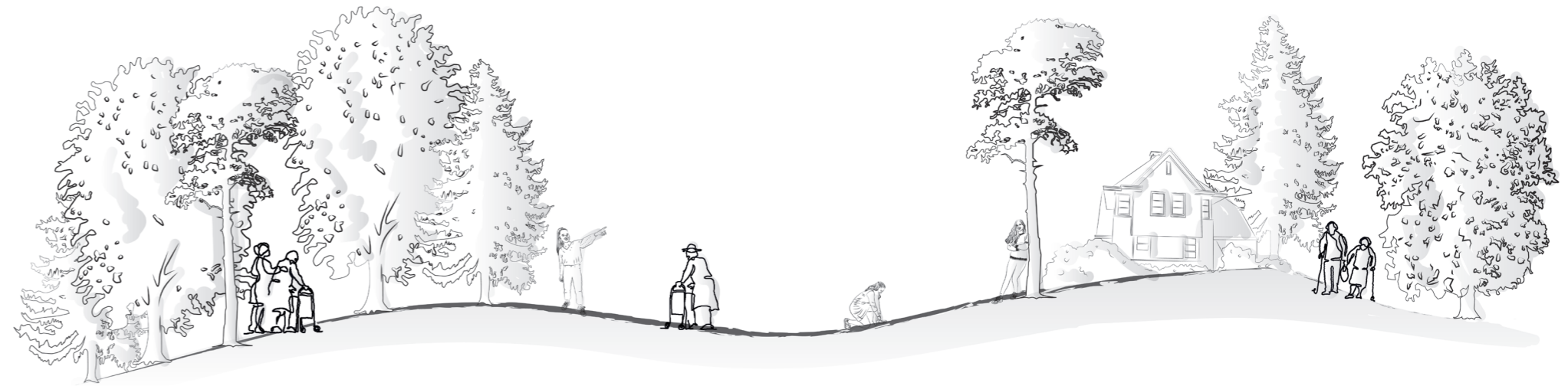
Trees and light at the Western area of the site



Trees and light at the Hoofdstraat



landscape analysis



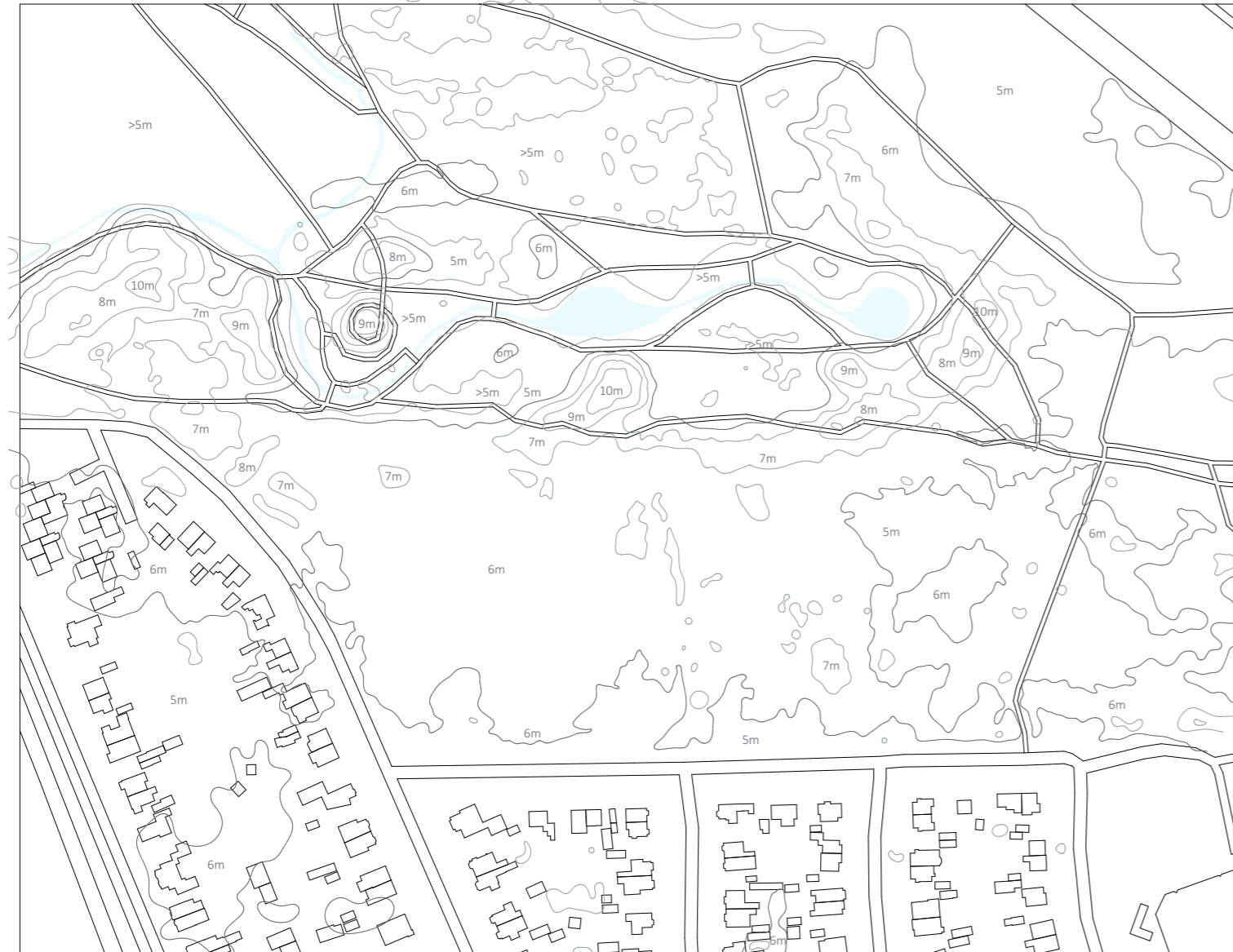


The landscape of the site hosting the intersection of nature and a road

VI Landscape

Introduction

To wander through the landscape of the site and its surroundings is something we all enjoyed doing. The landscape revealed itself to have a variety in colours, heights and characters etc. In this chapter the landscape of the site and its surroundings is analysed in several topics from textures, types of trees, colours of the site to birdhouses. Lastly, the chapter will be concluded with an analysis of the several characters the outdoors of the site offers.



Height map

The site is surrounded by many height differences, often sloping landscapes but sometimes sudden height differences. The site itself is 1 meter higher than the attached neighbourhood and sometimes changes in height with usually 1 meter. When entering the forest side of the site there is a sudden drop of 1 meter, a ditch, followed by a two meter higher landscape.



Tree map

The site is embraced by many trees as shown on the map. The places that lack trees are in the middle of the site and clearly show where the existing building is situated. The street surrounding the site has the character of a lane as the trees are lined up according to a repeating rhythm.



Type of trees

Driebergen has a diverse landscape with trees. Up north there are mainly deciduous trees. At Sparrenheide en Nassau Odijckhof there is a combination between deciduous trees and conifers.



Beech



Oak



Platan



Birch



Larch



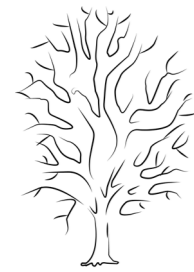
Douglas



Scots pine

Trees in summer

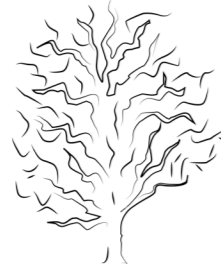
During the seasons nature changes. In summer beeches, Oaks, Platans and Birches blossom. These trees are common in the neighbourhood.



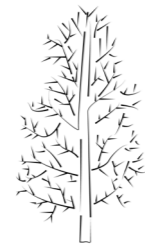
Beech



Oak



Platan



Birch



Larch



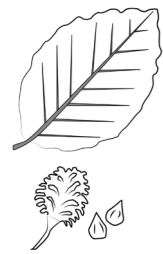
Douglas



Scots pine

Trees in winter

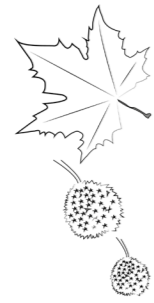
During winter many trees loose their leaves except for pine trees. In the neighbourhood a lot of pine trees keep their needles and still have their colour of green.



Beech



Oak



Platan



Birch



Larch



Douglas



Scots pine

Trees and its fruits and nuts

Every tree has their own type of leaves, fruits and nuts. This gives them different kind of colours and change of colour during the seasons. The fruits and nuts can provide biodiversity since animals like to eat these fruits and nuts.





Trees and their textures

Trees types differ from each other. Not only the leaves, but also the bark of a tree differs. On some trees mushrooms can be found, on others ivy are growing and rarely a woodpecker lives in the tree.



Intertwining trees

Nature flows

In the forest surrounding the site two trees interlock with each other as if one hugs the other. Which tree came first or were they grown together at the same time? These trees stand close to the 'Grote Boswei'. From these trees we learn that nature flows its own way and will take its own course.



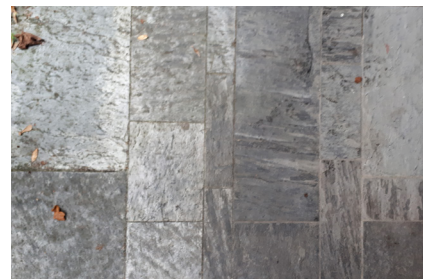
The forest around the site

Close up north a forest is found. There are little bridges to cross a ditch and a wooden larger bridge will take you to the other side of the road. This path is not necessary to take to cross but it gives another possible experience.



Textures of vegetation at the site

At our site very different vegetation and therefore various textures can be found in nature.



Textures of stones at the site

These stones are found in our site. On some stones nature has taken its course.

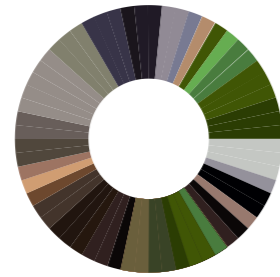


Birdhouses at the site

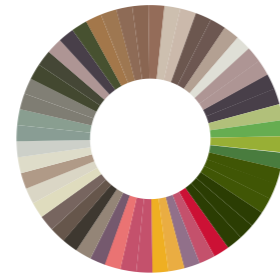
At the site different kind of birdhouses are in nature. Birdhouses are used to feed the birds or give them a place to stay. The houses show that the inhabitants of the nursing home have affection for birds and nature, and that they would like to be involved with them.



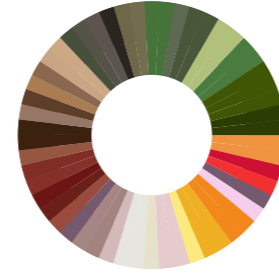
Fall



Winter



Spring



Summer

Colours of the season

Every season has its own colours. At the site the fall season is characterised by brown and red colours. In the winter the red colours have disappeared and made place for more cool toned colours such as grey, the green colours of the pine trees remain. In spring more floral colours such as violet appear as the heather begins to bloom. In summer yellow appears.



Colours of autumn

This image is taken during fall on the site of Sparrenheide/Nassau Odijckhof. The colours shown on the left are coming from the pictures. They are warm colours. Over the seasons some colours will change while others will stay the same colour like green.



Different characters in landscape | the site

Our design area consists of different characters in landscapes. We divided these several characters into three different elements: the meeting area, the active area and the perceive area. Some areas overlap and contain multiple properties.

The largest area of our design location consists of woods that we have defined as a 'perceiving' character. This means that the experience of the person is determined by the interaction of the individual to nature. It as well means a quiet environment. The blue colour consist of perceiving places.

At the same time some active parts can be considered in the forest environment, these are the functional forest paths or the play areas. In these places people can undertake an action or act out a specific function. This is shown in the white part of the map

Lastly, the pink dots in the map shows the meeting and social places of our area. These places often go together with the 'active' area and provide opportunities for people to meet.



The perceiving garden

In your view many trees are present, allowing for privacy.



The active and meeting garden

While walking and wondering around, there is a lot of height differences and bridges that acquire one to be active.



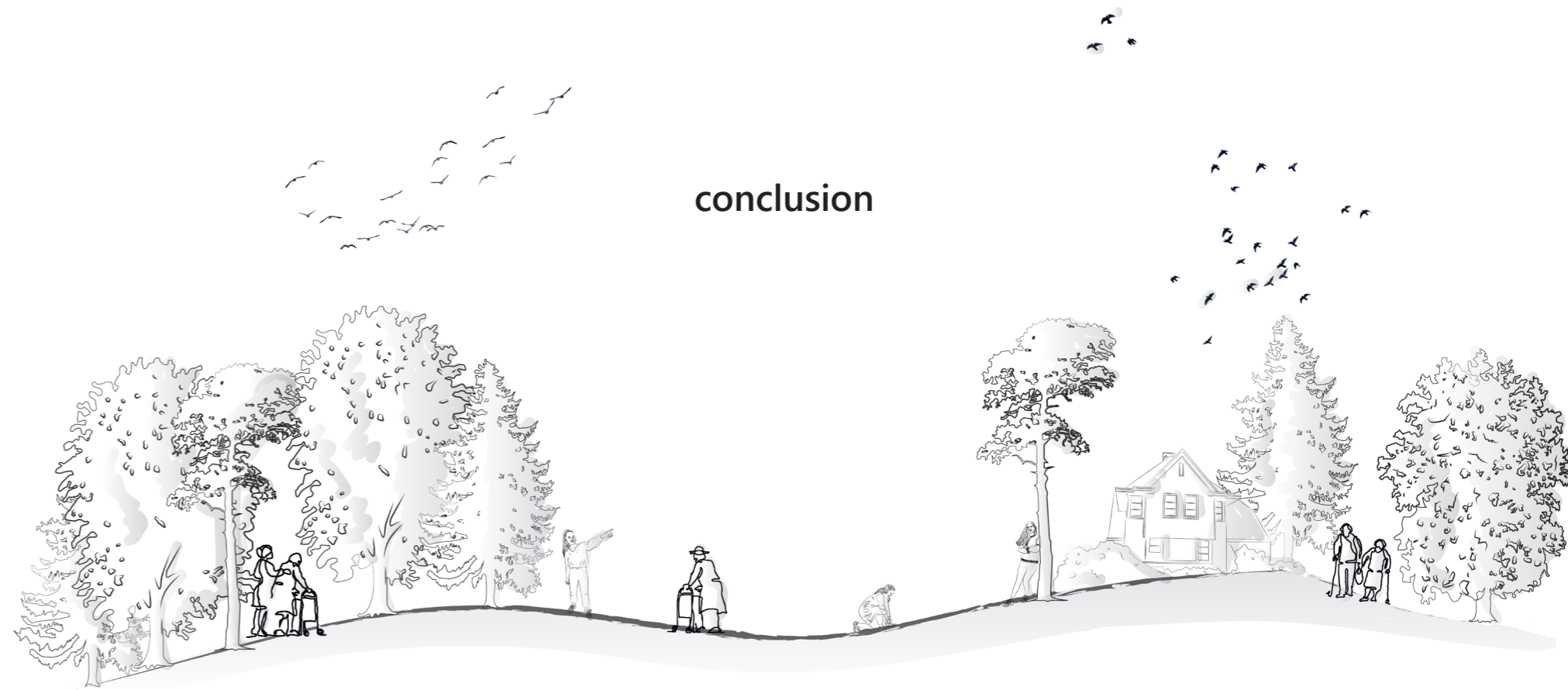
The active garden

The paths are straight or with a gentle curve. When activating elderly with a walker, it is important that the paths do not interrupt.



The perceiving and meeting garden

Benches are in the surrounding so you can perceive your view.



conclusion



VII In Conclusion

Strengths

Nature

The amount of trees, plants and animals is an apparent and beautiful strength of the site. This high amount in green features needs to be explored and used. With the many green features comes a large open outdoor space.

Function

The site is easily accessible for mobile visitors who arrive by car or train. Nearby the site is a cemetery, this is seen as a strength as it allows possible windowed elderly to easily visit their lost loved ones. Lastly, the growth in number of culture businesses is a strength as well.

History

The site, as we have seen through the historical landscape analysis, is rich in many layers of culture and history. Throughout history there has been a broad variety in land use and therefore in landscape as well, it allows for an experience of relief.



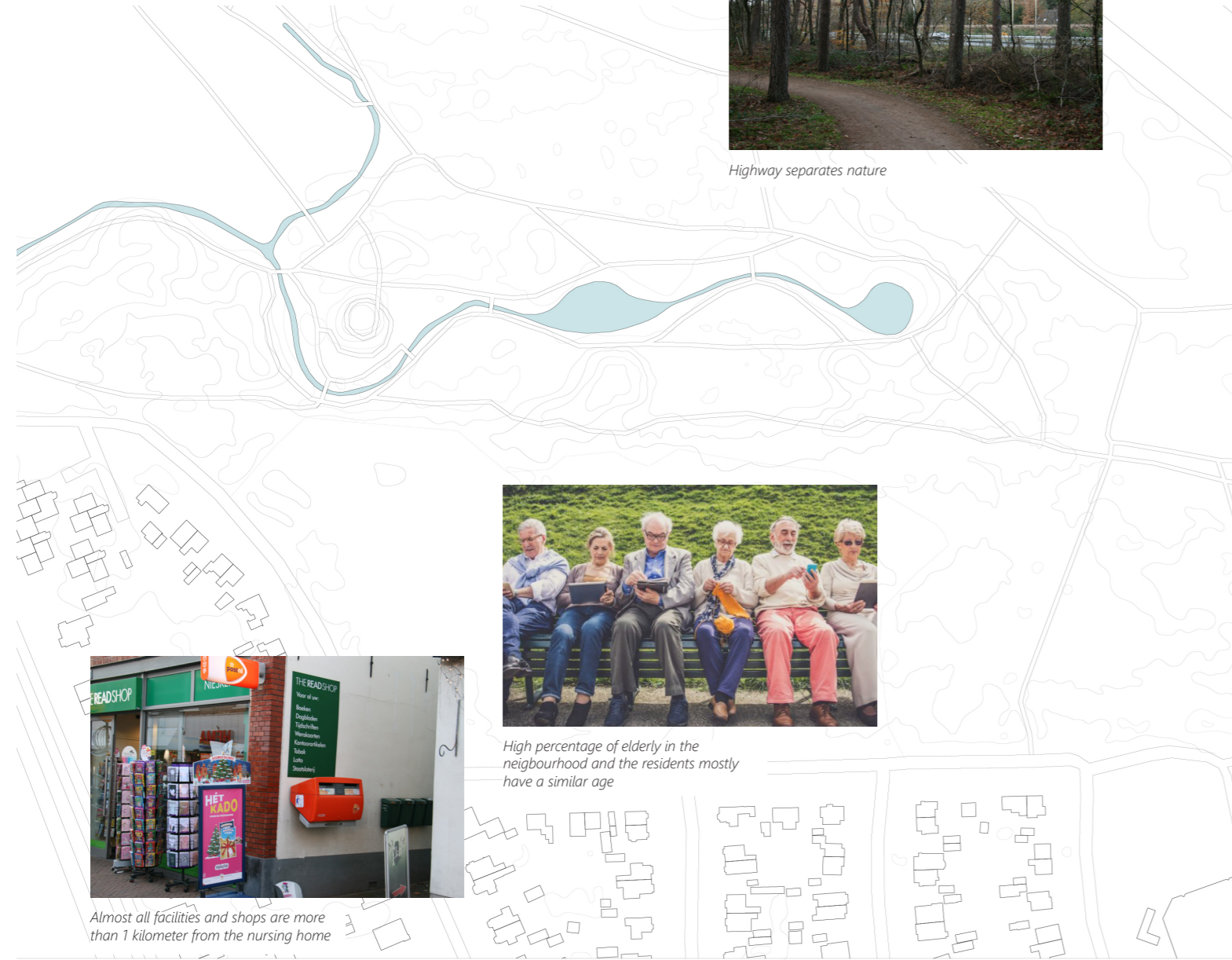
Highway separates nature



High percentage of elderly in the neighbourhood and the residents mostly have a similar age



Almost all facilities and shops are more than 1 kilometer from the nursing home



Weaknesses

Highway

The highway above the site separates the nature located at the site from the nature located above.

Functions

The site finds itself far away from the centre and thus losing 'reuring' of the village. As a result the primary facilities are far away as well from the site for elderly (more than 1 km). Along with the facilities, public transportation such as bus stops are too far situated as well (more than 300 meters).

The street named 'Hoofdstraat' separates the neighbourhood in which the site is located from the centre of the village.

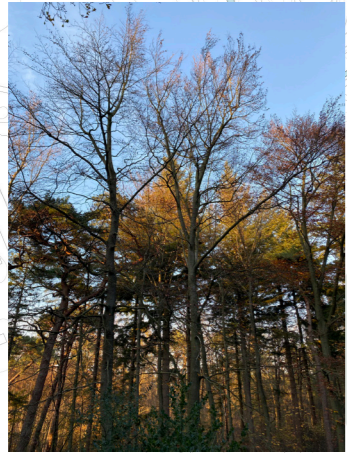
Neighbourhood

There is quite a high percentage of elderly in the neighbourhood and the residents mostly have a similar age. Lastly, the municipality is quite poor, this might cause them to not be able to support entrepreneurs for the elderly.





Air and sound pollution from the highway



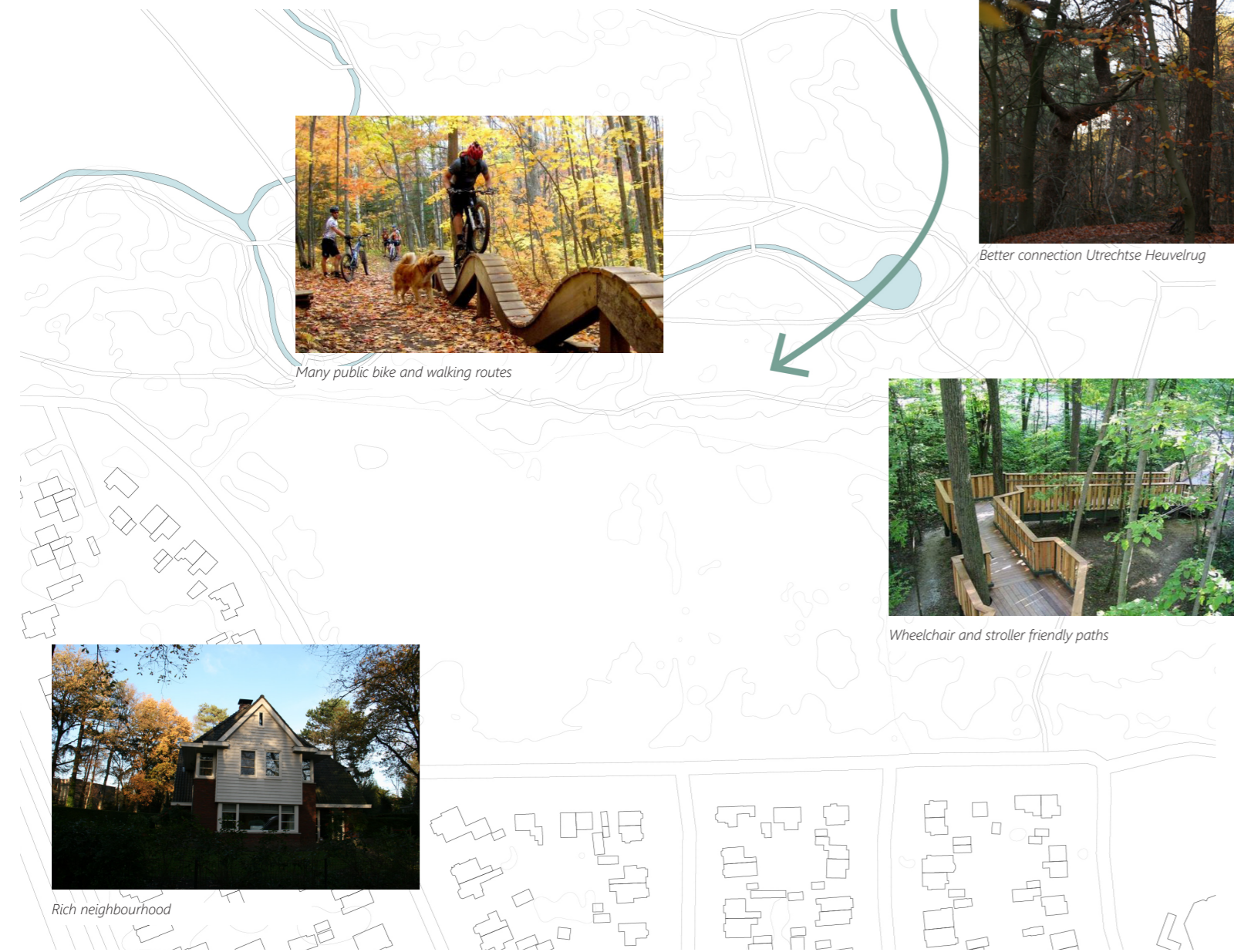
Limited daylight due to many tall trees



Threats

Nature
 As a result of the many trees and plants located at the site, the site does not receive much daylight. This is tricky as daylight is essential for the well-being of humans. The existing buildings at the site are hidden away, this could potentially make the elderly feel like they need to be hidden away as well.

Highway
 The highway causes air pollution and sound pollution both dangerous to human health and well-being.



Many public bike and walking routes



Better connection Utrechtse Heuvelrug



Wheelchair and stroller friendly paths



Rich neighbourhood



Opportunities

Nature

The site is hidden away in nature allowing the creation of privacy. There could be a better connection created between the Grote Boswei and the Utrechtse Heuvelrug. This can promote movement of elderly, making sure they stay vital.

Facilities

The many public bike and walking routes and facilities could seduce elderly to move more.

Neighbourhood

The average income per household is quite high in Driebergen-Rijsenburg and the neighbourhood could be made more walk friendly.

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