

Arcadia Again

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Studio: Designing Resilient Heritage Landscapes – Garden of Gelderland

May 10th, 2020

1. Introduction:

Our studio is concerning about the development of the landscape system of castles and historic country estates in the province of Gelderland. It is part of the KaDEr research project of the D U T. My project is about the cluster of estates around the city of Arnhem and the surrounding areas. The main topic of this area is tourism and recreational co-use.

The area bears a unique geomorphological feature in the whole country, that is the huge mountain area on the north side of the river IJssel, which makes the region outstanding and popular in the rich class in the history. In the past, kings and nobles and other rich people such as bankers contributed a lot to build their own estates in this region, mostly on hillside, between the urban area in the river valley and the nature area up on the higher ground. The owners of the estates usually used them as a place to spend the holiday or have hunting activities. As time passed, there were also some new estates established by the new elites in the region. The set-up of the estates included not only the typical beautiful buildings, but also the garden area, which usually kept changing styles though years, from geometrical French style to English landscape style, some of them even have a large amount of land for fields and hunting grounds in their boundaries. With all this beautiful creations in this area, in 1820, the writer Isaac Anne Nijho described the Biljoen and Beekhuizen as Gelders Arcadië in his book ‘Geldersch Arkadia of Wandeling over Biljoen en Beekhuizen’(first edition 1820), because of the beautiful estate layout with woody hills and streams, which made him feel the place was far beyond anyone in the realm.(‘in uitgestrektheid en fraaien aanleg, alle anderen in dit rijk verre overtreffen’).[1] This feeling match perfectly to imagination of the mysterious place ‘Arcadia’ in the myth. After that, the area kept getting more and more famous for the name of Gelders Arcadië, and the estates were also developing. We could see that the uniqueness of the landscape finally also evoked the prosperousness in cultivated landscape.

However, from the last century till now, there is almost no rich people or family that can afford the high expense of maintenance of the estates. Consequently, most of the private owners sold out their estates, the territory of the estates shrunk or split apart. The most of estates becomes owned by the foundations or companies. Instead of only being private used, the estates started to serve as museums, hotels, schools, caring facilities, or business facilities open to rent for weddings and other events. At the same time, the middle class is getting richer and richer and the city grows. The cities grow from the river plain towards the hill, getting more and more closer to the once distant estate. The bigger cities caused bigger demand on more public green space. Some of the historical estates that are near or even in the city can serve perfectly as an attracting public green space. Besides, for the estates that are still in or near the nature reserve, the Nationaal Park Veluwezoom, they still have a lot of potential to benefit the public and develop in a better way. The positions of the estates have a particular feature in common, that is on a ribbon area across the hillside, which

can also be regarded as a transition zone between urban area and nature reserve area. With their unique history and beautiful layout, as long as the breathtaking nature landscape in the national park, they are also a perfect connection with cultural and natural value. Nevertheless, when we look into the current situation, most of the estates are more or less struggling with maintaining the whole estates, some of them lost their historical buildings or even nearly abandoned. Besides, many of them are semi-public or private, for those that are open for the public, people often couldn't find easy access to the estates which are not in the urban area, or even don't know their existence. It is really a pity for the cluster of beautiful estates, which could have become one of the most attractive features in this area. In a nutshell, the values of the estates are losing through time.

Those problems and potentials drive me to think that what I can do as a landscape architect to revitalize the cluster historical estates. According to this thought, I developed my objective of the project, that is, 'to make the rich heritage landscape value visible, accessible and open for experience to the public and fit in the contemporary context.' To achieve this final goal, I want to use the immaterial concept of 'Arcadia' to hold the cluster of estates around Arnhem and Veluwezoom together, to promote the estates to the public and let people to visit and experience the rich beauty of the area. In this scenario, the estates could gain more credit in the public, that leads to more income for the owners, which can in turn support more maintenances and improvement to the historical sites. So it would be a win-win project and have a positive feedback, in which estates could make more money and develop, and the public can experience the beauty of the estates and landscape. To make the goal practical, I should also do some physical intervention based on plenty of analysis and case study and design. Based on the analysis of the existing situation, I developed my main concept of the project, that is to create route that follow one contour line on the hillside as the backbone of the whole area to hold the estates in the area together as the 'Arcadia'. The main reasons of using this approach are that, the locations of the estates are mostly on the hillside, which is an important feature of them, a route along one contour line can easily go through a lot of wonderful estates and the route itself could be an implication of this feature, besides, a route that strictly follow a contour line is powerful and obvious that can become a clear guidance for visitors to follow and access to the estates. To elaborate the whole 'Arcadia' with the route and the estates, such as re-organize the planting, road network, layout of estates etc. to let different elements interact with each other in coherence, and establish multiple access to the 'Arcadia'.

2. Methodology

I firstly refer to Paul Meurs' 'Heritage-based Design'^[2] to get some theoretical support. In the book the author talks about the trends in heritage related designs, which gives me some guidance and directions that if I design with heritage, which aspects I should pay attention to and what kind of things I am supposed to achieve. Some of them I think are really related to my project:

First part is the trends he mentioned that is happening in the field of heritage.

- From monument to heritage, Meurs (2016, p.14):

In this part, he mentions that Heritage covers loose objects, buildings, structures, landscapes, archaeology, traditions and stories (immaterial heritage), which gives more elements credits in the field of heritage. Then the book says that 'the emergence of heritage as a widespread social phenomenon has contributed to the fact that monuments have become less elitist and reach a

larger audience’, and ‘heritage is about the presence of the past in contemporary life, it often says more about the present than about the past’.

Those consequences of the shift from monuments to heritage make me aware that it is important to let the heritage have their own values in the contemporary context, and also making the once private-owned estates more open to the public fits perfectly in the trend, which are the things I want to achieve in my project. I should always keep those fundamental goals in mind throughout the whole project.

- From objects to areas, Meurs (2016, p.18):

In this part the author mentioned that ‘the concept of heritage as a collection has given way to the concept of the historical cultural landscape in which buildings, green space and water, urban structures and the landscape are inter-dependent’, ‘area-oriented heritage care is much more about giving form to (appropriate) change than about overall conservation’. In this part, I learnt that when I realized that not just the beautiful architecture, all the elements in the estates, such as the garden, the stream, the plants and the structure of the layout could be part of the heritage and with historical values. Besides, overall conservation may not be the best way to do, I should be brave to do some intervention to the place to make it better.

- From conservation to development, Meurs (2016, p.21):

In this part the author mentioned that ‘heritage care is more and more about the coordination of changes’, ‘due to lack of subsidies, you often need private investments and new developments to finance heritage conservation’, ‘development-oriented heritage care cannot do without the mutual trust between the heritage sector and the developers’. This part informs me that we should hold every related parts together, in my project that are owners of the estates, the foundations, the departments, the designers and the visitors, to create a win-win situation, which I think is an important aspect in my project, that is to revitalize the values of the estates, then to attract visitors, let more people to experience the beauty of the heritage and in return let the owners make more money for maintenance and development.

There is also a diagram in the book that demonstrate the similar idea. (fig. 2.1) Meurs (2016, p.34)

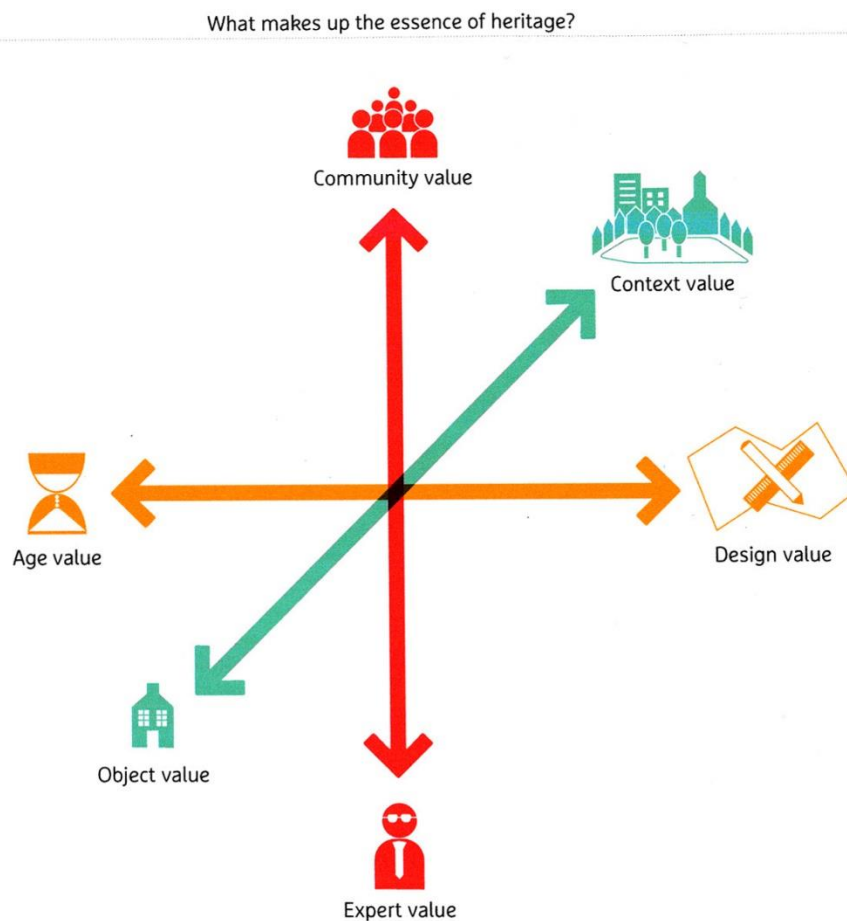


Fig.2.1 the dimensions of cultural value. (SteenhuisMeurs).

- From relicts to place makers, Meurs (2016, p.25-26):
In this chapter the author demonstrated that ‘in current urban redevelopment, connecting the old with the new is common place.’ ‘The old buildings are sometimes changed considerable, but also that the renovation is (partly) based on the past.’ ‘Saved monuments are no longer relicts of a world that has disappeared, but the quartermasters of the renovation.’ Then it comes to the example of Hotel New York in Rotterdam. The hotel used to be former offices of HAL (Holland America Line) when that area was a busy port area in the past. After that the area became a part of the inner city and hard to access. Then the old offices transformed to a restaurant and drew a large amount of people to the area and contributed a lot to the revitalization of the area.

This strong example inspired me a lot that what role a historical site could play in the contemporary context and what a good transformation could bring to the revitalization of the monument itself and more important, to the revitalization to the whole area. The answer could be combining the conservation and innovation, let the new transformation and function interact with the unique historical value of the monument, which could attract more audience in the contemporary time and in return lead to the revitalization.

In the part of Heritage-based design, the author explains how to manage this kind of intervention in practice, and what impressed me a lot is the approach of Designed presence, Meurs (2016, p.75-83)

and Rearrangement, Meurs (2016, p.85-89). In these two approaches, they both mention that when making changes or adding new things, we should always do it with some form of cohesion with the old elements, such as the volume, the form, the material etc. In this way, the old and new can merge into one which can have new functions and transformations that fit in the contemporary context and at the same time keep some monumental values. This is something I really want to achieve in my own project, that is to let the estates to revitalize to fit in and keep its values.

Besides, Meurs also demonstrates the values of immaterial aspects of the heritage. Meurs (2016, p.56) He writes that 'Immaterial values concerns the mentality of a place – linked to the ideas on which a certain design is based, or to the associations that have become connected with a place in the course of time', 'Objects can represent crucial links in the context, they can mark a transition, are iconic, show rare traces of a certain historical period', 'These qualities are not always immediately visible, they are perceptible to all those who know the story'. This part make me aware that the concept of Arcadia is really important in the project, which will make the whole project unique and outstanding, and offer visitors something different.

Meurs then take the example of Van der Pekbuurt to explain the importance of immaterial values. Van der Pekbuurt is a residential area located in the district of Amsterdam-Noord. Except for its material essences such as typical features of individual building and the spatial structure of the neighbourhood, it also has important immaterial essence, that it was one of the pioneer of social architecture in the Netherlands. For the first time, architects were involved on a large scale with building for people with low incomes. It is such an important element for the area that it would be strange if the renovated houses would suddenly become unaffordable for lower incomes. It inspired me that the immaterial factors could become guiding factors when doing interventions. Just like the fame of Arcadia in my project, I regard it as an important feature of the site that could play as a leading concept that hold the whole area in the large scale and lead the interventions for revitalization.

Although Paul Meurs' 'Heritage-based Design' mainly talks about heritage-based design in architecture field, there's a lot in the book that are applicable in the context of my landscape architecture project, like things I mentioned above. The trends in heritage gave me good directions and guidance about what I should try to achieve and what aspects I should deal with in a general higher level, which helps me a lot on coming up with my objective and make my own goals, interests and hopes blending in the objectives.

In addition, the approaches he mentioned when analysing and designing heritage architecture are also helpful for my analysis and design. When I analysed individual estates, I referred to the approach of analysing the historical buildings Meurs mentioned in the book, the example shows below. (fig. 2.2, Meurs (2016, p.49-57)^[2]) It picked out high value elements and positive values in the aspect of building envelope and spatial structure. When I tried this approach in analyzing the estates, it helps me a lot in understanding the historical values of the estates and guiding my design in the next step. This will be mentioned in the following part.



Fig. 2.2 Value assessment drawing Hegius lyceum, Deventer. W.P.C. Knuttel, 1954.

With all these theoretical foundations, I get clear on the final goals, that I should rebuild the area as the Arcadia in the contemporary context, where breath-taking estates and beautiful nature landscape make the nature and culture come together, where once the privately-owned estates show their historical values to the public, and where the set-up of the landscape make visitors feel they are in a secret beautiful neverland 'Arcadia'.

To achieve the experience and effect I want in the place, I should also work step by step to make it come true. Firstly, I should do analysis on the existing situations, first the basic information, the geomorphological map, the location of different elements and the estates etc., then the related aspects individually such as the current function of the estates, the transportation, the existing hiking & cycling routes, etc. In the analysis I am supposed to find problems in the existing situation that I can improve and also the potentials that I should dig out and make them functional. Most of the analysis would be mapping.

Based on the theoretical foundation and analysis, I can come up with my basic design assignment, that is:

To use the cluster of estates as a ribbon and connection, to reorganize the elements to offer the public an ensemble for recreation where people can easily experience the historical monuments and nature reserve.

To organize the elements under the concept of ‘Arcadia’, my main approach is to create a new route as a backbone of the all elements. Based on the route, things like re-organizing the planting, road network, layout of estates etc. to let different elements interact with each other in coherence and establish multiple access to the ‘Arcadia’ should be done to elaborate on the whole system.

To achieve the design assignment, I would design through scales. All the work should be based on existing situation, some relevant case study, and conclude and design by myself. On the biggest scale, I should decide where is the backbone route, which contour line to follow, and some adjustment in the urban texture. Then after zoom in to the areal level, the road network should be decided, as well as the facilities I add or change. To support this, a tool box of design principle should be concluded to show how to establish the road interact with contour lines, and also the prototypes that show what the route and the related facilities would look like. Next step is to zoom in to the estates level, some important estates would be picked up to show detailed design, which would show how the whole system improves the individual estates and how the estates interact with the route. In this level another series of design principle would be concluded and applied.

Those are the steps of how I would achieve my goals and I will show every step in the following parts.

3. Analysis

After setting the goals of my project, I want to find out the problems and potentials that are lying in the site and are concerned about my objective. Through analysis on different layers, scales and aspects, I understood the whole site better and got to know better what to do to achieve my goals.

I firstly overlapped the topography map with the elevation map, because the height difference is a crucial aspect in my project and I want to see the relation between the position of urban area, the estates territories and the elevation of the region. The mapping shows as below. (fig. 3.1, 3.2 & 3.3, drawn by the author, based on basic maps from the map room of TU Delft library, in the form of tif and dwg, and Provincie Gelderland (n.d.)^[3])

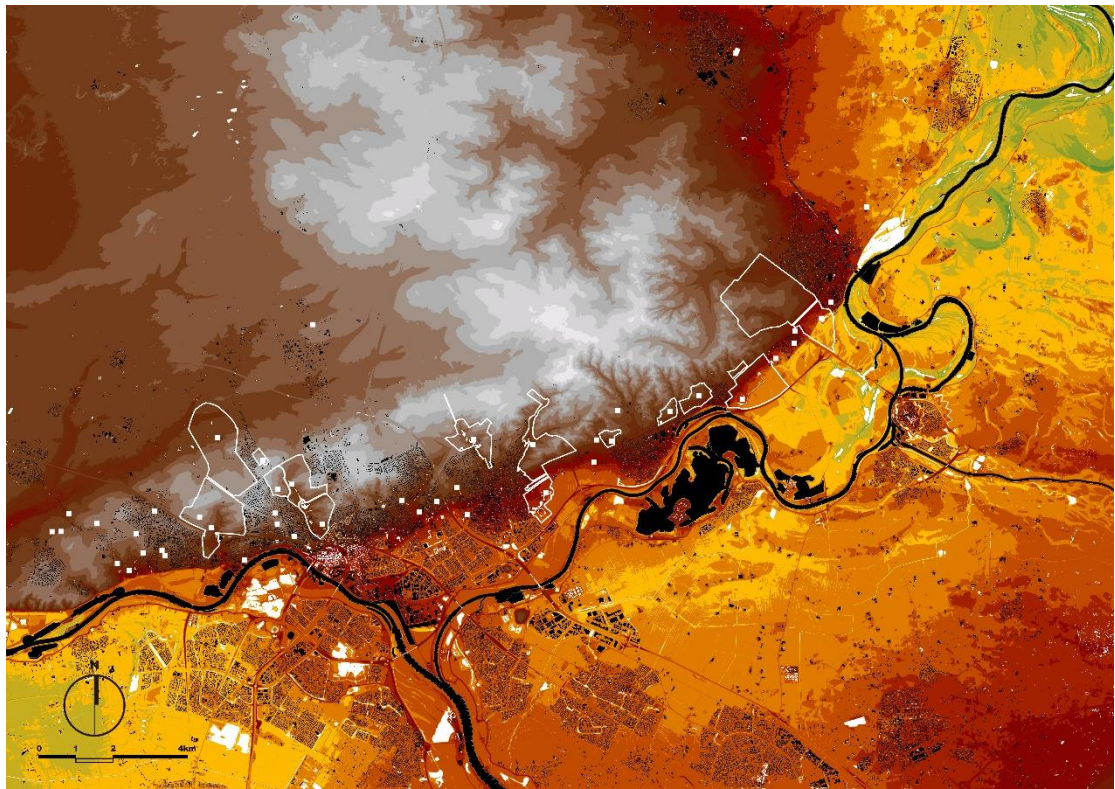


Fig. 3.1 Elevation map with estates and urban area

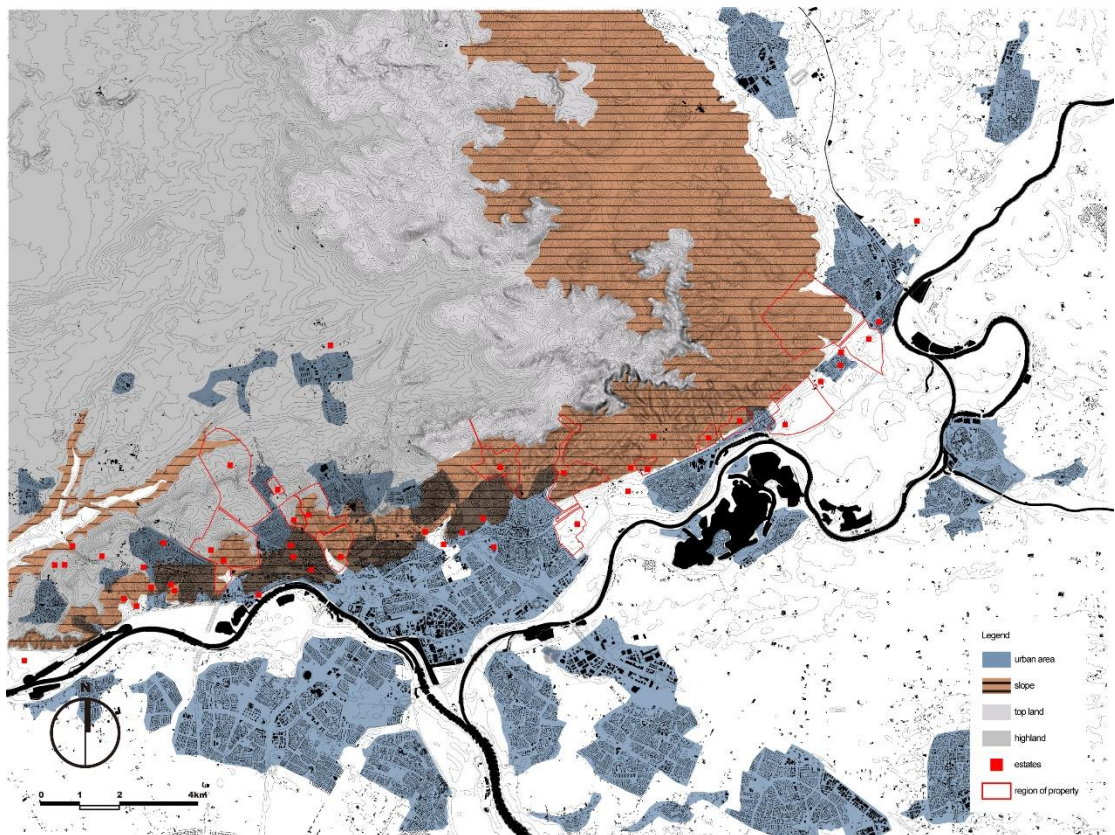


Fig. 3.2 Concluded map from fig. 3.1, the characteristics in landform

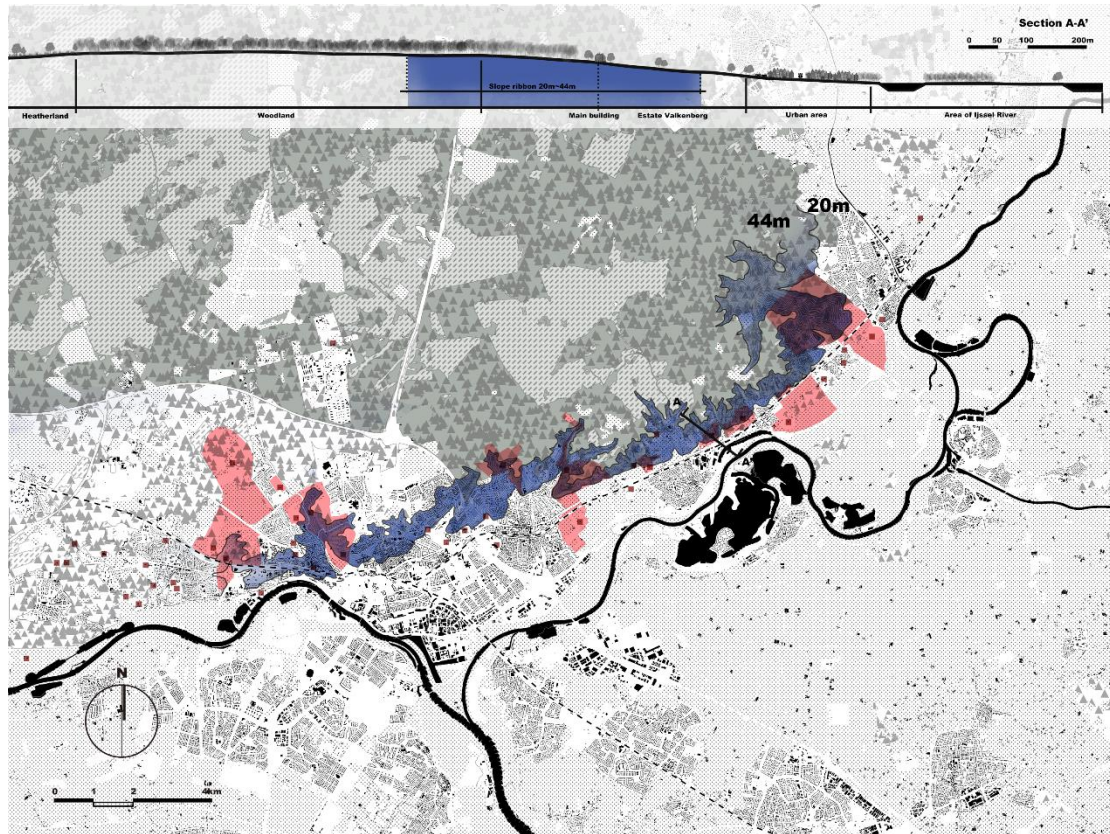


Fig. 3.3 Mapping and section of the ribbon area where most of the estates locate

According to these three mappings, we could clearly see that the relative position of the estates and the urban area. The urban area lies mostly on the low land beside the river, growing up towards the hill, while the estates lie mostly on the fringe of the cities, and most of them are in a ribbon area on the hillside, which are shown on in the fig. 3.3, where the color blue marks the ribbon area on the hillside and the red parts mark the location of the estates. The hillside has a very unique landscape condition, having beautiful nature at the back and the urban down in the sight, it has a good view down to the river valley and relatively easy access to both nature and urban areas. That's the main reason why they all have common feature in the location and I regard it as an important fundamental aspect that I can work on in my project.

Then I try to compare the current region situation with it in the history, show as below. (fig. 3.4 & 3.5, drawn by the author, based on basic maps from the map room of TU Delft library, in the form of tif and dwg, and Provincie Gelderland (n.d.)^[3], and Gelders Genootschap (GG. 2016. P.25, 35, 47, 51)^[1]

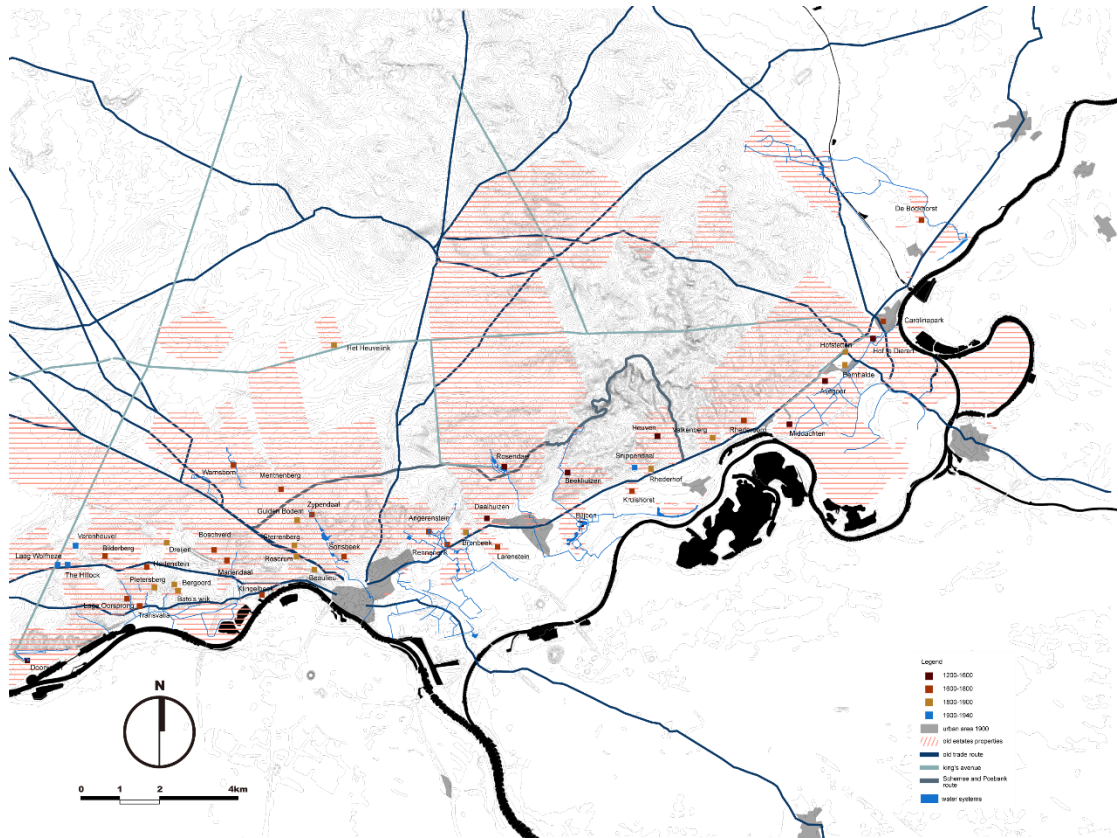


Fig. 3.4 Historical map

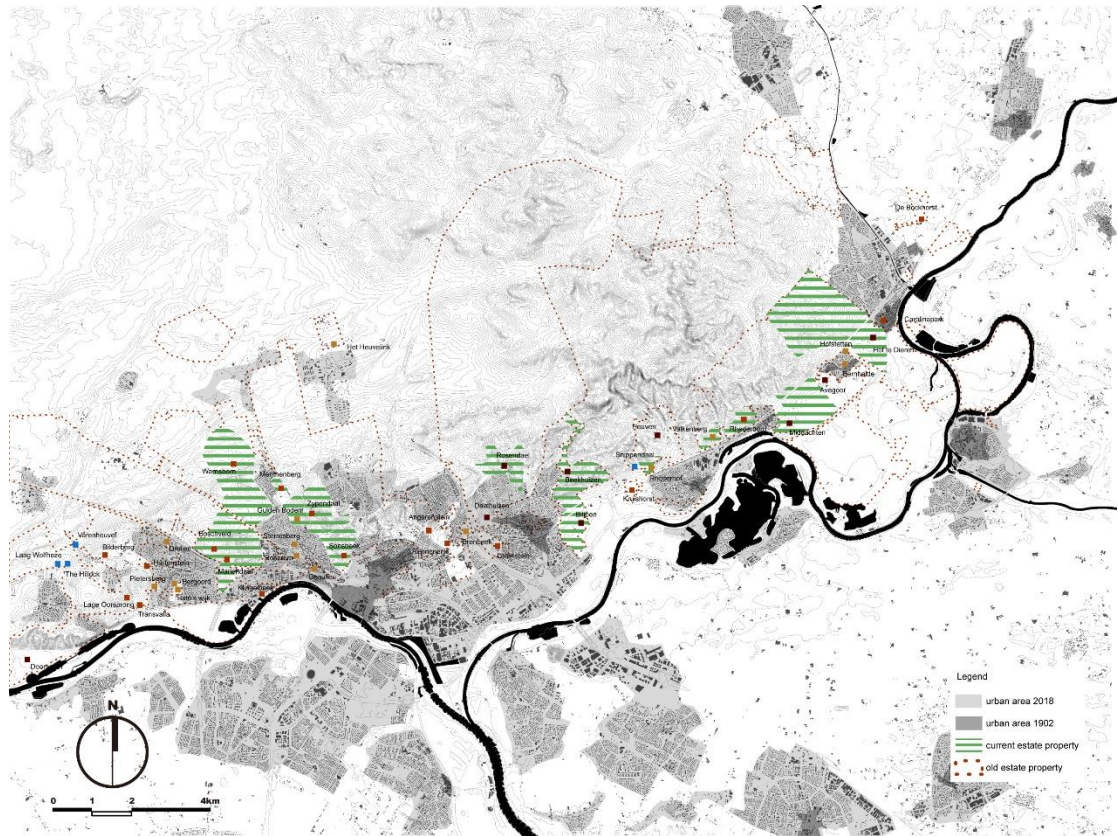


Fig. 3.5 Existing situation

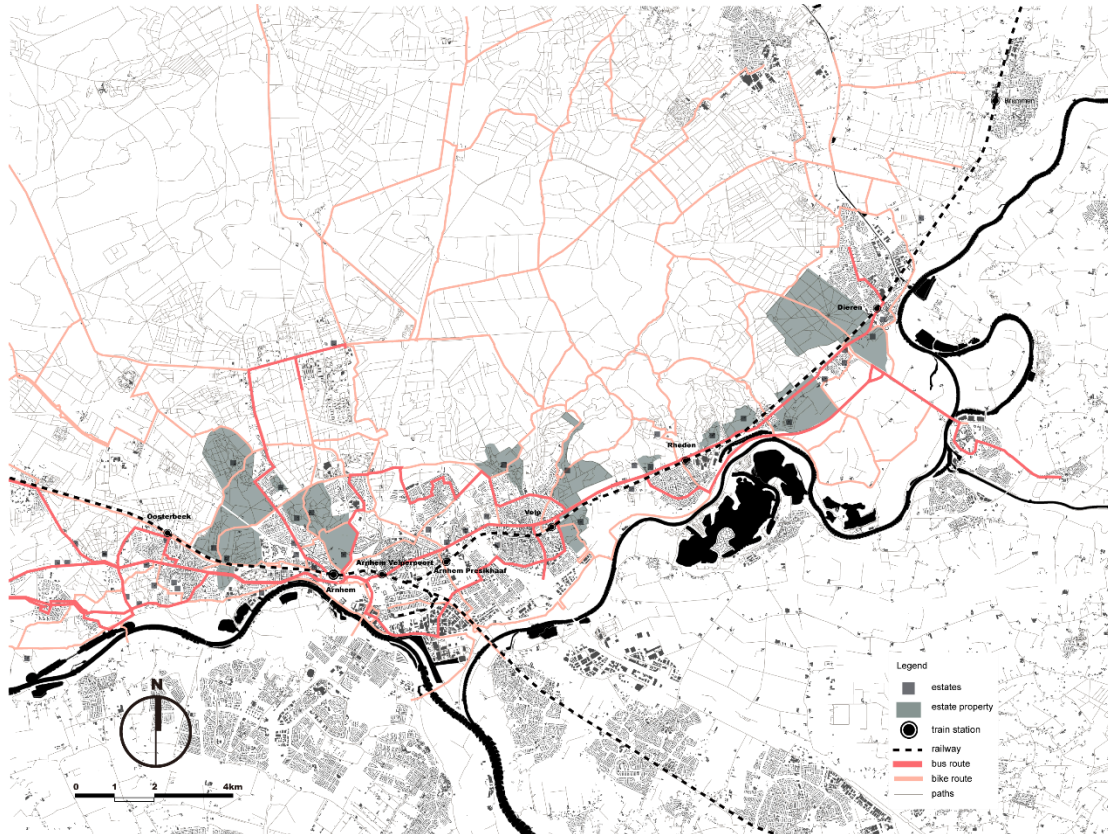


Fig. 3.7 Existing transportation map

According to this mapping we could see that there are some problems when we look into the transportation situation concerned about the estates. The public transportation mostly goes along the river and railway, barely up to the slope and hill, where most of the estates lies, and the exchanging nodes are too centered in Arnhem and cities, which makes it difficult when visitors want to visit the estates continually on the hill area. Besides, the biking tourist routes are evenly spread, but not have ones specially for estates.

Besides the transportation map, I also make a mapping which shows the existing hiking and cycling routes which are offered for the tourists. It shows below. (fig. 3.8, drawn by the author, based on basic maps from the map room of TU Delft library, in the form of tif and dwg, and Provincie Gelderland (n.d.)^[3], Natuurmonumenten (n.d.)^[5]

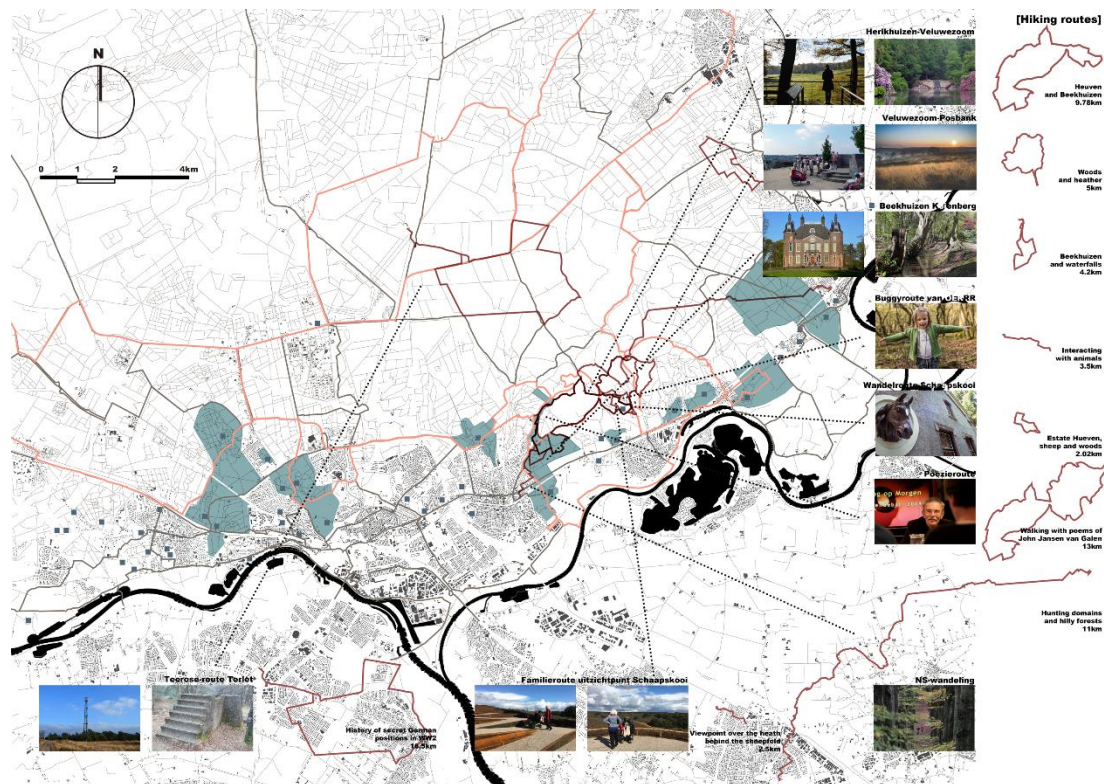


Fig. 3.8 Existing hiking and cycling routes

According to this mapping, we could see that there are already plenty of routes with different themes throughout the national park Veluwezoom, which we can tell is a quite popular way of experiencing the area. If we analyze this map with the last one together, we could see that there isn't a specific route which holds the estates in the area together and featured in this precious historical richness. I regard this as a big potential which I can fulfill in my project. Considering the landform maps I mentioned before, a route that follows a contour line in the ribbon zone may perfectly meet this demand. At this point, my main thought starts to come out and I will elaborate it in the following parts.

In addition to those analysis, I also concluded the natural values in the national park. Because I regard the cluster of estates not only a beautiful area in itself, but also an access to the vast and beautiful nature reserve area. Only when the cultural and natural parts work together, does the concept of ‘Arcadia’ fulfill in the contemporary context. The mapping shows below. (fig. 3.9, drawn by the author, basic maps from the map room of TU Delft library, in the form of tif and dwg, and Provincie Gelderland (n.d.)^[3]

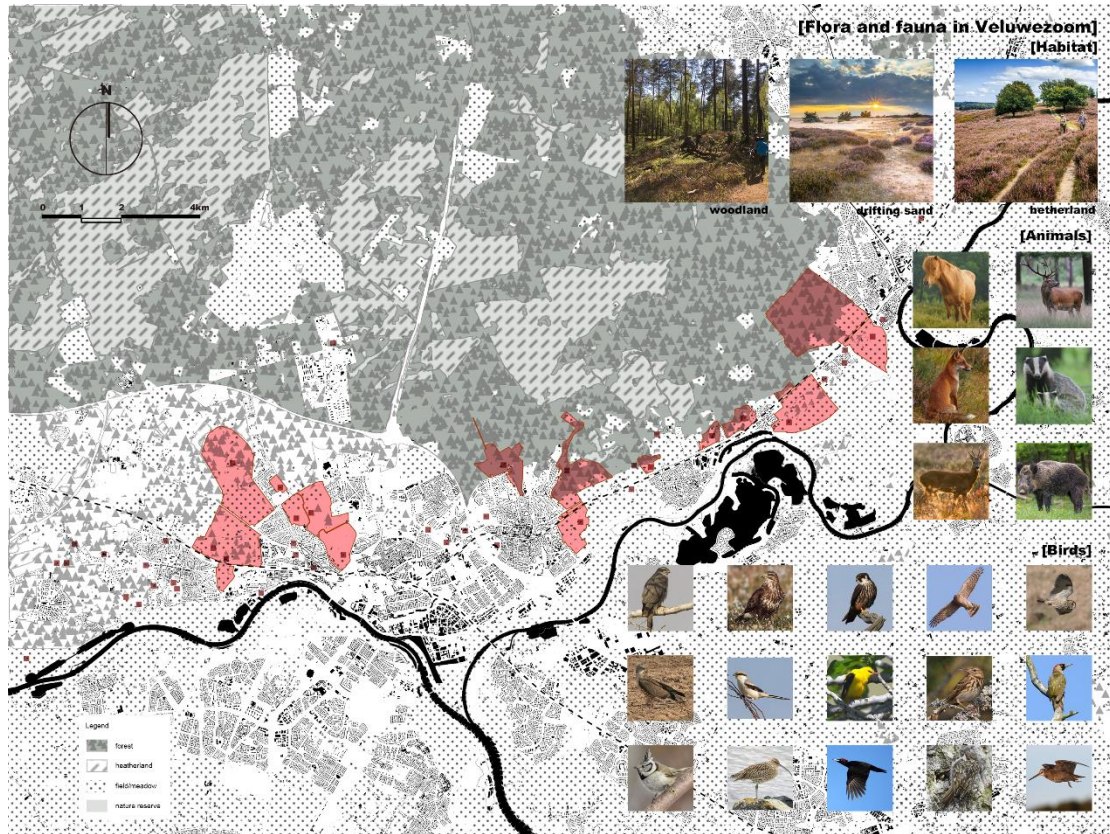


Fig. 3.9 Nature sources in the National park Veluwezoom

In this mapping I can see the rich beauty in the nature reserve area. It reminds me in the following design I should also consider the connection between the estates and the nature area.

After the areal analysis, I zoomed in to the estates level, assessing the historical values of the individual estates, which could be a foundation before I do some intervention on the estates. I took the estates of Beekhuizen (fig. 3.10), Rhederoord (fig. 3.11) and Hof te Dieren (Carolina Berg and Prins Willemsberg area) (fig. 3.12) as examples to analyze.

When doing the assessment of the monumental values of the estates, I refer to the approaches and examples mentioned in the book 'Heritage-based design' by Meurs (2016, p.49-57)^[2], and did some modification to develop my approach that fits for the estates' situation. As explained in the methodology, the individuals should play important roles in the whole system. In my project, to promote the branding concept of Arcadia, the individual estates should also have outstanding values to attract visitors, which would in return contribute to the whole system. So this kind of analysis could let me figure out which elements to strengthen or maintain and which parts to improve. When assessing the existing monumental values, I have two levels of values for two aspects, that is the infrastructure and green and blue structure.

Infrastructure values (Incl. Buildings, paths, platforms and other infrastructures, as well as the structure of the estates):

High value: (showing in red) Elements with high monumental values, which show the crucial

heritage features and qualities of the estates, that should be maintained and protected.

Positive value: (showing in blue) Elements with monumental values, which show the heritage features and qualities of the estates, that should be maintained to some extent while have space of transformation at the same time.

And the same two kinds of values are also used to assess the green and blue condition of the estates, which includes planting patterns, surface water courses etc., as well as the layout of the cultivated landscape.

When assessing the values of the estates, I first referred to the materials about the history of the estates, try to find the important outstanding features of the estates in the past, then I looked into the existing situation, to see the existing beauty of the estates through mappings and pictures. When comparing the history and existing situation, I may conclude what are the historical values of the estates.

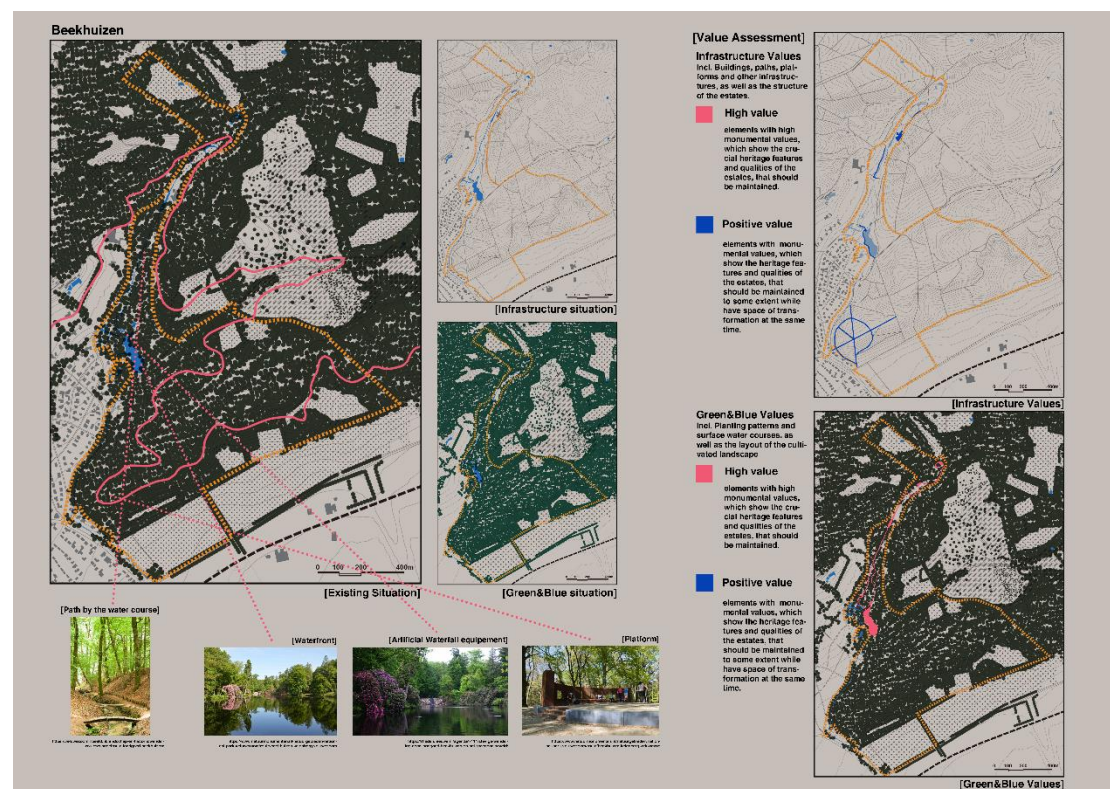


Fig. 3.10 Analysis of Beekhuizen. (picture sources from websites ^[19]^[20]^[21])

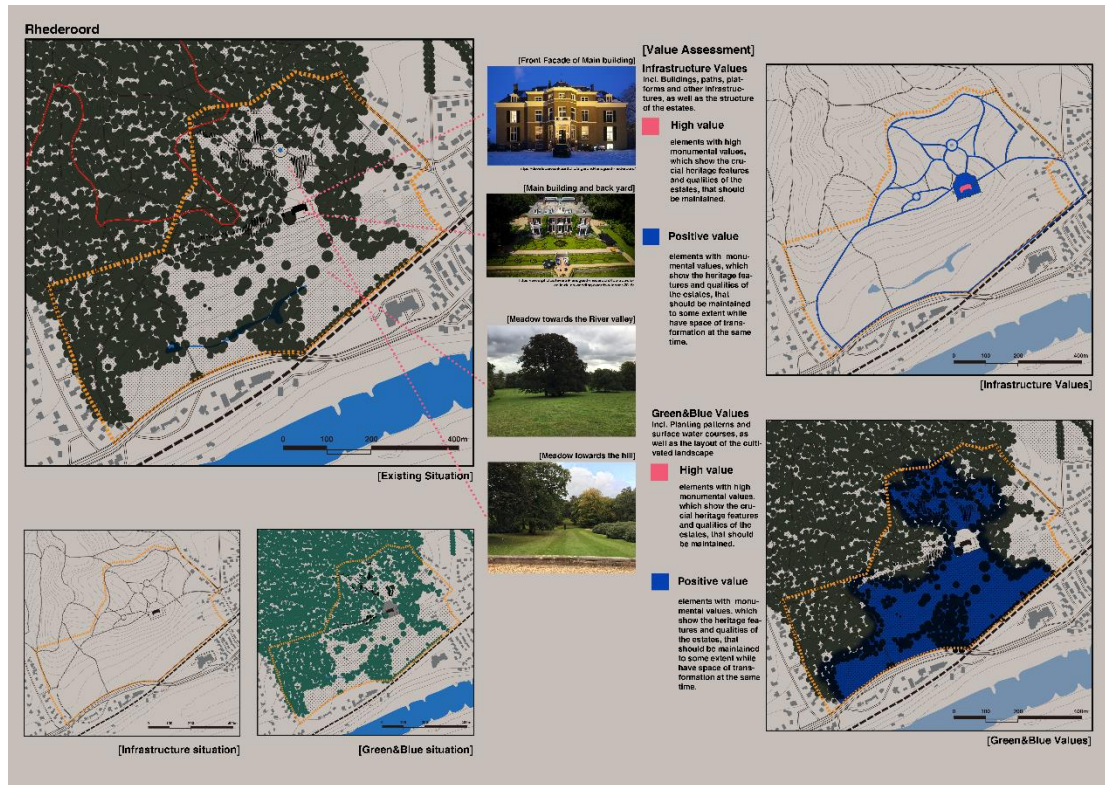


Fig.3.11 Analysis of Rhederoord. (picture sources from websites ^[22]^[23], and taken by author)

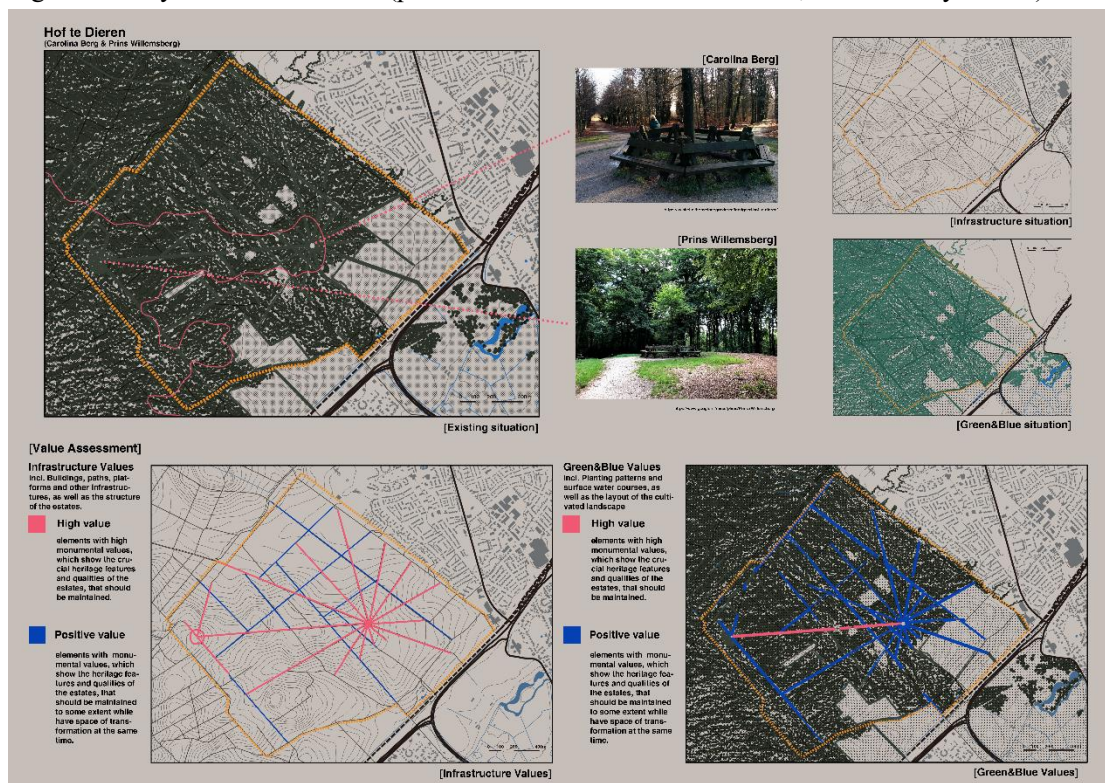


Fig. 3.12 Analysis of Hof te Dieren (Carolina Berg and Prins Willemsberg area). (picture sources from websites ^[24]^[25])

According to the analysis of Beekhuizen and the history of it^[26], it could be concluded that the most valuable part of this estate that still remains is the water course and the small lake in the park. In the

past, Beekhuizen was famous for its outstanding hilly landform and the beautiful romantic landscape with waterfalls, which became the origin of what the name of Arcadia come from. People in the park will forget the urban life outside and addicted to the beauty of it. The height difference along the water course creates a small waterfall, which reflects to its history depicted in the engraving. (fig. 3.12) At the same time, the infrastructure around the lake and waterfall, as well as the new hotel, which recalls the memory of the historical hotel in the park, have the positive values and should be maintained or transformed a little to fit in my project.

As for the Rhederoord, based on the analysis and its history^[28], in the past, the estate was mainly owned by one noble family. The main building first built at 1740s, and developed into today's appearance after several renovations until last century. One owner was addicted to gardening and brought many exotic species to his estate. The style of the garden changed many times to catch the fashion of the time, and finally keep as the English landscape style, which we can see it nowadays. Based on all these facts and mappings, the high value lies in its main building. In addition to that, the English landscape style garden, which is showed mostly in the planting pattern and the layout of the paths, also shows its uniqueness and beauty and should be maintained.

In the history^[29], Carolinaberg was a high viewing point in the hunting area of the Hof te Dieren. It has a good view and has multiple straight path connecting to different places in the property in the shortest distance in benefit of hunting. In conclude, high values of the area of Carolinaberg and Prins Willemsberg lie in the locations of these two viewing points, with straight paths that spread out, which indicate the special history as a hunting field. In addition to that, the straight-line layout also indicates its style of sterrenbos.



Fig. 3.12 Engraving, c. 1790, view of the Great Cascade of Beekhuizen, by Chr.Henning.^[27]

Those three estates respectively shows the monumental values in different aspects, the buildings, the planting patterns, the layout of paths, and the water courses. At the same time the existing situation of them all can not excel at every part. The values can only be seen in one or two particular parts in each estates, which makes them become the typical examples of the estates that have monumental values remain but at the same time need interventions and transformation to revitalize. Those analysis would help me a lot when redesigning those estates, guiding me which elements to keep and which to be modified.

In addition to the assessment of the estates, I also took them as examples to analyze the existing situation of the boundaries (fig. 3.13) and the paths (fig. 3.14) of estates, which I think have common problem to be improved in most of the estates, and even for the whole area in terms of the path condition.



Fig. 3.13 Analysis of the boundaries. (pictures sources: street views from Google Maps^{[30]-[40]})

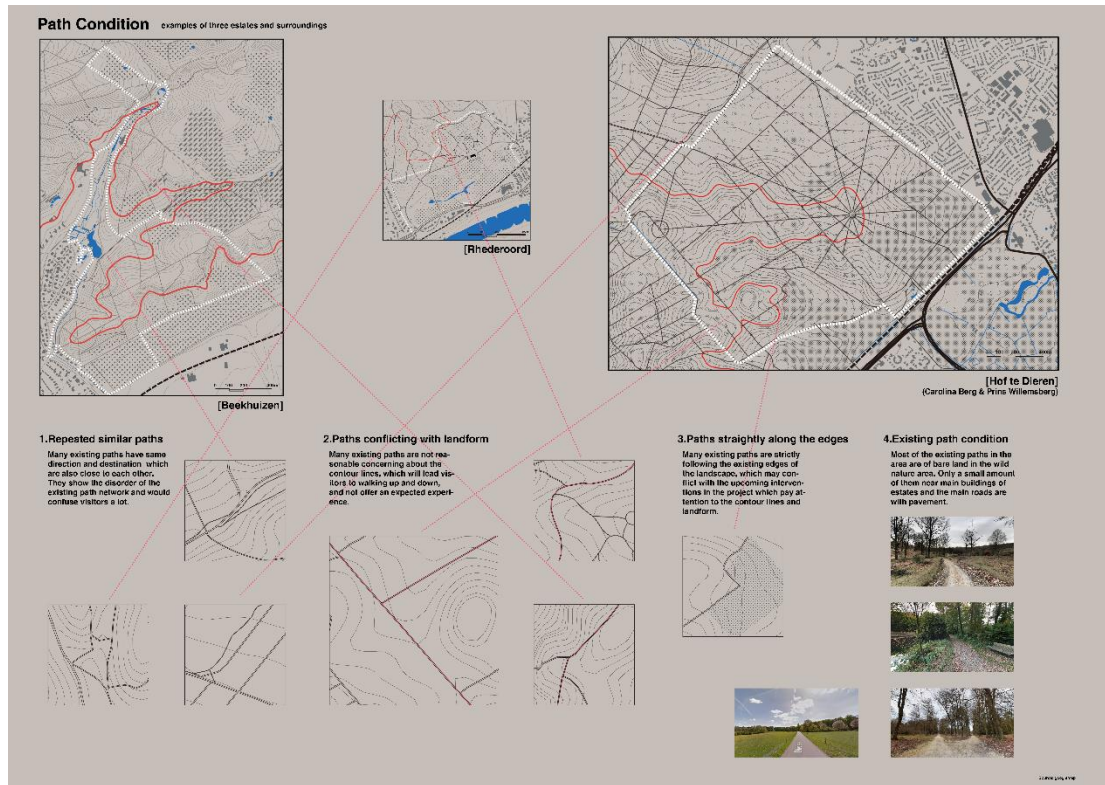


Fig. 3.13 Analysis of the paths. (pictures sources: street views from Google Maps^{[41]-[44]})

According to the analysis, I concluded that for the boundary, there are mainly three types of it, well-elaborated fence, poor-conditioned fence and no fence. The well-elaborated fences are mostly situated near the main roads or the established urban area, they are usually clear and beautiful. The poor-conditioned fence are mostly situated deep in the woods or near the distant area of cities, they are just roughly established by wood and steel. They can successfully block off the unwillingly intrude of the people and wildlife, but they also look unpleasant and would break the beauty of the natural area. There are also some places where no fences are along the boundaries of estates and just trees and bushes or some height difference that define the different parts, which makes the boundaries unclear.

As for the path condition, I also found some typical problems. The first one is the repeated similar paths. In many places, there are multiple paths that have almost the same function and are very close to each other, which simply makes things more confused. The second one is that there are many paths that are extremely conflicting with the contour lines, which will lead visitors to walking up and down, and not offer an expected experience. The third one is that there are some paths that are strictly following the edges of the landscape and not concerning about the landform, which are also not so reasonable in the geomorphology level. As for the path condition, we could see that most of the path are made of bare land, which are not well-elaborated and at the same time have a good space for improvement and change.

After analyzing the existing situation in detail, I gained a better understanding of my site and knowing more specifically which elements to keep and protect and which have many improvements to do.

4. Design principles

Through all the analysis, I got all the ingredient that are related to my project and objectives. The next step of achieving my goals is to come up with my design assignments and produce my principles for achieving the assignments.

My design assignment is to use the cluster of estates as a ribbon and connection, to reorganize the elements to offer the public an ensemble for recreation where people can easily experience the historical monuments and nature reserve. Some sub goals follow, that is to create a new route that follows one contour line as a backbone of the all elements; to re-organize the planting, road network, layout of estates etc. to let different elements interact with each other in coherence; to establish multiple access to the 'Arcadia'; to establish a series of infrastructures to support the 'Acadia'; and to improve the qualities of individual estates and make them interact better with the whole system. To achieve those design assignments, I looked into many examples and then produced my own design principles that could guide me achieve the goal in design based on the materials I referred to .

To establish my design principles, I firstly divide my project into three different scales. The first scale is the regional scale, which is the biggest scale from the west side of Arnhem where Zypendael and Sonsbeek locate, to the Dieren, where Hof te Dieren locates. The second scale is the areal scale, from west side where Beekhuizen locates to the east side where Hof te Dieren locates. The third scale is the estate scale, where I would choose three or four typical estates to show detailed redesign and intervention. Different scales show different staff and they together form the whole project.

When generating my own design principles, I mainly referred to different precedents for different situation, and then conclude and summarize my design principles dealing with different scales.

In the regional scale, I want to show the overview of the route, as well as the accesses to it from the urban area. Firstly I decide which contour line the route should follow. I studied the ribbon area and finally decide to use the 36m contour line. (fig. 4.1)

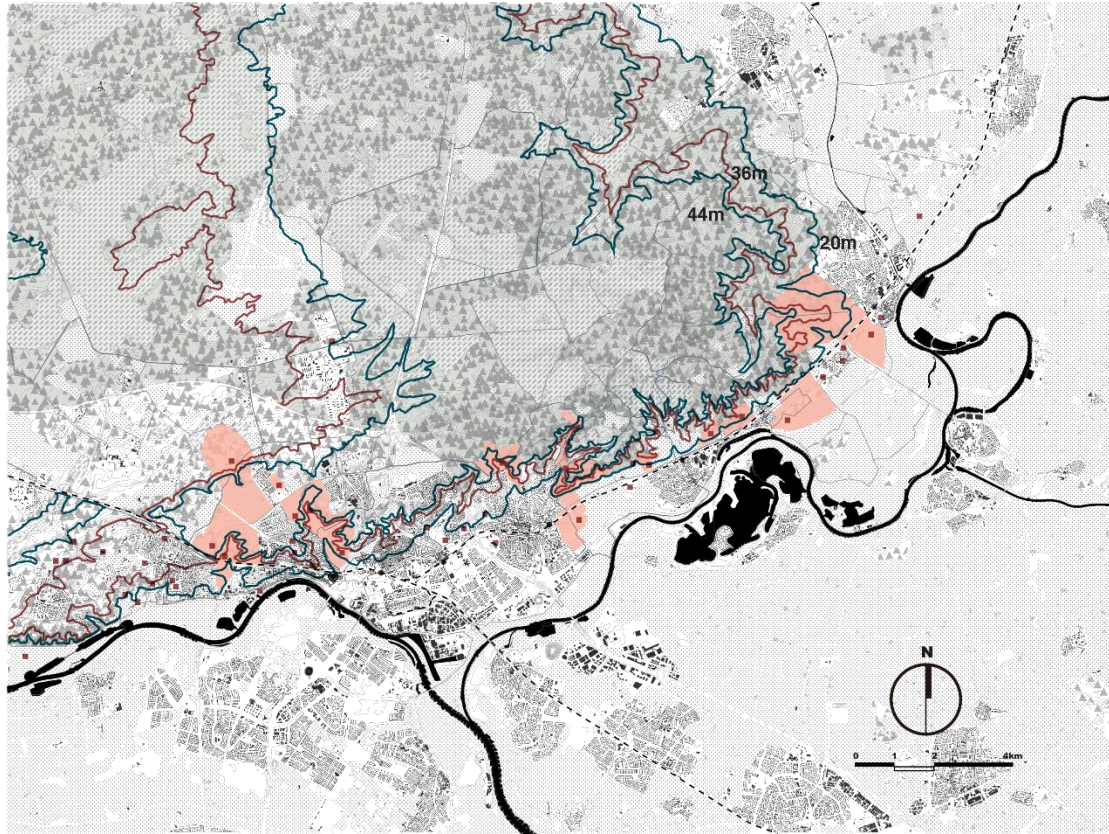


Fig. 4.1 the Choice of the contour line

The reasons why I chose this contour line are: I should pick it inside the ribbon area, that is from 20m to 44m, I want the route to be relatively high up so it won't be so close to the cities because the 'Arcadia' should be relatively secret and beyond reach from urban, and finally I found that the 36m contour line was perfect because it goes through as many properties of the estates as possible, and also touches the meadow landscape and heather landscape in addition to woods. Consequently, I decide to use the 36m contour line to build my route.

At some point of the route, when the 36m contour line goes through the urban structure and when I construct the road connections between important transportation nodes in the city like train stations and bus stations and the route on the hillside, I would mostly refer to the existing roads and build the route and connections based on the urban structure.

In this scale I referred to the Passeig de les Aigues in Barcelona (fig. 4.2, taken by author) and the hiking and cycling routes system throughout the whole country (anwb (n.d.)^[6]

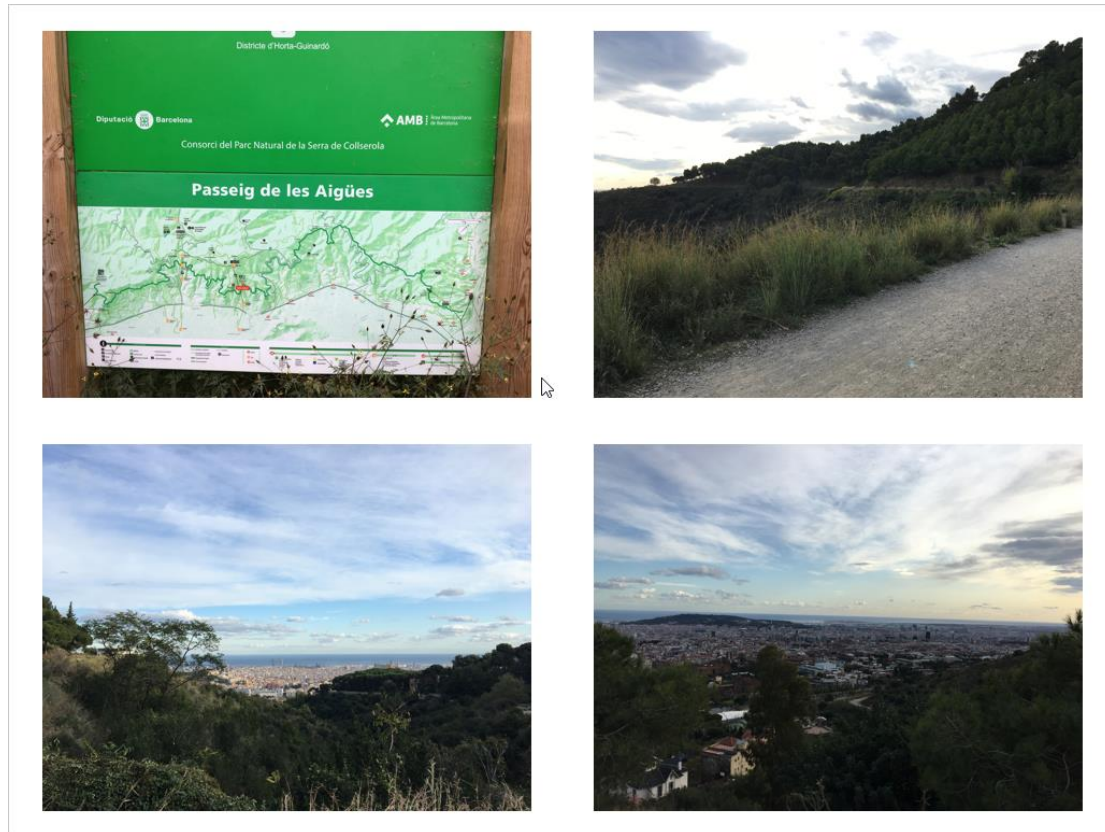


Fig. 4.2 Views about Passeig de les Aigües in Barcelona

As for the areal scale, the reason why I choose this scale is that this area intensively has a lot of estates, most of which have a big potential to be revitalized because they are usually not completely open to the public, they are not in a prime cultivated condition and some of them even lost their buildings for some reasons. Besides, the estates in this area have a close relation to the national park Veluwezoom, which could be very interesting to redesign with.

In this scale, I want to reorganize the path network in the area, and then establish some facilities related to the whole system, such as information centers, resting points, viewing points, as well as the benches, the information boards, the guide signs etc. and last but not least, what the route would look like.

Before I reorganize the path network, I have to figure out what kinds of experience I want to offer to the visitors. I referred to some cases which did a good job on this part. That shows below. (fig. 4.3-4.5)



Fig. 4.3 Case of “Renovation for Tourist Service Center at Yumen Pass in Dunhuang” (Gooood (n.d.)^[7])



Fig. 4.4 Case of “Strategic Vision for the New Management of Machu Picchu”(1) (landezine (n.d.)^[8])

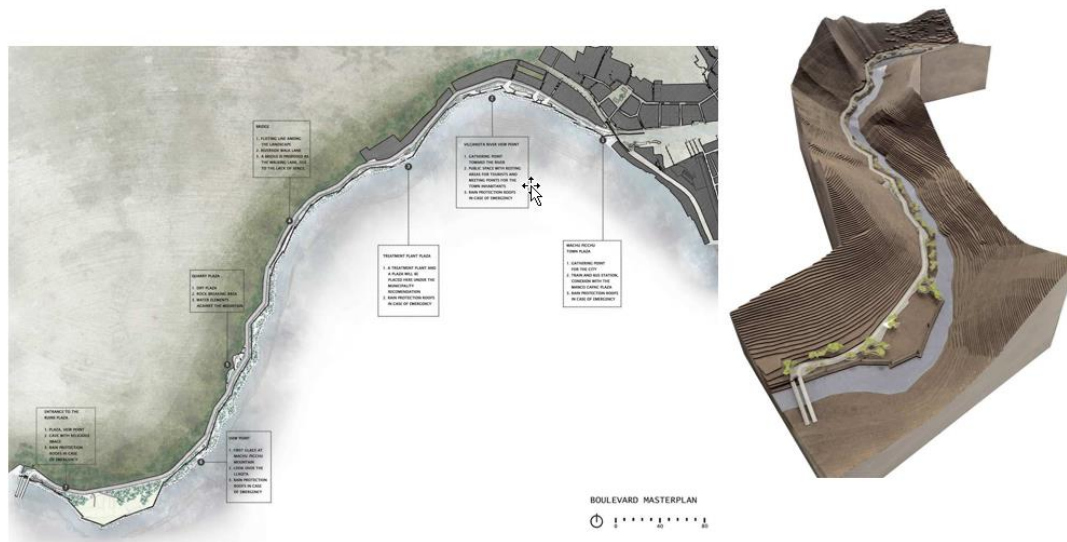


Fig. 4.5 Case of “Strategic Vision for the New Management of Machu Picchu”(2) (landezine (n.d.))^[8]

In these two projects, the situations are both about dealing with the connection between urban constructions (the main road and the village) and the historical sites. The principles they applied are that they create a connection way, on the way it has multiple attractions which can attract people to proceed along the route and finally get to the destination, at the same time, when visitors are walking along the path, the views they get vary when they are moving.

In addition to those physical aspects, I also referred to the immaterial reference of a famous ancient Chinese article called the Peach Blossom Spring. (Wikipedia (n.d.))^[9] It talked about a wonderful story in which a fisherman accidentally found a beautiful neverland and had a good time there, but after he left, he failed to find it again. In the beginning of the story, the author described a wonderful experience to finally get to the beautiful neverland. The fisherman rolled his boat along the stream and ran into a place where only grew peach trees with beautiful flowers along the stream. The breathtaking view attracted him to continue to explore. At the origin of the stream, he met with a hill with a little cave, with small clues of light coming out. The fisherman then walked into the cave. After walking through the one-person-width narrow cave, the view suddenly opened up in front of him, with breathtaking landscape and a beautiful village. The story is like a Chinese version of Arcadia and the experience of the fisherman finding the beautiful place is very attractive, which is the kind of experience I want to achieve my project. I think a map with a series of perspective drawing could show the sense of it in the design.

When reorganize the path network in detail, I want to do it mostly based on the contour lines, because the geomorphology condition is a very important element in my project, since my backbone route is also following a contour line, it would be reasonable and organized if I redo the path network based on the contour lines. I referred to some cases which are inspiring on working with height difference and produce my own tool box of path dealing with contour lines.

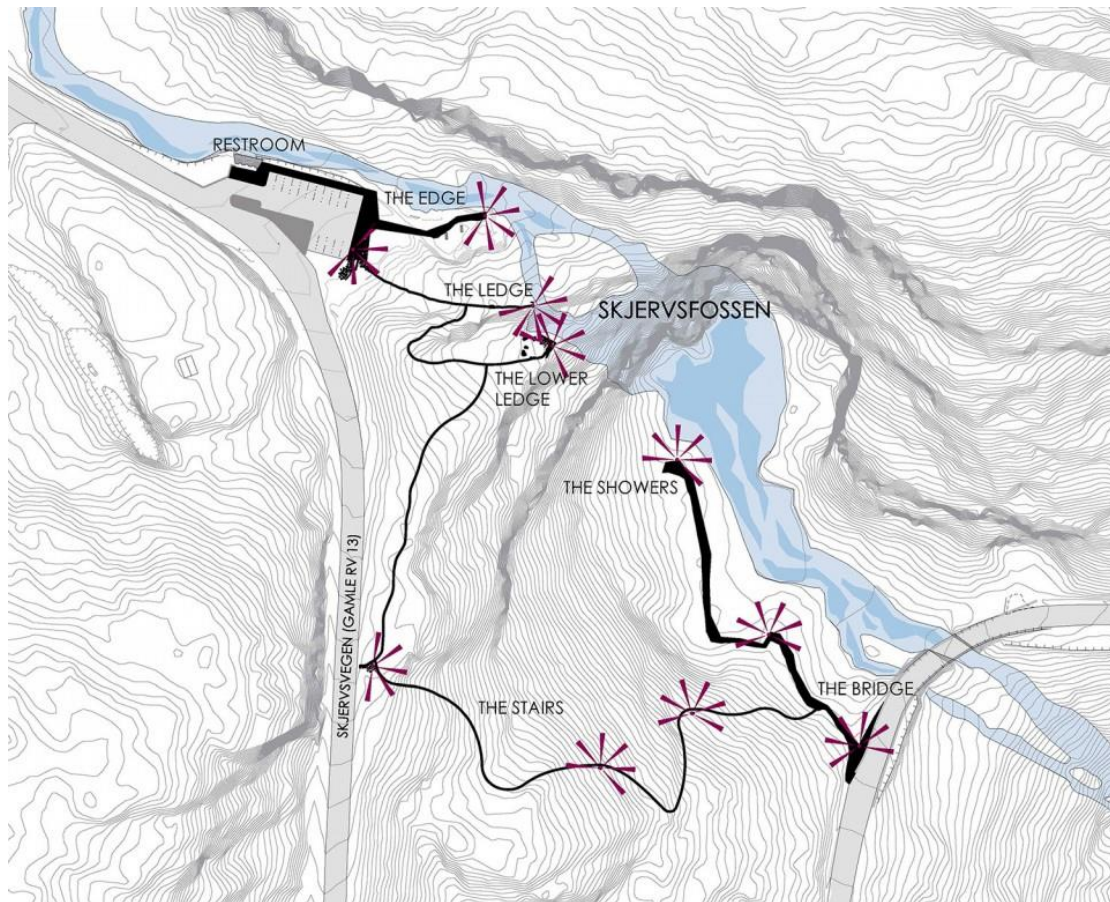


Fig. 4.6 Case of “Skjervsfossen by Østengen & Bergo Landscape Architects”(1)(Gooood (n.d.)^[10])



Fig. 4.7 Case of “Skjervsfossen by Østengen & Bergo Landscape Architects”(2)(Gooood (n.d.)^[10])



Fig. 4.8 Case of “VIEWPOINT 360°. Intervention In Cerro De Las Torres. Álora, Málaga”
 (1)(Gooood (n.d.)^[11]



Fig. 4.9 Case of “VIEWPOINT 360°. Intervention In Cerro De Las Torres. Álora, Málaga”
 (2)(Gooood (n.d.)^[11]

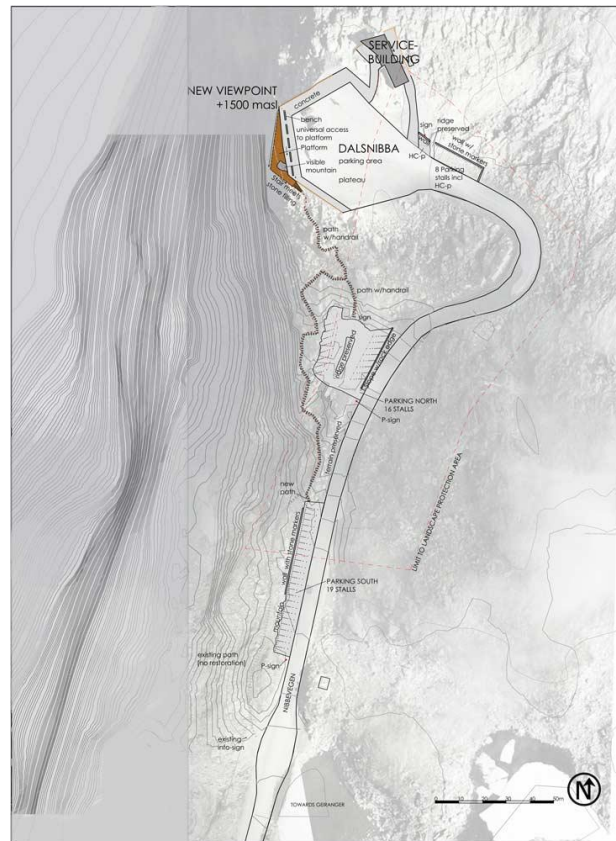


Fig. 4.10 Case of “Dalsnibba Skywalk”(1) (landezine (n.d.))^[12]



Fig. 4.11 Case of “Dalsnibba Skywalk”(2) (landezine (n.d.))^[12]

These projects are all working with height different and produce a beautiful path or stairs to go through it. They all inspired me to come up with my tool box of how to work with contour lines

when organizing the paths. In addition, to make the tool box more fit in my project, I also take planting into consideration and to study the different effects in different situations.(fig. 4.12)

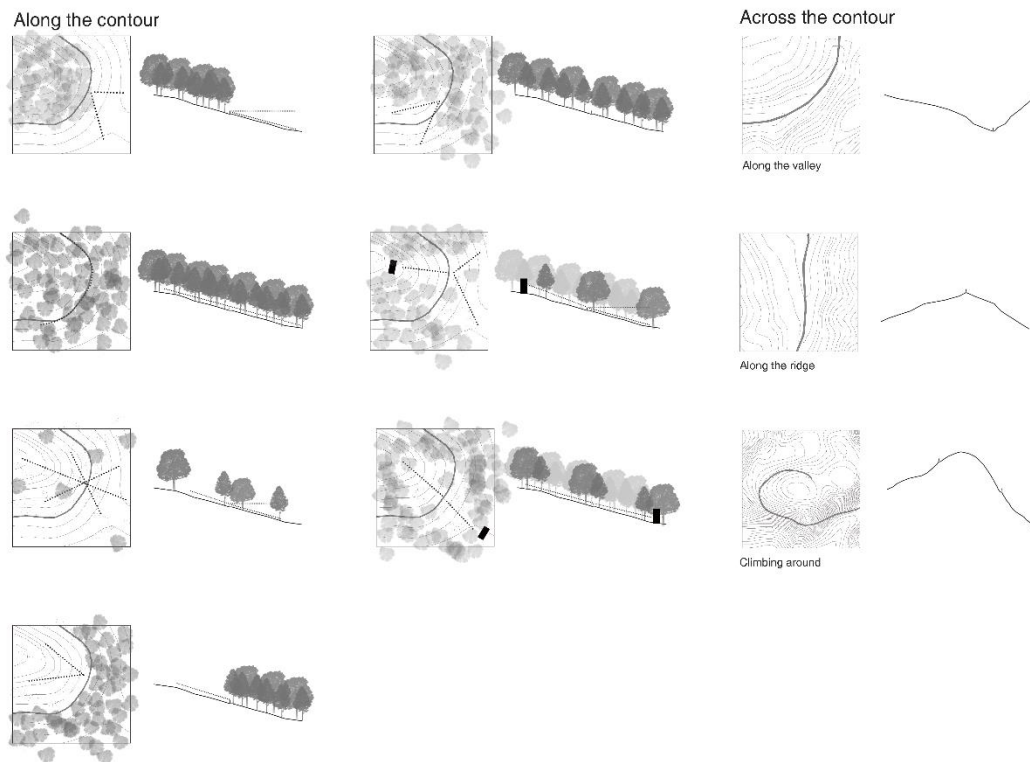


Fig. 4.12 Tool box of path dealing with contour lines. (drawn by author)

In this scale, I would also like to establish a series of facilities, the unified form of the route, the benches, the information boards, the guide signs etc., as well as the form of the information center, the resting points, the viewing points and the access to the estates from the route. I referred to some cases (fig.4.13-4.1) and try to set up my prototype for all those staff.

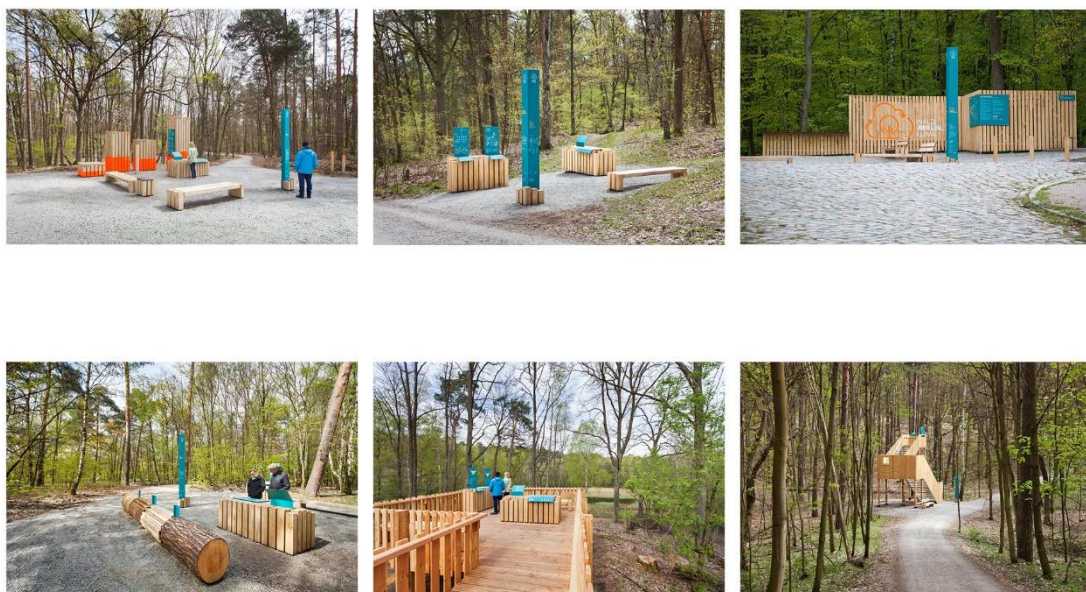


Fig. 4.13 Case of “Wald.Berlin.Klima. – Exhibition in the Forest” (landezine (n.d.))^[13]



Fig. 4.14 Case of “Path of Perspectives Panorama Trail on Innsbruck’s Nordkette Range / Snøhetta”
(1) (Gooood (n.d.))^[14]

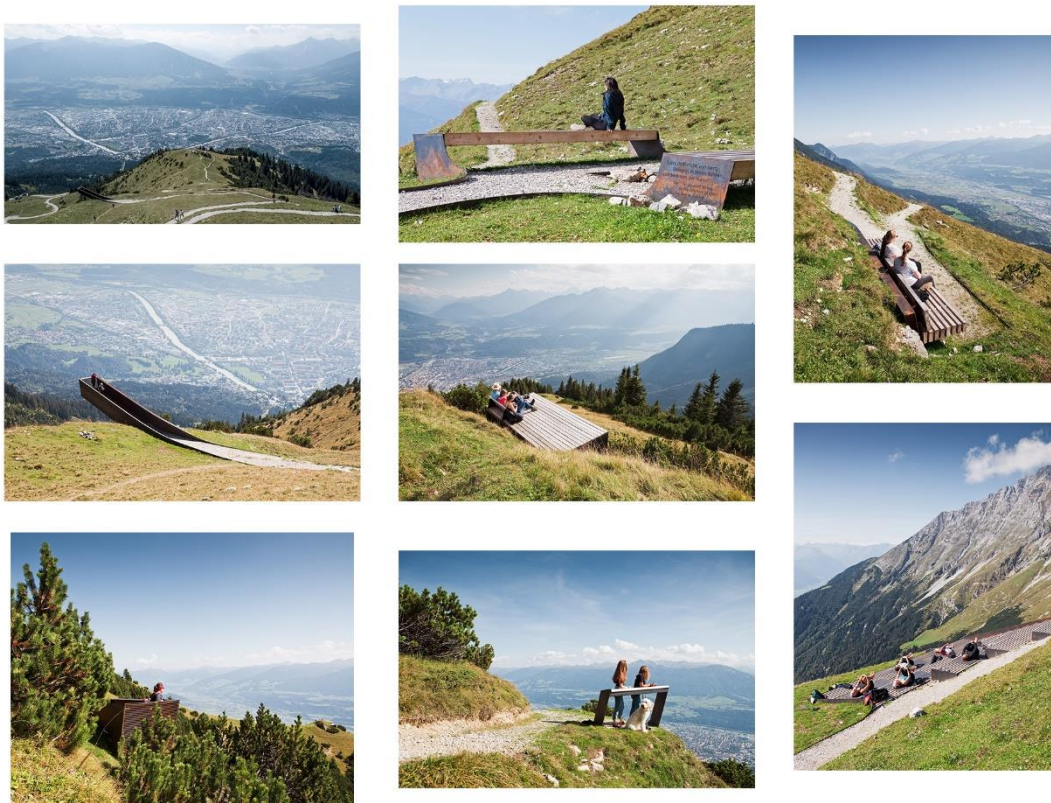


Fig. 4.15 Case of “Path of Perspectives Panorama Trail on Innsbruck’s Nordkette Range / Snøhetta”
(2) (Gooood (n.d.))^[14]

These two cases inspired me on how to establish a series of facilities for the whole walking experience. All the facilities have something in common like in material and form, while have some differences when applying on different place.



Fig. 4.16 Case of “Homage to a duck decoy / MD Landschapsarchitecten” (2) (Gooood (n.d.)^[15])



Fig. 4.17 Case of “the Bluff” (landezine (n.d.)^[16])



Fig. 4.18 Case of “Umfassungsweg, Twickel” (landezine (n.d.))^[17]

These three cases inspired me of the form of what the route would look like, about the structure, the material and the size and some changes in different environment.

Then talking about building something new, the project of Moerenburg, Tilburg that shows below inspired me a lot. (fig. 4.19)



Fig. 4.19 The project of Moerenburg by MTD Landschapsarchitecten^[45]

This project inspired me that when planting new infrastructure or buildings, how to refer to the history of the site and create connection between the new things and the place itself. In this project, I saw that they rebuilt the house partly, to highlight the feature of the house in a simple and clear way, at the same time, they offered visitors a place to enjoy themselves and get some knowledge about the place. In my project, I want to add some facilities in the whole system, such as the viewing tower and the small tourist centre at some points. This project inspires me how I can decide what the new buildings would be look like.

The last part is the estate scale, in this scale I choose three estates in the area, that are Beekhuizen, Rhederoord and Hof te Dieren. I referred to some works of Michael van Gessel about redesign of some historical estates in other parts of the country ^[18], and learned about his ideas about minimal intervention. After that I concluded my way of how to improve the individual estates.

Firstly, I would analyze the existing situation, trying to get to know what are in there now. After this layer, I would pick out the elements that have historical and aesthetic values, such as the buildings, the gardens or the structure of the cultivated landscape. Those elements are the ones that I would not touch or change. For the rest of the estates, I would try to reorganize them to fit more in the system I create with the backbone route. I would redesign the paths and boundaries based on the contour lines, and create physical and visual connection between the route and the estates. (fig. 4.20) In addition to that, I would also dig in some interesting elements that may be lost now and I want to revitalize. Referring to Meurs' theory of heritage-based design^[2], such as Designed presence (Meurs (2016, p.75), Rearrangement (Meurs (2016, p.84), Makeover (Meurs (2016, p.90), or Narrative (Meurs (2016, p.98), I may also add or rebuild something that are coherent with the existing heritage staff.

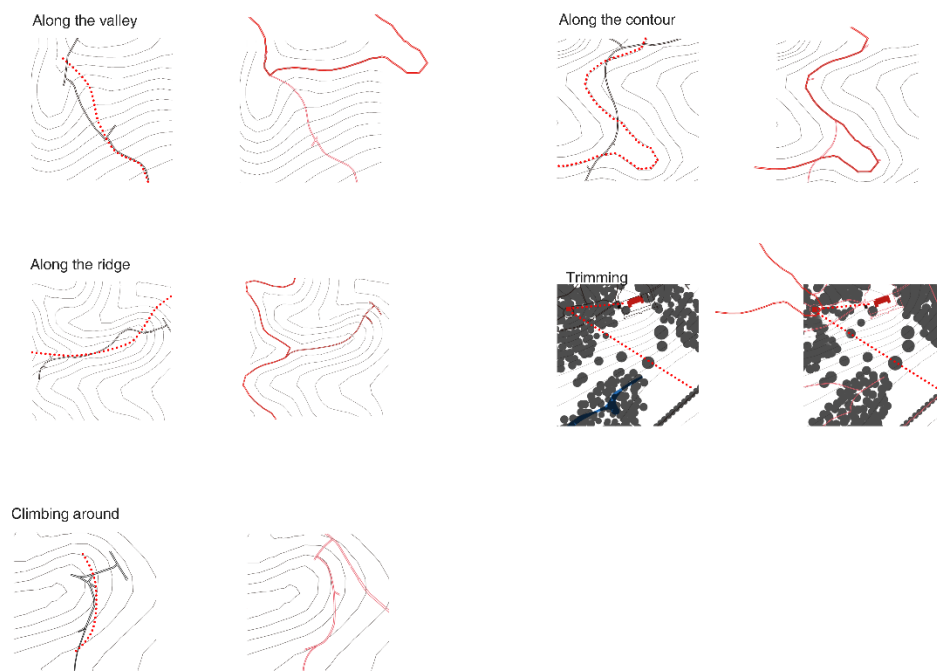


Fig. 4.20 Tool box of how to reorganize the paths and trimming of the planting in the estates.

5. Design

The design part also consist of three part according to the design principles, divided by the three scales.

In the regional scale, the design shows in a masterplan. (fig. 5.1) In this scale, I mainly want to shows the position of the route, and how the whole route system would fit in a large scale, such as Sthe main connection between the cities and the route, and the natural area and the route, as well as where the contour line route will lead beyond the area. It mainly stays in a relatively conceptual and general way in this scale. In the plan we can see the route will follow the 36m contour line strictly in the natural area, while when the contour line goes through the urban area, the route will be modified to follow the existing roads in cities. When creating accesses between cities and the route, I chose to firstly build the connection to the main nodes in the city like train stations and main bus stations, and use the existing roads. As for the connection between the route and nature reserve area, I create main connections that can lead visitors to explore more in the nature, such as the heather land and deeper woods where wildlife exists.

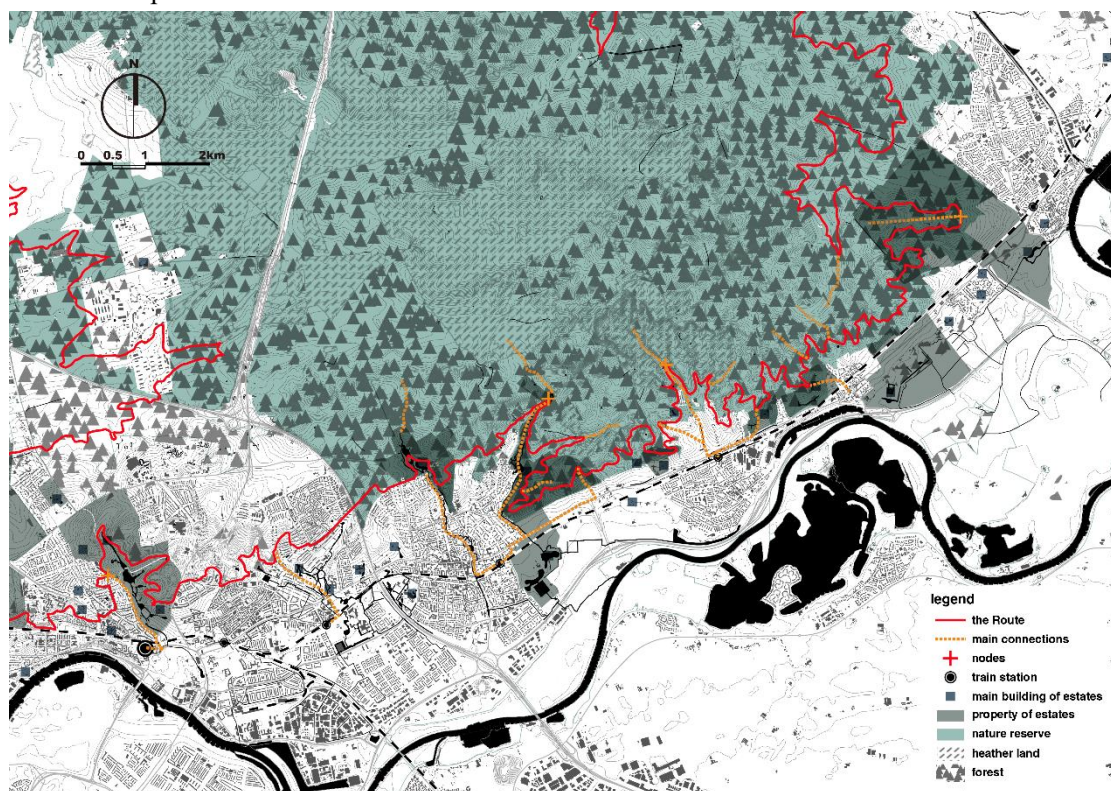


Fig. 5.1 Masterplan of the whole route with main accesses.

In the areal scale, the first thing to show is the masterplan of this area, with the path network of the ‘Arcadia’ and the position of the viewing points and tourist centers. (fig. 5.2)

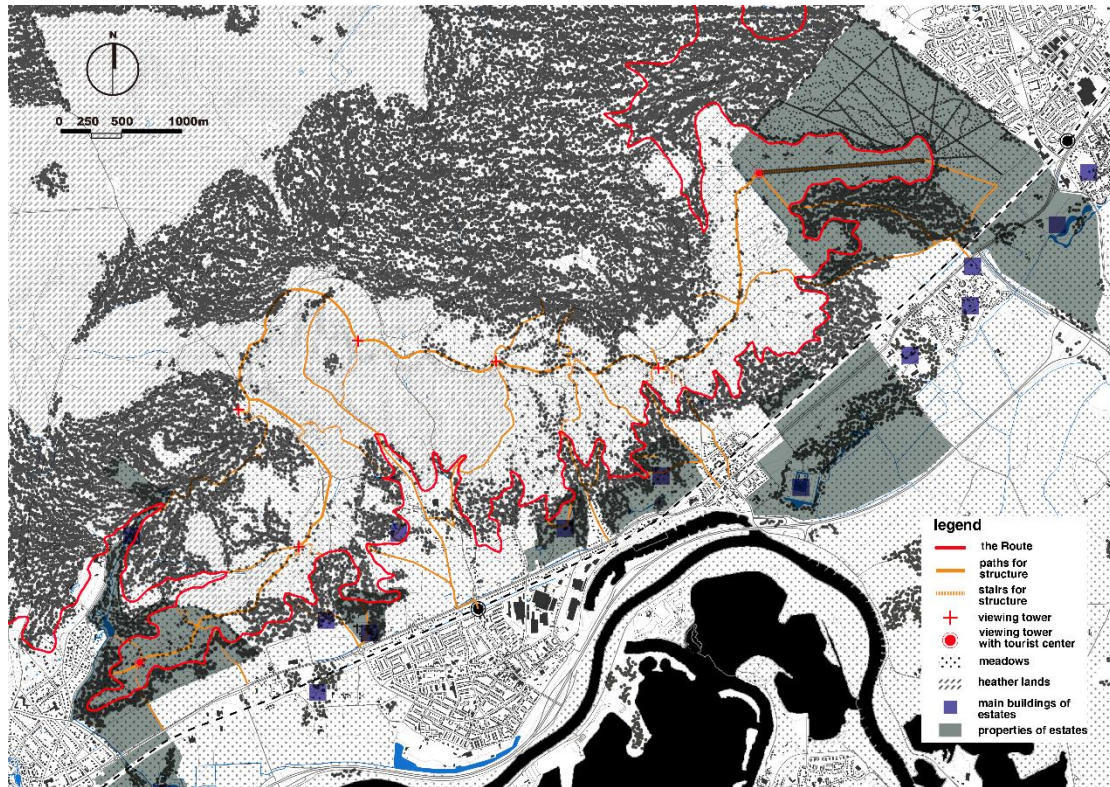


Fig. 5.2 Masterplan of the area.

In this scale, the route would strictly follow the 36m contour line. The reason why I want to build the system like this is based on the experience I want to offer to the visitors derived from the ancient Chinese article the Peach Blossom Spring and shows below in a series of conceptual perspectives. (fig. 5.3)

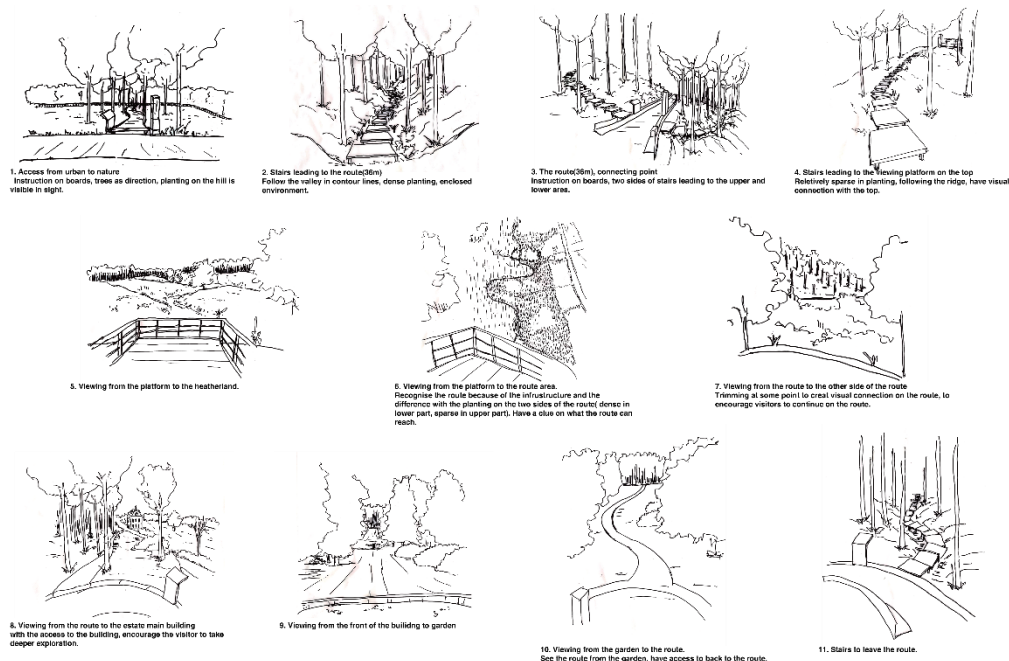


Fig. 5.3 Sequential perspectives showing the expected experience in the 'Arcadia'

The expected experience I want to offer in the 'Arcadia' would start at the edge between the urban and nature. The visitors will get some information of the 'Arcadia' up on the hill in the green at the entrance beside the cities. Here a path with beautiful trees will lead visitors to the mysterious and beautiful green area on the hill and encourage them to move on to explore. When they first get to the area and start to climb up, the surrounding would be dense and closed, creating a feeling of mystery and blocking apart from the noisy outside. When they climb up to the hillside and get to where the route situates, the visitors will get more guidance by the information boards as well as the uniformed settings of the route infrastructure. In addition, they will have a sudden open view to look up to bigger area. They may then climb up to the hill to the viewing point to have a overall impression of the area. After they get to the viewing point on the top, they can have a overall view and also get some rest. Here they can see the beautiful heather land besides and the forest in the distance, maybe some small clue of the estates on the hillside, the information boards will help them to spot the estates. The contrast of the dense and open in planting style also make the route easy to recognize. This kind of view will make visitors more interested in the whole 'Acadia' and go back to the route and continue to explore in the 'Acadia', finding the beautiful estates inside. Then they would follow the route to go through woods, meadows and even some part of the heather land. At some point on the route, the visitors will suddenly run into the boundary of an estate, the route will lead you to have a view of it and offer you some access to the estate, one can leave the route and have a deeper exploration of the estate and get back to the route at some other points and continue the journey along the route. After you visit some estates along the route, you can choose to go downhill at one of the access and leave this distant beautiful 'Arcadia', back to the noisy city.

After knowing the whole experience in the 'Arcadia', one would understand why I placed the new infrastructure at certain places and modified the planting like that showed in the masterplan of the areal scale. (fig. 5.2)

Following that I would like to show a series of prototypes. The prototypes of the route system. (fig. 5.4) The prototypes of new facilities. (fig. 5.5) As well as the models of the viewing tower and the tourist centre. (fig.5.6-5.7)

Prototypes for the Route System

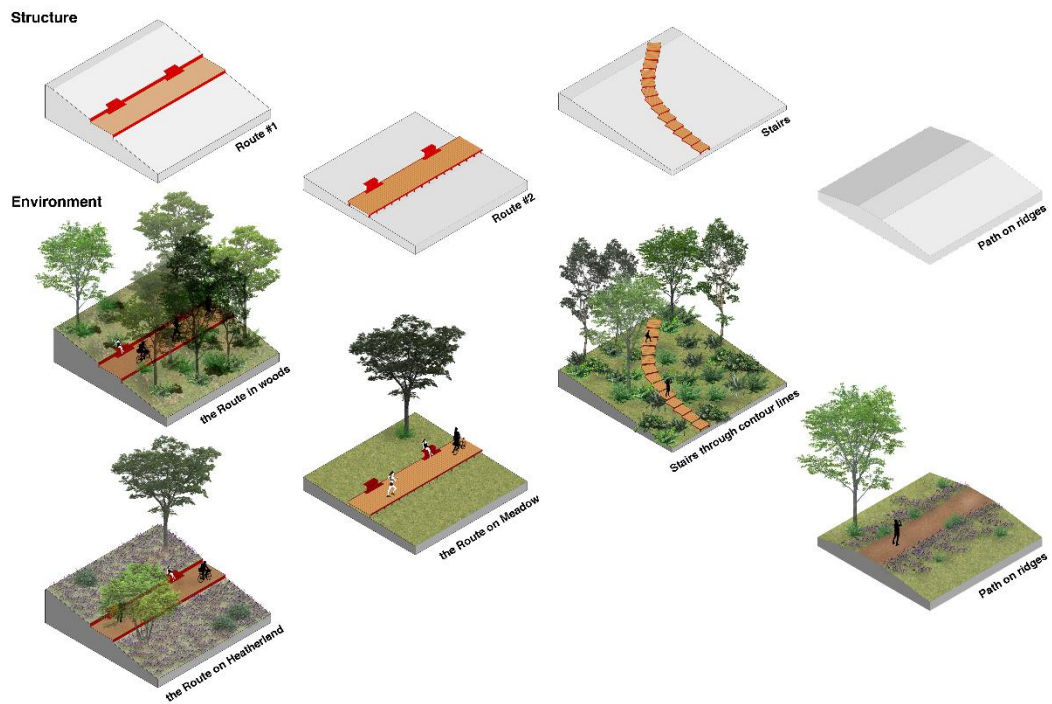


Fig. 5.4 Prototypes of the Route system

Prototypes for infrastructure

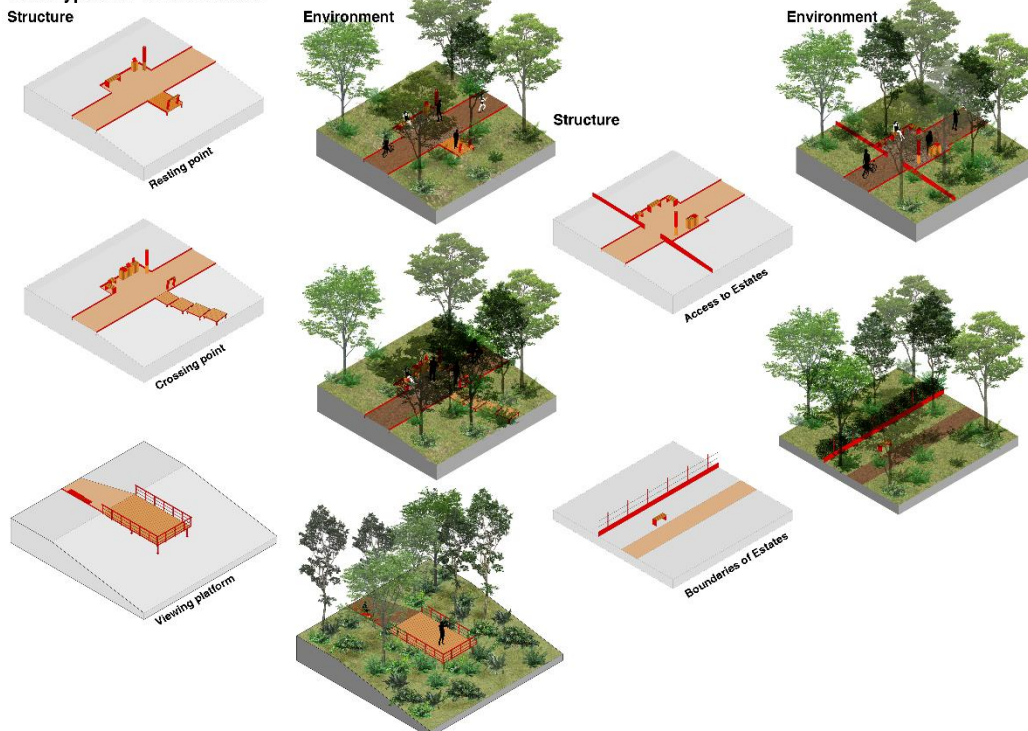


Fig. 5.5 Prototypes of infrastructure

Viewing tower and Tourist centre

Viewing tower

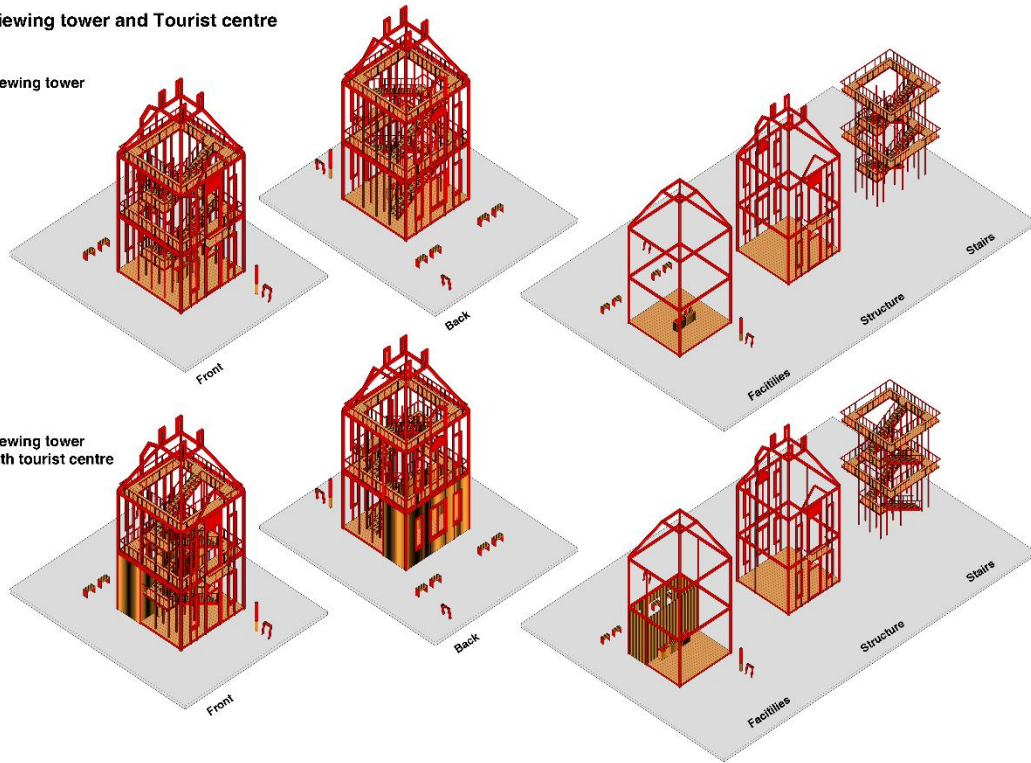
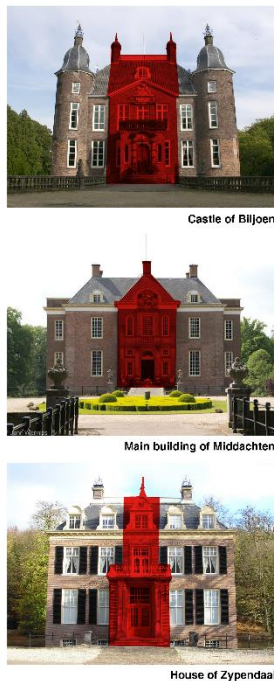


Fig. 5.6 Models of viewing tower and tourist centre

Facades of the Viewing tower

References



Facade



Fig. 5.7 Facades of the new buildings and pictures of inspiration.^{[46]-[48]}

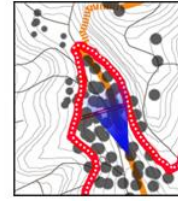


Fig. 5.8 one Example of the shortcut option on the route.

In the prototypes, I want to show what the whole route system throughout the whole area would be look like in different situation and environment. The important part is that they all use the same materials, that is the reddish iron as structure and wooden boards as platforms or walls. The reddish iron makes the infrastructure stand out and easy to recognize, while the wooden material makes it fit in the nature surroundings. The whole system is trying to offer visitors clear information about the area, the easy and clear guidance and access to different attractions in the area, and also some places to rest and have a good view at some points, and even some shortcuts on the route offering more colorful experience in the whole area.

As for the viewing tower and tourist center, I referred to the main buildings of some estates in the region, and conclude some common features of the middle part of their facades. I build the buildings with the same material of iron and wooden as other infrastructure I add, and create this structure to show some crucial feature of the building styles of the estates. The size of the building is neither too much compared to the precious historical buildings of the estates, nor too small to let visitors spot in distance or extend the view of them. When visitors climbing it, they can also get some clue of the common style of the estates in the area. On the ground floor and surrounding area, there are also some facilities like the benches and information boards. At two ends of the system in the area, where Beekhuizen and Hof te Dieren locate, some space on the ground floor of the two viewing tower there will be used as small tourist centre, where visitors can buy some drinks and snacks, and get maps and posters of the area if they want.

As for the estate scale, I chose Beekhuizen, Rhederoord and Hof te Dieren as leading examples to improve. The main interventions would be done on the reorganization of the path network and the planting pattern to fit in the areal scale as well as create better visual connections. Drawings are showed below.

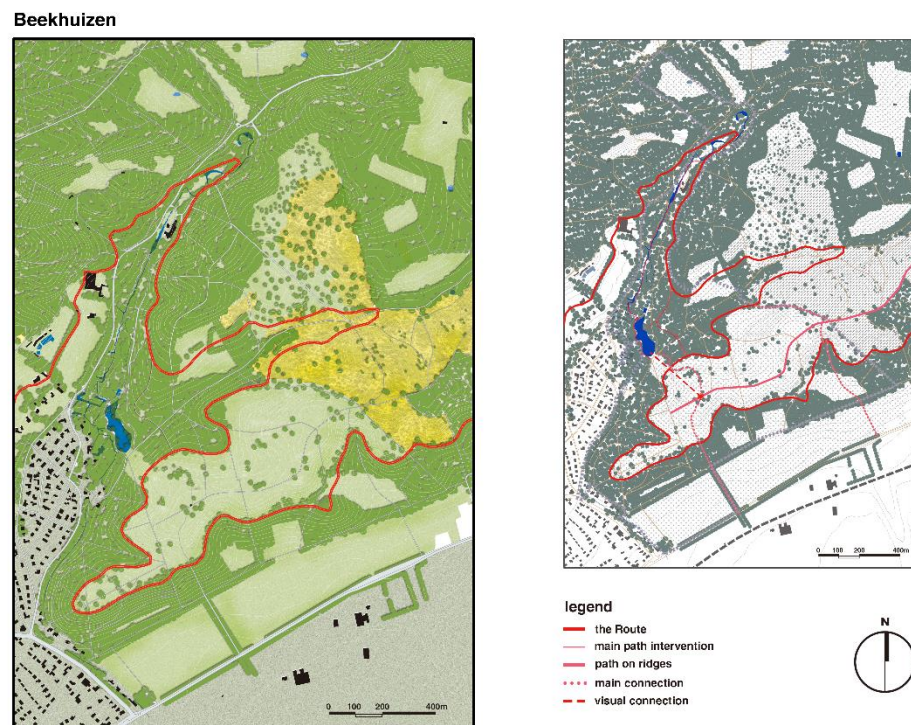


Fig. 5.9 Masterplan of Beekhuizen and highlighted main intervention.

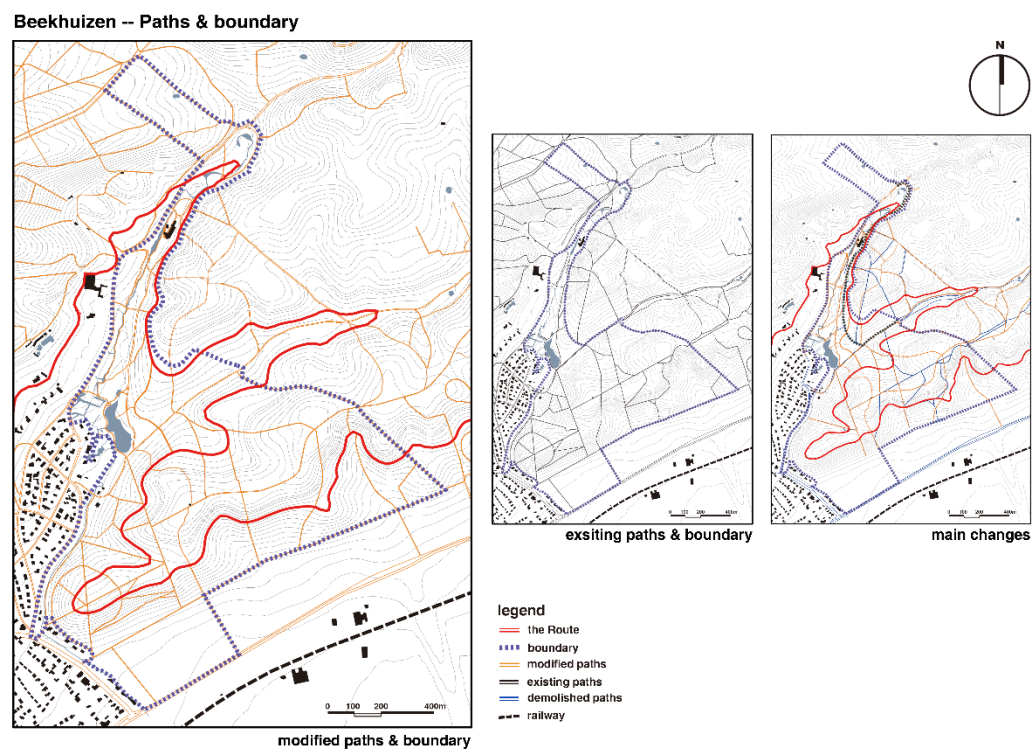


Fig. 5.10 Reorganization of paths and boundary, with comparison, Beekhuizen.

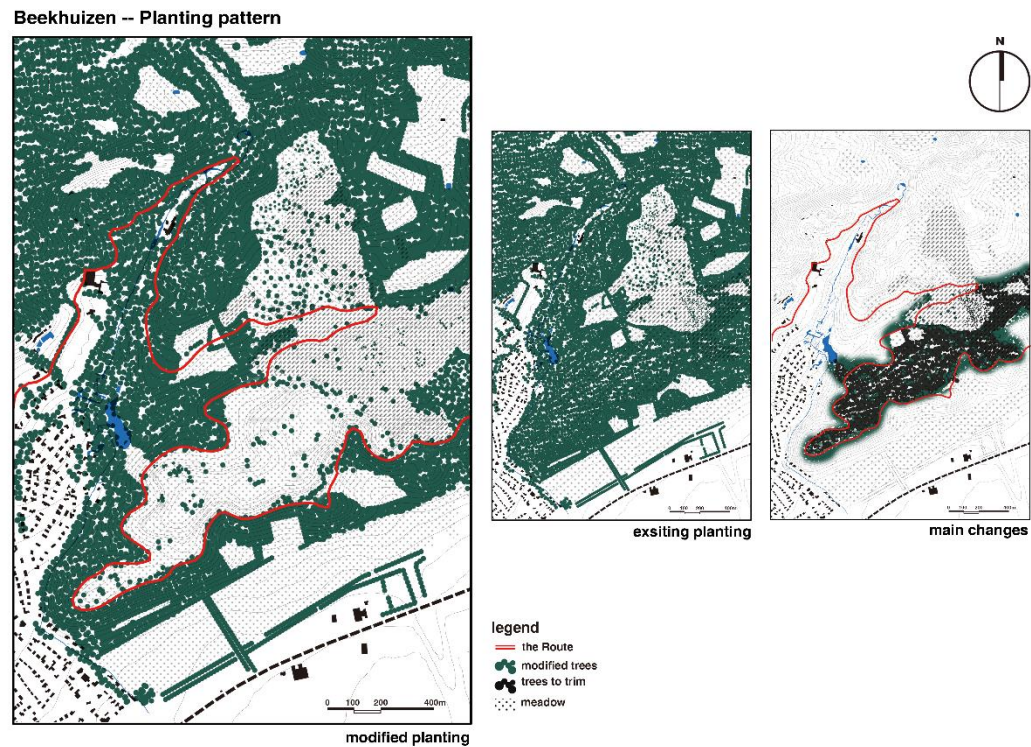


Fig. 5.11 Transformation in planting pattern, with comparison, Beekhuizen.

In Beekhuizen, as analysis before, the main attraction is beside the water. So I complete the paths beside the stream and create some access from the route to the stream. As the introduction of my route, I eliminate some existing paths that has similar function with route at some part, and improve some crossing nodes to more fit in the Route system. To fit in the larger scale, I improve the planting patten as the areal scale shows. Besides, I build my first viewing tower and tourist center on the high point in the boundary of Beekhuizen, and do some trimming of planting to create visual connection between the viewing point and the main attraction, the lake in the middle, I also add new paths to connect the viewing point, the route and the lake.

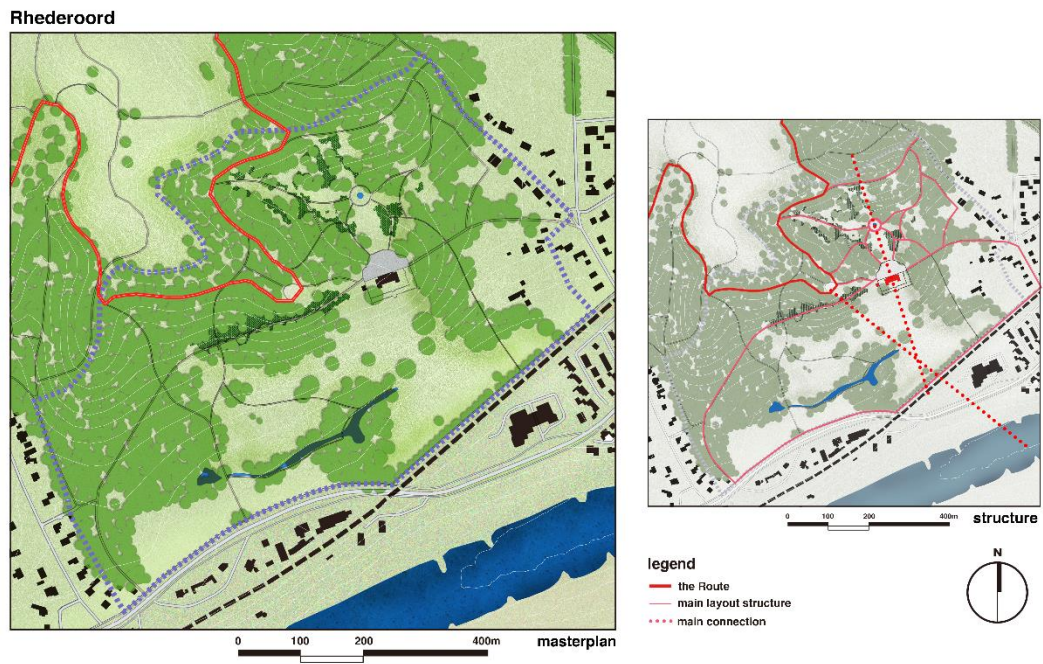


Fig. 5.12 Masterplan of Rhederoord and highlighted main intervention.

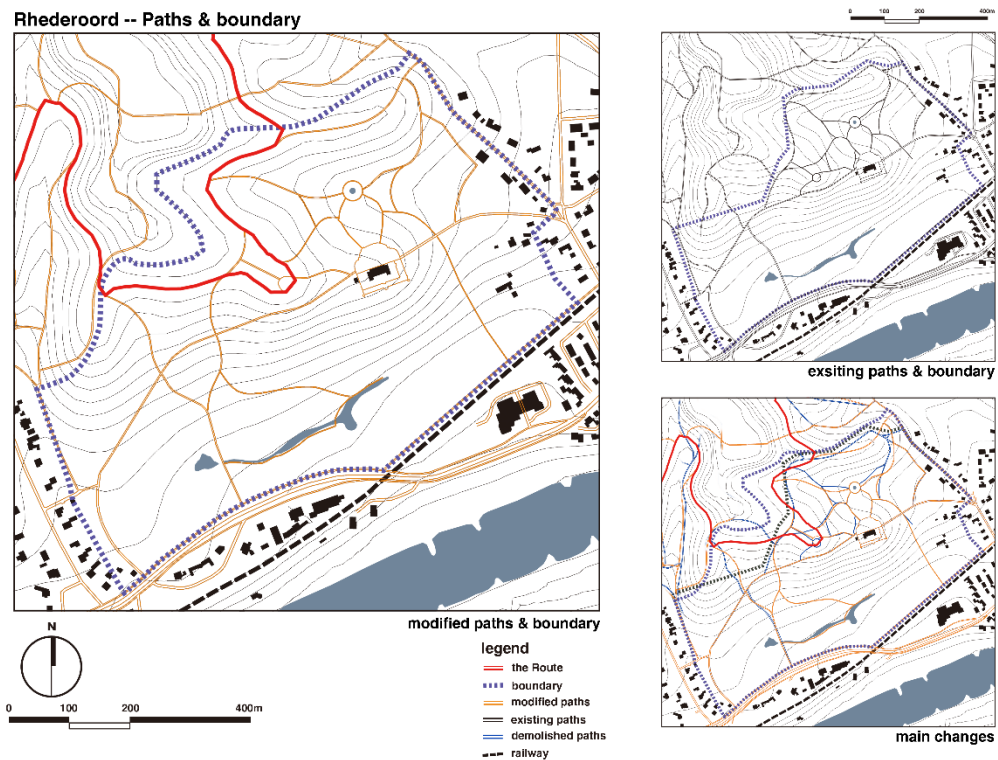


Fig. 5.13 Reorganization of paths and boundary, with comparison, Rhederoord.

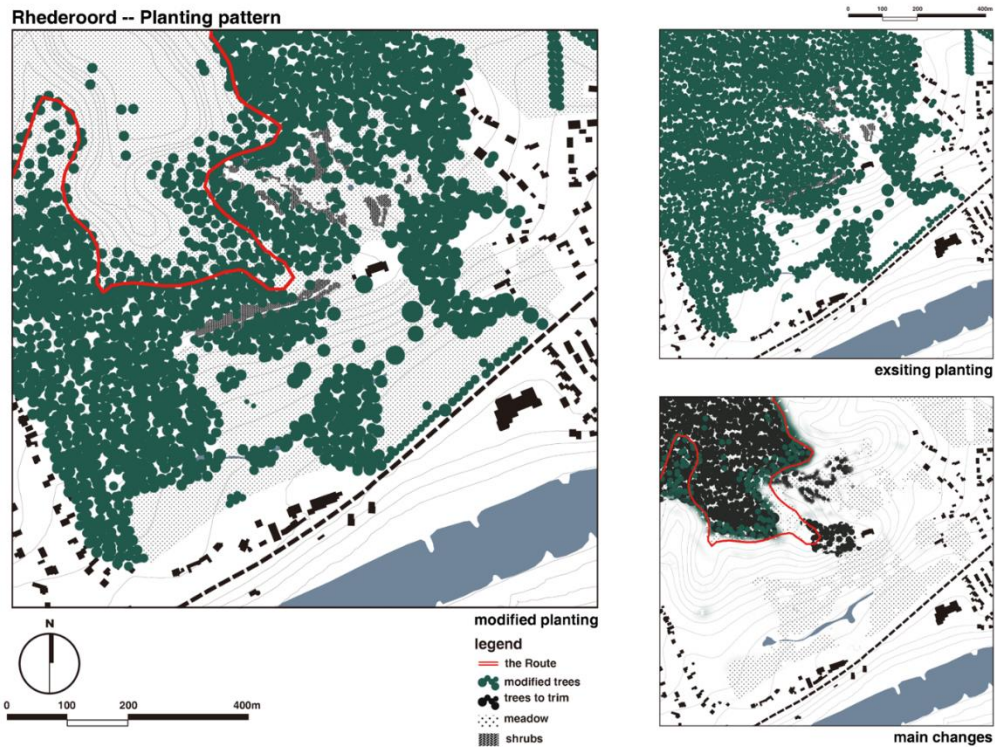


Fig. 5.14 Transformation in planting pattern, with comparison, Rhederoord.



Fig. 5.15 Perspective drawing from the route towards the main building of Rhederoord

The Rhederoord is already a quite beautiful estates, so the main improvement would be the fitting in to the 'Acadia'. I reorganized the paths network to make it more coherent with the contour lines, then I create two main access from the Route to the estate, one is to the main building, the other one locates in the garden. The trimming is also done at this two point to create visual connection. The planting pattern is also modified to fit in the large areal scale. After doing those things, the estate interacts better with the Route system, and at the same time the paths network is better to interact with the landform.

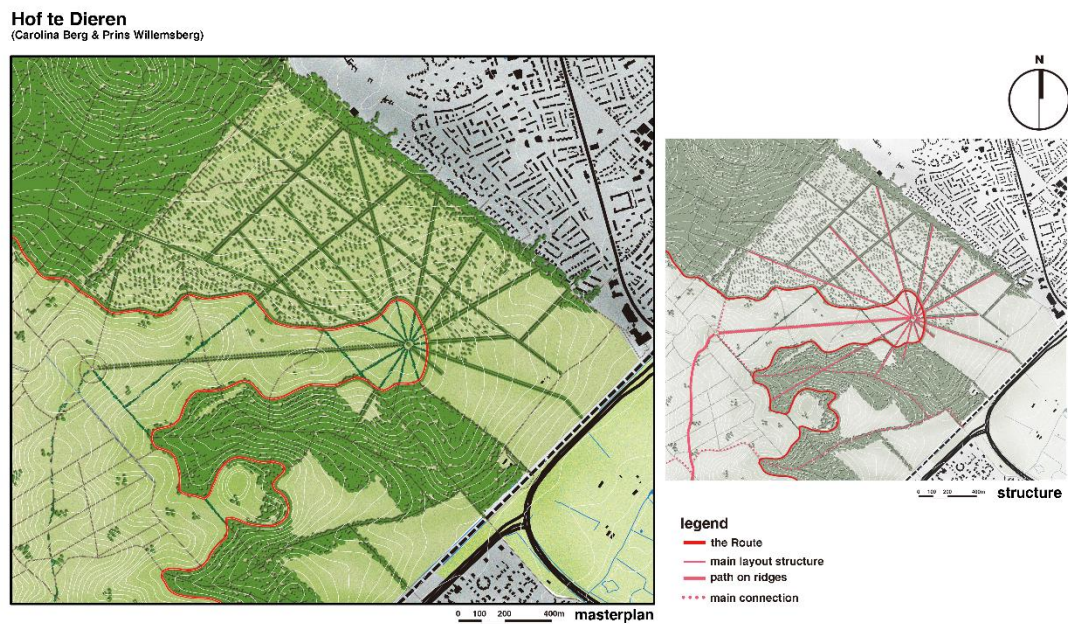


Fig. 5.16 Masterplan of Hof te Dieren (Carolina Berg & Prins Willemsberg) and highlighted main intervention.

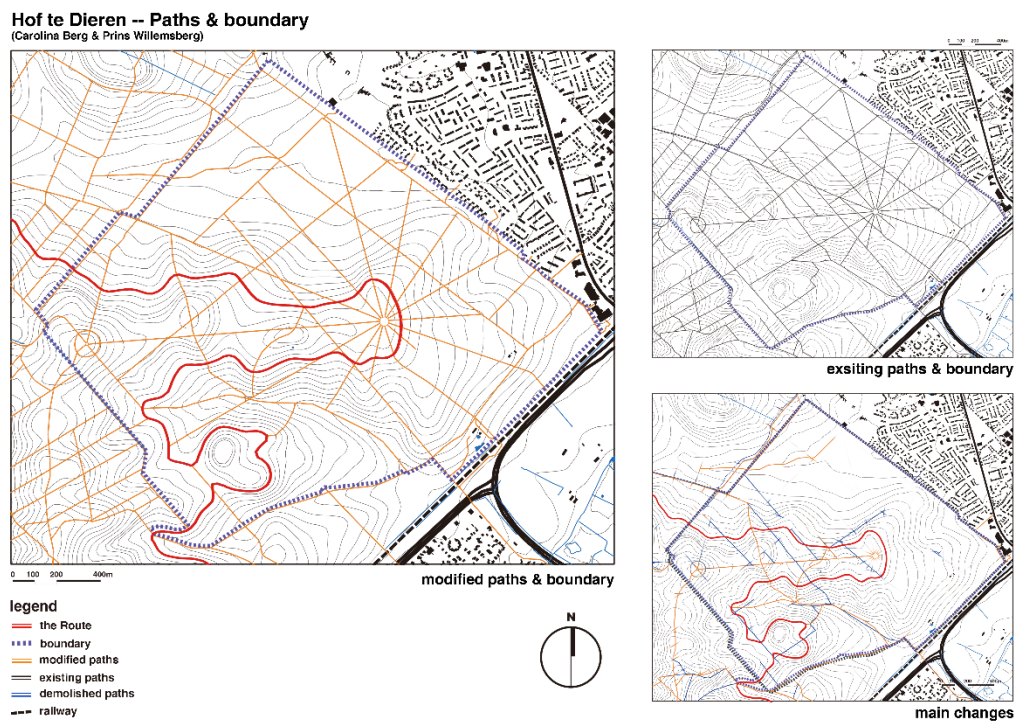


Fig. 5.17 Reorganization of paths and boundary, with comparison, Hof te Dieren (Carolina Berg & Prins Willemsberg).

Hof te Dieren -- Planting pattern (Carolina Berg & Prins Willemsberg)

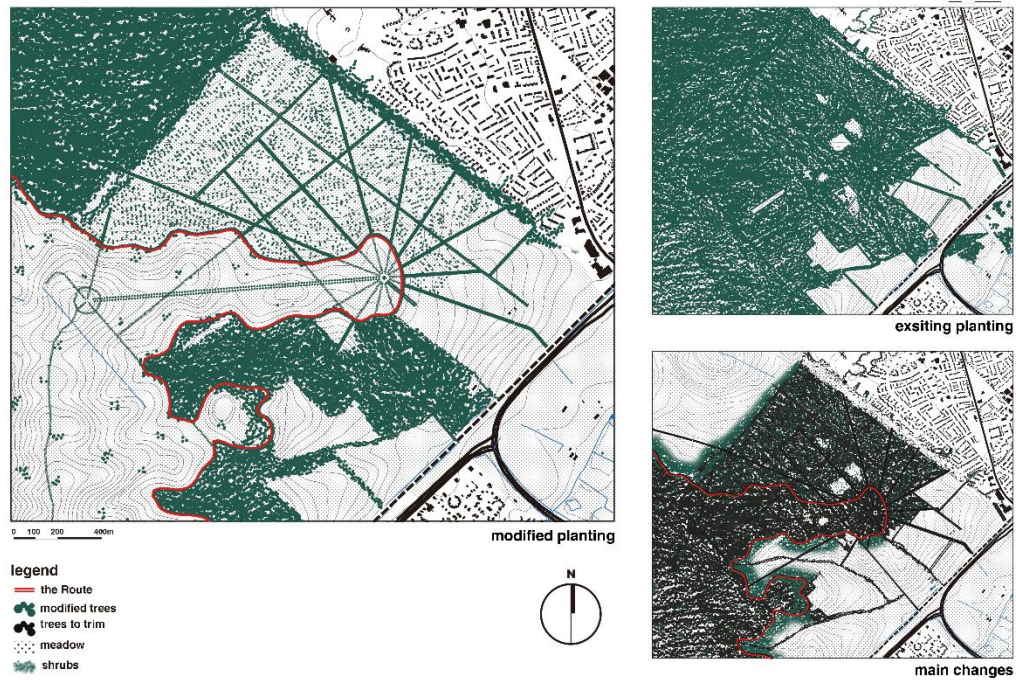


Fig. 5.18 Transformation in planting pattern, with comparison, Hof te Dieren (Carolina Berg & Prins Willemsberg).



Fig. 5.19 Perspective drawing from Carolina Berg towards Prins Willemsberg

In the Hof te Dieren, I assumed the main attraction would be the powerful road structure. In this situation, I trim a lot in its property to make the whole star shaped road structure more obvious. When visitors stand on the center spot of Carolina berg, or along the route, they will suddenly feel

the power of the road structure. In addition, I also build some new connections to let people move more easily from the city to the estate, and through the straight roads.

6. Discussion & conclusion

Firstly, I would like to reflect on the relation between my graduation project and my master track studying and also the relation between the project and the whole topic of the studio. One of the most important objects in our studio topic is the estates in the area. The most attractive thing about the estates is that all the estates consist of buildings and the surrounding cultivated landscape (garden, orangery etc.), some of them even contain a larger area in the properties. Designing and making intervention in this kind of sites is what we always learn and try to do in our track. And our studio is also under a larger project (KaDEr) led by the Heritage and Architecture department in our faculty, which tries to help the province of Gelderland to work with the heritage sites in the area. In my project topic, my aim is to help the historical estates transform to fit in the contemporary context and provide with more programs for the public, and the approaches to achieve it are in the field of landscape architecture, which are making intervention in the space, working with the layout of estates, reorganizing paths and plantings etc. In my project, I can apply all the things I learnt the last whole year, and research and design in the course of how landscape architecture projects work. After that, I am sure the outcoming will response to the larger scale of the project, to transform the historical sites to a proper situation for the public to experience the beauty of culture and nature, which I think right fits in the topic in the lab for my site, that is tourism and recreational co-use. One of the important goals of my project is to attract more visitors to experience the beauty of the historical estates.

Secondly, I want to talk about the relevance of your graduation work in the larger social, professional and scientific framework. The most important points in my projects are: 1. Create a route system as a backbone to connect the estates, to revitalize the whole area as Arcadia. 2. Make some limited intervention about the estates to make them interact properly with the route and show the cultural values better. 3. Create easier access between Arcadia and cities, and between Arcadia with larger natural reserve area. 4. Revitalize some of the individual estates, strengthening their values and making some improvements. In this way, the heritage sites will be more accessible to the public and also revitalize the estates in the contemporary context. In my opinion, the values of an object depend a lot on how much people, or the public, can experience. If the precious things only keep in the dark and away from public, it is not fully used. In my eyes, the existing situation of the estates here has a lot of potentials, they spread widely, some are public but some are private. People know their existence but can not enjoy some of them. With my intervention on the landscape level, the estates will become more close to people's recreational activities, which will bring benefits both in culture and in economy. I hope this project can provide an option to the heritage transformation projects what heritage sites can offer and benefit at the same time with some minor interventions to be more accessible to the public.

As for the relevance in the professional and scientific framework, I think the most important part is trying to apply the theories that were developed in the field of architecture in my own project which is mostly in the field of landscape architecture. In this part I would like to give special

thank both to my first mentor Eric Luiten from Landscape Architecture Department and my second mentor Hielkje Zijlstra from Heritage & Architecture Department. They both recommended the book 'Heritage-based design' by Paul Meurs, which has become my main reference to build my theoretical foundation of my project. Just this group of combination made this happen. The theories and approach from this book were mostly developed from the field of architecture, and also applied to the architecture in the urban context. However, when I read the theories, many of them could support my thought of my project and helped me to develop my own methodologies. And the approaches which are supposed to use on the intervention and transformation of historical buildings, can also guide me to do my intervention on landscape architecture. When I look back to this now, I am so excited that I think to some extent, I kind of extend the application scale of the supposed one, and it proved good as well. In addition to that, this kind of experience allows me to look to the theory in a higher level, not just to the architecture or the landscape architecture, but to regard them all as the heritage issues, which makes me see more clearly on the similarity and difference. I think this is the most precious experience, because even if I don't do the landscape architecture related jobs in the future, the abilities of transformation and generalizing and trying out can always benefit me in my life. In fact, the Architecture and landscape architecture does have a lot of relation with each other. With this successful experience this time, I am excited about more trans-disciplinary trying outs in my life. But still, I should also refer to some other books and articles to give my theoretical foundation wider support to make it more convincing.

As for the strong and weak sides of the chosen (design) methodology, I think the strongest side of the project is that if it goes well, it will produce a win-win situation, and develop a positive feedback system, that is the area attracts plenty of visitors to have good experience, and the visitors in return benefit the estates in economy. Besides, it makes interventions through different scales, making the whole system complete. Every scale level has its own design principles which lead to proper interventions. While the weak side is that, relatively, the project may not have very detailed design for individual estates. For myself, I think the most fundamental part of the project is the areal level, that is the system with the backbone of the route following one contour line. This system can hold the estates together and put them in a better platform where have more space to get better. The system will offer better access to the estates, which will bring more visitors. With some leading estates making changes firstly, as time passing by, the positive feedback system will gradually make some more estates to improve in the future. Then in the practical level, I think there are also difficulties when we have to persuade privately owned estates to join in the system and give access to who are using the route and the whole system. So I assume that the whole project should really be attractive enough. I am really looking forward to the reaction of the stakeholders.

Next I would like to reflect on all the research work of my project. Generally speaking, I think when I do the research, I always have my objectives in my mind. As a result, my analysis are all done on purpose and every research and conclusion from them are useful for my design and the final goal of the project, which I think is the good part of my research. At the same time, I also find some rooms for improvement in my research. As I mentioned above, the fundamental part of my project is on the areal level, which means that my research starts from quite a large area and

most of them are in the larger level. Consequently, I may lack some of the zoom-in analysis. At the same time, the detailed data and maps are always hard to find, after all, most part of my project are in the area without dense urbanization, which has lesser data than the urban area. Besides, which parts to zoom in also have to be considered deliberately.

Then I want to talk about the ethical issues and dilemmas. I think most of the issues in this field in my project are because that my intervention is kind of powerful in some way. In my expected situation, I want all the concerning estates in the area would come together and create their connection to the whole route system, so the concerning estates would have to more or less have some modification according to the route and attaching path system I build up. According to the theory and my design, I am sure that this project will be beneficial to the whole area and the cluster of the estates in the long term. But I admit that there may be some unexpected conflict between the whole cluster and the individual owners, like they may worry about modifying to fit for the route will harm their monumental or aesthetical values, or the system will bring too many visitors that they can not take etc. On the design aspect, this conflict becomes that how to make estates interact better with the larger system, and more important maybe, how the system can help to revitalize and improve the qualities of the individual estates. For the latter one, I was trying to achieve it in my design but I can not say it's satisfying in my design. I think it requires more trying back and forth to find out the balance on the cluster and individuals. But still I am sure the project will revitalize the cluster of estates in the long term. With money coming in, estates can improve little by little and finally find the balance between visitors, profit and maintenance. As I said before, I think the valuable things can only embody their values when they show their precious features to the public. So what I can do is to stick to my project and try to make it better and persuadable.

When I looked back at the whole project, I would say it really keeps going in the direction I want. It is getting closer and closer to my objectives. But still it has some space to improve. Besides, as my mentors picked out, the ingredients are there, they have connections and relevant to the topic, but they should be put in a logic structure to combine stronger to explain the whole process better and connect with each other better. Next time when I do the project I will pay more attention on the relations of the elements and form my whole logic, convincing and systematic structure to sell my idea and project out better.

At last, I also want to mention the crisis we are going through because of the corona virus. Working at home is always hard for me. But the pressure of deadline always push me to move forward. Luckily, I am still fond of my project and want to finish it as better as I could.

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