



# REFLECTION URBAN FOREST MOVEMENT(S)

Movement as design method for experiencing nature and its beneficial effects in the city of Den Haag.

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**MSC THESIS LANDSCAPE ARCHITECTURE**

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## Reflection

In the reflection the thesis is discussed and reviewed on different topics, reflecting how and if I could have done them differently and what I learned in the process. The reflection will be concluded with an outlook of the project.

### THE THESIS PROJECT IN RELATION TO THE URBAN FOREST PLACES LAB AND THE GRADUATION STUDIO FLOWSCAPES.

The project researches a new way of designing cities and their main structures, creating healthy living environments with restorative effects. These new, healthy living environments and green spaces relieve stress and improve the mental health of its residents, while responding to current environmental design questions. Throughout the project I came to the conclusion that it was not the amount of green in cities that led to a healthy living environment, but it was influenced by how the green spaces were experienced. Resulting in a design method of using trees, shrubs and grasses to create an experience in a space. This links back the Urban Forest Places lab which focuses on different green structures and scales in the urban environment, exploring trees, their composition and effect on the urban environment.

The designed spatial framework, consisting of forests, green spaces, lanes and country lanes can be recognised in one of the thematic lenses of the Flowscales Graduation Lab. This Green Infrastructure lens consists of green structures which are linked together to form one network. These structures in urban areas offer spaces for leisure, food supply, water storage, nature etc. each of them having their own beneficial effects on their surroundings. This is further explored in

the thesis researching the beneficial effects of nature for its users, by researching the restorative side of nature. Another element mentioned in the Flowscales Graduation Lab is the research by design method. Here design is used to understand the spatial characteristics of a site or to research different design elements. In the thesis this method is used to reinforce and investigate the Urban Forest Movement. While the main design is on the lower scale, detailing out how the different movements work in relation to restorative nature, the Urban Forest Movement is still being improved and worked on. This leads to a back and forth of zooming in and out resulting in new ways of looking at the project offering new insights for the design on the different scales.

One of the main perspectives in landscape architecture is perception, how users experience a space and the created design. In my thesis the lens of perception is one of the main design tools to create spaces which offer bodily experiences, created by contrast between light and dark, textures, colours, smells, sounds, amount of enclosure and elevations, reinforcing the importance of the lens perception.

Further the project is related to urbanism, creating a new way of designing a city. Focussing on living environments, main structures, ways of planning a city and creating transitions between parks and neighbourhoods.

### SOCIETAL RELEVANCE

Currently cities are becoming more dense resulting in overpopulated neighbourhoods and little green spaces. Together with this

the rising mental health problems and new environmental design questions such as heath island effect, water nuisance and densification, results in questioning our current city structures. The mental health side of the thesis is becoming an important design question in creating healthy living environments that offer green spaces in dense cities. The research explores a new way of designing a city with current environmental design questions in mind but also by focussing on restorative nature and healthy living environments. Not only should the city structure be designed from a planning point of view but also from an experience point of view. Designing the main framework with movement in mind and how residents of the city are going to experience these structures.

This thesis researches new methods on design cities on different scales, focussing on healthy living environments and using nature for its restorative effects. Conclusions show that when designing green spaces in cities it is not about the amount of spaces but about how these are experienced. Offering a new design method for designing future dense cities with, maybe fewer but, effective green spaces. The research could be used in further development of current cities.

#### METHODOLOGY AND DATA COLLECTION

While doing the literature research, a historic overview offered a way to summarize a part of the research. This helped me by giving me an overview of green structures and their relation to events or movements over time. Seeing relations between urban planning, health movements, green structures and ideal city movements, helped to understand how all of these elements had influenced

each other. It also gave new insights on what elements this Urban Forest Movement should have.

Although the overview was a good way to summarise the literature reviews and to oversee the conclusions, these were only of little influence when designing the Urban Forest Movement. The historic overview was needed to build up an understanding of the events over time in the different subjects, which extended my knowledge about the subjects. This helped me understand how cities and parks developed, with which design goals in mind, related to healthy living environments. By being able to recognise these structures or patterns in the existing urban tissue, a new framework was easier to design by piecing these elements together. Therefore, the conclusions from the historic overview may not directly have influenced the Urban Forest Movement, but rather have influenced the creation of the spatial framework indirectly by using the obtained background knowledge.

The second part of the research used literature reviews and case studies to answer the question. Although there were a lot of literature studies on mental health related to restorative nature, how these findings could be spatially applied in the design was not clearly mentioned. This prompted the research on how elements of these restorative theories could be recognised in design methods or activities. After further research and feedback from my mentors a link was found between the restorative nature theories and experience and walking. To transform these conclusions into design principles, multiple case studies were researched. Many of these cases didn't just



focus on walking but on different speeds and types of movement. Explaining that to experience nature one needs to move through it. To explore these findings new literatures studies were done which offered a similar conclusion. This led to a further exploration of two themes: movement in relation to experience levels of nature and kinesthetic and synesthetic experience.

To conclude all these different elements and findings a toolbox for movement was created, where the most crucial design principles were summarised.

Because the research started with literature reviews and case studies and there was no precedent goal, an overview or design method, only answering the research question, it felt easy switching between the two methods. This allowed for a lot of research and finding conclusions without immediately valuating them, allowing for the two types of research to complement each other.

#### GENERALISE THE RESEARCH

The explored literature and case studies offered input for the Urban Forest Movement, a generic scheme with design goals. These goals might differ for each city but the main outline of the Movement stays the same. How this can be implemented into the site has been shown in the design. Here the design principles, main structures and movements are adapted to fit the design brief of the site. From this the Urban Forest Movement can be implemented through the different scales. Although the Movement is generic, it does require main structures in the city's pattern or in the landscape. If those are missing new structures need to be designed.

#### ETHICAL ISSUES AND DILEMMAS

The restorative element in the thesis caused a dilemma. According to the literature studies, restorative effects of nature can be achieved by designing a space where visitors are emerged in nature, restricting long views or sights of the surrounding city. This results in a dense forest with no or little sightlines from outside. While restorative effects benefit the mental health of residents so does the feeling of safety. With such a dense park or forest in their neighbourhood it might have negative results on the feeling of safety. Therefore, when designing that park, I needed to find a balance between the restorative design elements and the quest of feeling safe, which was about making choices. After the design I can conclude that the restorative effects in my design did overtake the idea of feeling safe, designing a park with many enclosed, unclear paths and spaces.

Other dilemmas that I faced were the preservation of certain historic buildings and the cemetery. The site for is currently a cemetery, one of the oldest cemeteries in the Netherlands. It consists of monumental tree structures and has many historic important memorials sited in it. To create a restorative green space the function of the cemetery had to be removed, which caused the dilemma, to keep certain structures, keep the function or to keep the elevations. People that have family members or friends buried on the cemetery of course want to keep the graves intact, surrounding residents might want to change it because they demand more leisure areas. Therefore, I had to ask myself how to transform such a site. To slowly transform the cemetery into a park memorial trees could

be planted instead of burial stones, phasing out the cemetery. Or by looking at examples in cities like Copenhagen, where we can see people enjoying the green environment of the Assistens Cemetery, a connection can be made between leisure and cemetery.

After deliberation I decided to remove the function of the cemetery, amplify the existing elevations, to keep some of the tree structures and burial stones to link back to the old function of the site. I chose this option to pay tribute to the old site but to still offer myself a free canvas for my graduation project.

#### DIGITAL MENTORING AND OTHER ISSUES RELATED TO THE CORONA-CRISIS

I concluded that the digital mentoring due to the Corona-crisis had positive and negative sides. Communicating my design choices and clearly drawing the spatial design elements was a bit difficult for me. I found that not only was I not able to talk through all the elements in the drawings but I also had to think how I drew them to clearly communicate my ideas. This resulted into early thinking of drawing methods while having them left open could have created new insights during the design process.

While these were some of the negative aspects, I also experienced some positive ones. For instance, as mentioned earlier the drawings were important, thinking about how to visualise and make them this early also allowed me to see which drawing styles were better to use. Which was helpful for some elements at the end of the thesis.

#### VISUALISATIONS

During the quest to visualise the Urban Forest Movement many different visualisations

were tried, from sketches, exploded views, birds eye views, strips, sections to a model. Trying to find a clear way to visualise the different scales and their own structures, principles and experiences. Each time new found ideas from the design were processed in the Urban Forest Movement and a new style of drawing was tested.

#### PROCESS OF THE THESIS

I started my thesis with the fascination for healing nature and ideal city movements and how these two could be linked to create a living environment where residents don't feel the need to flee the city for peace and quietness. Through researching I found out that I needed to widen my lens to how to create healthy living environments by reacting to larger design questions such as water nuisance, heath island effects and densification while also using nature for its beneficial effects. These elements soon seemed to be linked to each other and could be used to create a generic scheme and detail design which focussed on both parts of my earlier fascination. Therefore, I decided to further explore the ideal city movements, mainly the Garden City movement, and restorative nature theories on how to design a current version of an idealistic healthy city movement. The restorative side of the research mostly focussed on the literature and how this could be applied, which was later found to be possible through movement and bodily experience. The ideal city movements were further explored by seeing how the ideas were used in current city structures and if certain elements or structures could be used in the design.

From this, conclusions were drawn and

the first ideas on how to create a generic scheme were drawn up. This scheme was designed through the scales and was tested every time I zoomed in or out. As a result of this method, working through the scales, the detailed design and city vision were matched to each other and offered new insights for the design on the different scales. While starting with the design one of the most important design tools of the project was found, movement. With this find, many things fell into place such as how to create larger green structures in cities and how to let visitors experience restorative nature in the parks. Movement became the main idea behind the spatial structure of my ideal city movement the Urban Forest Movement. This finding provided me with a design tool that I could use on different scales, using it for its level of speed and what is experienced from it on a city scale to it being a way of letting people experience a space fully by emerging in it through bodily experience. Working through the scales and using literature, helped me get to a level of detail in my design which reinforced my ideas and the movement on a larger scale, showing how it could work on a zoomed in site. Using the conclusions from the research led me to be able to substantiate the design choices and demonstrate the concept behind the design through the scales. Although not all of the literature and design research was as directly applicable to the design as others, these all contributed to my knowledge about the topic of my thesis. Therefore, in a way these parts of the research had their own input in some design choices, indirectly using them to substantiate the design.

A part of the project which I feel I

could develop further is the process or transformation of the scheme. Here a more detailed out scenario design could have made the generic Urban Forest Movement stronger, allowing it to be adapted to any new design challenges or sites.

## OUTLOOK

Looking back at the project with the gained knowledge the relevance of the researched themes becomes clear for current cities. This project could offer new insights into designing future cities and their spinal green structures. The idea of movement, bodily experience and eyelevel perspective, is one of the crucial elements in this project. As shown how this could be used to design green structures and nature areas in a city, it should form one of the main design tools when designing future cities.

Currently the Urban Forest Movement is applied and further researched for the city of Den Haag. Although this offered a site from where to start the project and to see if it could be applied, this results in a limited applied design. The Generic Movement can be further researched and improved by applying it to various other cities. Cities with an existing green, spatial framework, such as a historic green city wall, or cities that lack an overall green structure. By applying the movement to different city structures the spatial framework could be elaborated.

Further research on a lower scale, park scale, could lead to new ideas on how to design a park. Currently the main park design in the project can be related back to contemporary design tools to create spaces and experiences, such as elevations,

planting schemes and materialisation. Further research could dive into a new design method, such as virtual reality, to create these bodily experiences in nature. This could offer a new insight into green spaces in cities. This is mainly a design question with the rising demand for housing and the fewer spaces which are available for nature in the city. Can densification and emerging in nature be combined in a space and if so how? Questions such as, how can virtual reality be used to create an emerging experience in nature, rise. Leading to what could be a next step in the research, exploring new design tools.

Finally, the movement could be looked at through different scenarios to create a better adaptable and sustainable spatial framework for a city. Scenarios such as economic decline, extreme climate change or extreme population growth could all have their own influence on the green spaces. This leads to questions such as, how can a food production area offer a similar emerging experience to a park and be implemented in a city or could smaller green spaces, due to densification, combined with virtual reality still offer an experience of emerging in nature. Not only could these scenarios offer new insight into how to design a green space on a zoomed in scale but it could also be investigated on the larger scale. For instance, how could the Urban Forest Movement offer design methods on dealing with rising sea levels or cities in The Netherlands getting intertwined.

The conclusions from this project lead to new questions that could be further researched, to investigate how to create an ideal healthy

living environment in cities, using restorative nature, that responds to environmental design questions that are relevant at that time.





