

RECREATION FROM THE FOREST

Design of a lowtech spa in an extraction landscape

Appendix 3 – Reflection on research and design

Appendix 3 – Reflection on research and design

Author: David Kooymans

Student: 4165322

Mentors: Annebregje Snijders, Paddy Tomesen and Jan Jongert

Subject: Appendix 3 – Reflection on research and design

Date: 19-09-2018

This reflection is an explanation to account for the preliminary results of my research and design in the graduation phase. The first part is a personal reflection of the process. It aims to reflect and look back to see whether the research approach worked and to get an understanding of the 'how and why'. Further the reflection upon the feedback of my mentors is discussed and the translation of this feedback into the graduation project.

The second part is a reflection of the research and design in the broader context using 5 different aspects.

Approach of research

The starting point of my research was very broad and started with the fascination for energy landscapes. As context I focused on the IBA Parkstad where architects were invited to think about 'out of the box' projects that can lift up the area. My approach was to identify multiple energy potentials of this region that has an ambitious vision for its energy household. "*The big challenge for the Green Metropolis is to find ways of converting itself into a region that can get all its energy needs from renewable sources extracted in the region itself. Its unique history, underground potential and characteristic appearance above ground can inspire plans to develop the 'energy landscape of the twenty first century'*" (Sijmons, 2016).

Using this approach the research results became very broad and led to an open end with many possibilities. That made the transition from research to design difficult. However while I was focused on the scenic and fragile forest of the Brunssummerheide it became clear that the forest as an extraction place for material and energy (wood and biomass) had potentials to initiate an exemplary project.

How and Why

To me starting with the why is most important. Therefore my research method included a broad analysis of energy potentials in order to filter out the most promising for an 'out of the box' and exemplary project. From my research I could conclude that the forest in the Netherlands can only be managed sustainably when there is a balance between nature, recreation and production. Currently the balance (specifically in the south of Limburg) has dramatically shifted to the nature function. The mines were closing, the railway company started to use reinforced concrete and the paper industry mostly used recycled paper. Also plastic was introduced and replaced wood in consumer products. Therefore the production forest lost its function. Together with the introduction of 'natuurwaarde' in the seventies, recreation and production seemed to vanish in the forest. The reason 'why' my project reintroduces a recreation and production place in the forest was a direct result of my research.

However it took a while to understand 'how' this 'why' could be translated into a 'what'. My first thought was the design for a sawmill factory in combination with a Spa facility. This was based on the 'how' principle. A local sawmill can deliver its 'waste wood' to the Spa to produce its heat for bathing and saunas. My thought was that this could lead to an interesting synergy. Therefore my P3 design proposal consisted of this idea.

Feedback of mentors and implementation

During my P2 feedback I had a clarifying discussion with my mentors. We came to the conclusion to focus on a lowtech and small scale intervention because of the vulnerability and the character of the scenic design location. Namely de forest of the Brunssummerheide. Also the economical and political context of IBA Parkstad would suit such an intervention better.

During my P3 feedback session my mentors advised me to go along with the Spa pavilions that I proposed. This meant leaving out the sawmill factory in the design. In that way I could focus on the design and technical elaboration of several Spa pavilions. After some additional research I found that close to the Brunssummerheide a sawmill factory already exists. Further more, I found that a sheepfold and a restaurant on the Brunssummerheide together with the sawmill form can form an interesting synergy for the Spa pavilions. These can deliver waste wood, manure and organic waste for the natural heatexchangers that power the Spa pavilions. The feedback of my mentors helped me to bring more focus on the design assignment, without losing the broader context. Therefore the project became layered and can be explained in all different scales.

What did I learn? What's ahead?

I have learned how to formulate a design assignment using a broad approach in research. The key of this process was to reduce the design assignment to a clear plan. The knowledge I build up about the context of IBA Parkstad and the use of waste wood as heat exchanger during the research phase made it difficult to think clear sometimes. Therefore I had to break with some rules. I decided for example to place my project on the most beautiful and exemplary location, while making concessions for the zoning plan that existed there. In the end I think these decisions make the project stronger because it now also really becomes an exemplary project that can be seen as a counter proposal for the existing recreation plans for the sand mines adjacent to the Brunssummerheide. In this last phase of my graduation project I want to focus on the user experience of the Spa pavilions. I will visualize the sensory experience and the use of the pavilions in order to present a clear story during my p5.

Aspect 1

the relationship between research and design.

My research paper was a broad analysis of energy potentials in the IBA parkstad region. It informed me thoroughly about the topic. In my research paper I made some hypothetical calculations of biomass streams from the Brunssummerheide forest. This helped me to build up the argument to use local wood and local waste wood to build and power the Spa pavilions. In that sense the argument to initiate such a plan was also quantified by the research. This helped me to continue my idea.

Aspect 2

the relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS).

When I chose for the studio Architectural Engineering I was mainly interested in the domain of 'flows'. This domain focuses on how material, energy and money flows can be redeveloped into more balanced metabolistic environments. My research therefore was focused on different energy potentials. In itself this research domain is not directly related with the field of architecture. Therefore the process from research to design was a bumpy road but eventually led to an interesting outcome. Without such a flow research approach the outcome of the project could have differ a lot. In that sense it is a really good preparation for the design phase.

Aspect 3

Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

Most of the research papers and documents I read about the energy transition of IBA parkstad were written on a policy level and resulted into policy recommendations. Little is written about actual spatial implementations or interventions that can contribute to this energy transition. My graduation project is in that sense a spatial elaboration or strategy of how one could use local wood and biomass. Therefore it builds upon scientific knowledge and shows how the energy transition can take shape in the physical environment.

Aspect 4

Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

The design of the Spa pavilions can be viewed as a counter proposal for the recreation plans that now exist for IBA Parkstad and specifically the Brunssummerheide. These proposals mainly focus on the existing sand quarries adjacent to the Brunssummerheide. My graduation project gives an alternative view on how recreation, nature and production can come together in a different place on a smaller scale.

Aspect 5

Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.

The ethical discussion or question that my project raises is: Should we as architects intervene in a nature area like the Brunssummerheide in the first place? I think we can do that as long as we create the right balance between nature, recreation and production. Currently Dutch forests are economically not sustainable anymore because the balance has shifted too much to the nature function. Therefore plans to add recreation and production should be developed. Forest can be part of the development of a sustainable energy landscape. If this is done in coherence with nature we can design very interesting new places in the forest that also uplift the function of the forest.