REFLECTION
Botanical Research Institute Amsterdam

René Görtz
4335791

22nd May 2018

TU Delft
Complex Projects Graduation Studio
Amsterdam Mid-City
Schiphol Corridor
Introduction

This reflection paper is a short substantiated account of the preliminary results of research and design associated with the graduation phase project. The aim of the reflection paper is to look back at the pre-design research and how this led to the chosen approach. The quality of the approach and the lessons learned over the course of the project are considered, to identify how and why the approach did or did not work and its significance in the wider social context.

The following aspects will be addressed:
1. The relationship between research and design.
2. The relationship between the theme of the graduation lab and the subject/case study chosen within this framework (location/object).
3. The relationship between the methodical line of approach of the graduation lab and the method chosen in this framework.
4. The relationship between the project and the wider social context.
**Aspect 1:**
The relationship between research and design

The graduation studio started with a personal enthusiasm for cultivating and reflecting the Dutch landscape in the context of future development. Based on research into future social and environmental needs the role of nature and city parks within the region was selected for special emphasis.

The first stage (until P2) focused primarily on the research aspect with less design input. The second stage then focused more on design aspects (leading to P4) with continued reference to research. The process required that both aspects (research and design) were tested against each other in parallel. Thus, both aspects have been leading forces within the graduation project, so as to exchange information between these fields and create a cohesive narrative. This narrative was refined during the process and culminated in the preliminary and final designs. This interchanging process will never completely finish. Evolving research, leading to new knowledge and technology will continually challenge the architect into new ways of thinking and novel or refined designs.

As part of the process open questions were constructed that allowed investigation without becoming too specific. This forced constant adaptation and refinement of the outcome. The aim of this approach was to stimulate an integrated solution and achieve more depth than framed questions. However, this process has the tendency to be never-ending and eventually a hypothetical question needed to be more firmly constructed to lead to an end product that would be ready for graduation. The question formulated was ‘What if the Dutch cultural landscape and the Dutch philosophy towards nature, were captured within the design of a botanical institute?'
Aspect 2:
The relationship between the theme of the graduation lab and the subject/case study chosen by the student within this framework (location/object)

Complex Projects investigates the development of Amsterdam Mid-City in 2050, the current fringe-belts located within the ring zones of Amsterdam Metropolitan city. The fields of study included energy efficiency, climate, noise and air pollution, waste water treatment and mobility.

The area between the City’s business district Oud Zuid and Schiphol is called the Schiphol corridor. This area was considered for special study, since it is currently under-developed and poorly connected to the airport. Adjacent to this the area is located the attractive lake Nieuwe Meer, whilst on the opposite of this lake lies the Nature Reserve Polder Meerzicht and Amsterdamse Bos, which is three times the size of Central Park New York. It is assumed that large changes will occur in this area in the future, possibly catalysed by the expanding airport. The Schiphol Corridor offers huge potential for future development of both business and residential projects.

With this potential development in mind, and based upon current research related to social and environmental needs for the future, the subject chosen was that of nature. The role of nature and city parks in the future city of Amsterdam was investigated.
Aspect 3: The relationship between the methodical line of approach of the graduation lab and the method chosen by the student in this framework

AMS Mid-City has a set schedule of work. The schedule describes tasks and products to be finished for each period. This schedule facilitated the meeting of key milestones and timely delivery of required outputs. However, these short periods of time did not always allow sufficient time to look back and carefully consider all aspects of the previous work. The pressure of the group work, where it was necessary to take responsibility for the work of others whilst attempting to focus on individual work, was particularly difficult. Nevertheless, in the world of work time constraints are the norm and team-work can be very important, thus this component of the process is likely to be useful in terms of coping with these challenges.

![Schedule of Work Diagram]

In terms of course structure a personal preference would have been for P2 to be 25% of the effort, whilst the period between P2 and P4 be 75%, or possibly more design incorporated in the initial phase. The first phase seemed rather a cautious approach, and could have had more emphasis on design and the architectural qualities to be investigated later in the project. In the period between P2 and P3 quite a lot of time was spent on the concept phase, which could perhaps have been shortened by a week. However, the conceptual massing and programme studies did help to give the project a firm foundation and improve confidence in the final product.

The Building Technology aspect was challenging in terms of creating a system that could be built without harming the surrounding protected landscape. This was approached on a small scale. The architectural quality of the facade treatment should be that of a minimalistic glass box with modern smooth edges, with reference to a rare and precious gem. Although pleased with the execution, more investigation into solving challenges of the facade on a large scale, to see the full potential of the design, would have been of benefit. The work required for Building Technology was intensive and an extra 25% extra time could have been usefully used for this exercise. This important phase is of course the last step towards a physical design and missing out on detailed, crucial refinements can significantly affect the success of the project.
Aspect 4:  
The relationship between the project and the wider social context

Globally, increasing financial and population pressures are resulting in city parks and protected landscapes being vulnerable to privatisation and development. Parks contribute to people’s health and should be freely accessible to everyone. They are not only important for the population of the city, but also for all other organisms located within its ecosystem. The Botanical Institute shows how nature and city parks and nature can be protected and add value, whilst maintaining a recreational function.

On a building technological point of view, the structure is designed so that it is built from inner dike to outer dike, through an integrated rail and crane system referencing the self-built construction of train tracks. The reason for this is to minimise the impact on the existing landscape and ecology. Systems like this could also be utilised in the future when water levels are predicted to rise.

The greenhouse protects the Dutch landscape within and passively cools its interior through the use of a climate facade with integrated technologies such as Ground Tubes, NIR Glass and translucent panels. This climate facade is a hybrid system that allows wildlife to pass through. It can open and close automatically according to changing weather conditions.