

Reflection | aE Studio

By Balthazar Kiewiet de jonge

Personal Information

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Name of studio: Architectural Engineering Graduation Studio
Design tutor: Anne Snijders
Building technologie tutor: Paddy Tomesen
Research tutor: Mo Smit

Relationship between project and research

The research is about the application of biobased materials in the redevelopment strategies; ADD-IN, WRAP-IT and ADD-IT. Because these are technical and very broad, it makes it difficult to link them to the design, especially in the beginning of the design process.

Therefore, I first conducted these separately from each other and then used the research to further develop my design (see Figure 1).

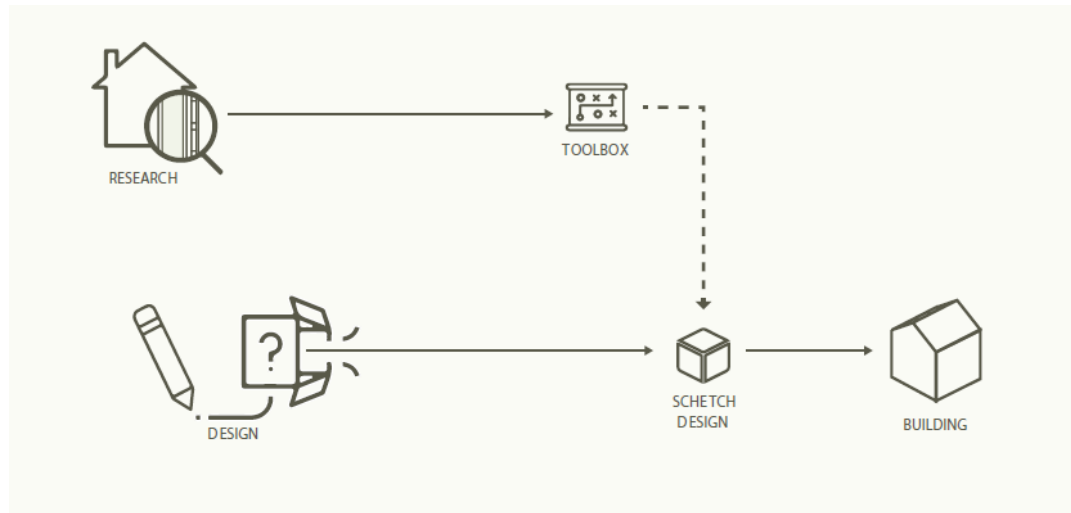


fig.1

In retrospect, I could have specified the research better by investigating the design possibilities. Like what are the materials good at? Instead of what do they score well at? This would make the link between research and the design easier.

Relation to general topic

As far as the theme is concerned, I think the project fitted in very well with the three different themes. Perhaps this is also the point of criticism. Because it fits everything, it is difficult to go into depth. Next time, I would like to try to tackle a more specific topic that fits in with one of the themes.

Findings and methodology

The research method was very interactive. As for the academic level of the research, I think it was certainly relevant. New findings have been made, such as the discovery of the fastest CO2 absorbing building material. However, sometimes it felt like I was just looking for data on a lot of different materials and then making a judgement. As a result, I did learn a lot about different biobased materials, but still remained on the surface. If I had been more specific in one subject, I could have gone deeper. In addition, there was little information available about certain materials, which made the research difficult to conduct. This meant that the research was not entirely successful/complete for me. The data I wanted to collect isn't complete.

Value research, design and criticism

On a social level, the project and the research are very much focused on sustainability and the densification of the city. In this way, this graduation can contribute to combating the housing crisis and climate change. However, these are again completely different themes/solutions and perhaps one reason why it is difficult to find depth. In terms of professionalism, I find the project and research within the themes very relevant. The integration of the transformations is well represented in the floorplans. However, there are also a number of points that could have been better/ different. Initially, the project was tackled on too large a scale. Because I wanted to carry out the various five projects, there was too little focus. This led to losing too much time on a new building project where ultimately little or nothing was done. Because of the amount of time spent on this project, there was less time to focus on what this is all about: The application of ADD-IN, WRAP-IT and ADD-IT strategies to our existing built environment. In addition, next time, I would have spent more time conceptualising the ADD-IN, WRAP-IT and ADD-IT strategies. Besides that I wouldn't incorporate technical solutions into the design too quickly, the subsequent adjustments were time-consuming. Fortunately, during the design process, I was pushed to think more clearly about why I was doing something. This led me to the realisation that I had to focus more on the existing buildings. Also, in my designs, I was reminded several times that I am very visually oriented and that my design choices are sometimes based on "because it's aesthetically pleasing." Through Anne and Paddy I was pushed to actually show what value such a design choice could add. This was something that guided my design until my P4. For each intervention within the strategies, I provided insight into its value, both spatially, aesthetically and in use.

However, due to the loss of time and a lack of focus, there are a number of aspects of the design that I would have done differently next time. For example, the roof of the monument could be more lively and user-friendly, the relationship with the surroundings is not sufficiently visible in the various buildings, the flexibility in the floor plans could be shown in more detail, and the construction sequence of the various strategies could be made clearer to better understand the application of the strategies. On the technical level, I would also have liked to look more closely at the ADD-IN in order to limit the thermal bridge in the concrete beams, and to look for an energy-efficient solution. In the case of the WRAP-IT, I would have liked to have studied the partial demolition of the building and the consequences of removing specific elements. And for the ADD-IT, I would have liked to look at the manufacturability and the possibility of modularity.

Despite these points for improvement and possible follow-up studies, insight has been gained into how we can transform existing buildings in a sustainable manner, so that these techniques and strategies can be applied at various locations in the future. Besides that there are also many other aspects of which I am proud and where I see that I have learned a lot. As a result of my graduation I have gained a lot of knowledge regarding the use and applicability of biobased materials. It also concerns improving our current built environment and which strategies are most suitable. For this reason, I am also glad that I chose to implement these different strategies. This ensures that in my further career I can actually make a well-considered choice in which strategy is best and that while using biobased materials. I think it would be very cool to further develop myself in this field and be able to make my contribution to combating the housing crisis and climate change.

To P5

In the last few weeks until P5, I would like to make some improvements to the design. To show more clearly how the project fits into the landscape. I would also like to make a model of the fragments in order to make it even clearer how an ADD-IN, WRAP-IT and ADD-IT strategy can be applied. Finally, the construction sequence of both buildings is something I would very much like to clarify by means of a video.