

Nature meets the human soul

Transforming the Augustinus church in Amsterdam North
Graduation project - **Reflection paper**

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Abstract

This document represents a reflection on the graduation year 2022/2023 within the Heritage and Architecture studio “Zero Waste Church” at the Faculty of Architecture and the Built Environment of TU Delft.

It showcases my choice of the heritage studio, my approach towards design and research, my inspirations and the obstacles I’ve encountered, overcame or not (yet) throughout this year and my position as an architecture (nearly) graduate.

It is, most importantly, a reflection on how I end my studies, at least for now, and enter the “real” architecture world.

Introduction

This reflection is written as a product of the Heritage and Architecture graduation studio “Zero Waste Church”.

In our current day and age, in which 30% of the waste in Europe is due to the construction field (Treggiden, 2020), the (adaptive) redesign of buildings is the most sustainable way of diminishing waste. Additionally, in the Netherlands, more and more churches are being decommissioned due to the rising number of atheists in the country. These churches, in addition to being at risk of demolition, are valuable heritage entities, as defined by the Heritage Council (2020).

The Augustinus Church in Amsterdam North (fig.1,2) is a neo-gothic church that has been vacant since 2014. After surviving a planned demolition, the church has been given a national monument status. Once a space for the local catholic community to gather, the building is now the subject for a prospective redesign. Although it maintained its presence in the neighbourhood's landscape, its interior can hardly ever be accessed.

In this situation, a first question has guided me throughout this year: What is a church without religion? After decommission, church buildings are stripped of their spiritual function, however, due to their identifiable architecture, they are still viewed as churches.

Then, if in the eyes of the people, a church is still a church, what function should it be given in a redesign so it respects the building's spiritual heritage?

A 2019 survey has showcased that nearly 92% of our time is spent inside (road.cc, 2017). Personally, I have days where my only connection with nature is through the window in my room. Because of this, experts are suggesting that as little as 20 minutes of exposure to nature per day could dramatically improve our wellbeing (M.C.R. Hunter et al., 2019). Generally, exposure to nature is having the same benefits to our nervous systems as meditation. It could be argued, then, that the non-religious alternative to being in a church could be exposure to nature.

This is why, for this graduation year, I took on the challenge of adaptively redesigning the neo-gothic Augustinus church into a nature-connected, mixed-use building. This design project was supported by research that aimed to identify how the redesign of neo-gothic churches could improve people's connection with nature. In conclusion, it was established that the redesign should be: 1. Biophilic and 2. Nature-inclusive. As a consequence, the church becomes not only a space for people, but also for the animals surrounding it, all the parties benefiting from each other's presence.



fig.1 - The Augustinus church

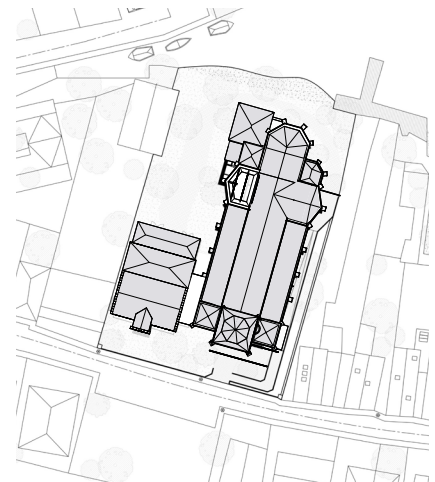


fig.2 - The Augustinus church in its environment, situation plan

1/ Relation with the academic field

What is the relation between your graduation project topic, your master track (Ar, Ur, BT, LA, MBE), and your master programme (MSc AUBS)

Within the Architecture master track and the MSc AUBS master programme, this graduation project tackles different relatable aspects.

First of all, it handles the redesign of a heritage church. Although this obviously impacts the architectural character of an existing building, the project also has an impact on a neighbourhood urban level.

The reprogramming into a mixed-use, public/private entity brings back the community aspect to the church. By creating 8 new apartments, a space for the community and also allowing access in the tower of the building, the church becomes, first of all, useful for its neighbourhood, but also addresses, at a smaller scale, the housing crisis.

Second, the zero-waste aspect focuses on creating as little waste as possible, but also handles the sustainability aspect of the building process. By choosing to work with only bio-based and reused materials, the project makes sure to tackle the environmental issue within the broader impact of architecture.

Third, through making nature part of the program, the church becomes a strategic point for supporting biodiversity on an urban level.

Lastly, the technical and climate solutions reflect upon a minimal impact on the environment, whilst ensuring the long-term preservation and structural integrity of the Augustinus church.

As a conclusion, the redesign is not only impacting the architectural definition of the church, but the church also becomes a landmark for both people and the local biodiversity.

2/ Research; Design

How did your research influence your design/recommendations and how did the design/recommendations influence your research?

In my research, I worked with the notions of biophilic design and nature-inclusiveness. Although the design and the research paper are two independent elements of the graduation project, they have fed within each other. The paper created a theoretical framework for the redesign: it helped identify elements that reinforced the natural connection within the building, what elements could be changed and to what degree.

At the same time, the design showcased style-specific dilemmas that general theoretical sources weren't clearly explaining. For instance, the theoretical sources don't mention the lack of light in the central nave of some neo-gothic churches. In this way, both elements complement each other, but are able to work perfectly as two distinct entities.

The transcription of the research into the preliminary design resulted into two booklets: "Biophilic Augustinus Church" and "The Ecosystem of Augustinus Church". Together with the booklet "Values of the Augustinus Church", they became the core basis of the further transformation of the church.

The process of going back and forth in between the design and the research, identifying, in the research, practical elements that weren't present in theoretical bases and vice versa has showcased question marks in the research.

Understanding, through theoretical research, the impact that architecture has on its environment and biodiversity strengthened the choice of using bio-based materials in the new intervention. At the same time, understanding the living needs of different animal species, the existing biophilic qualities of the church and the areas to be improved has framed the what, where, how and why of the interventions in the existing building.

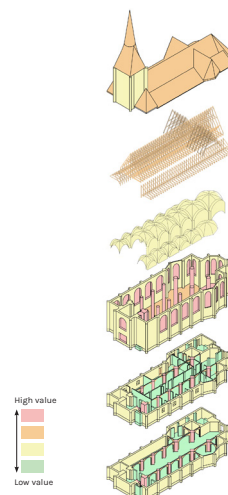
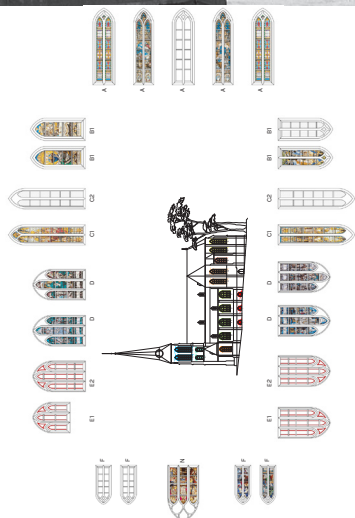
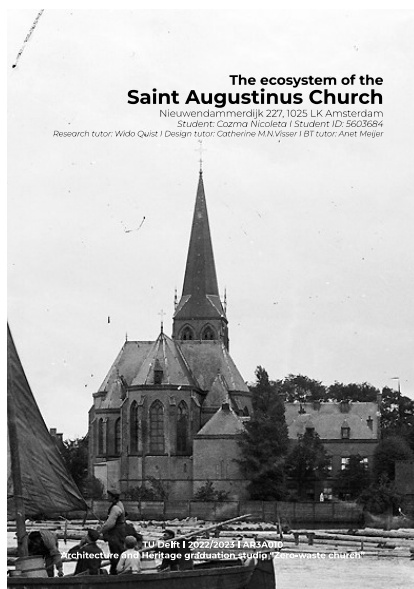
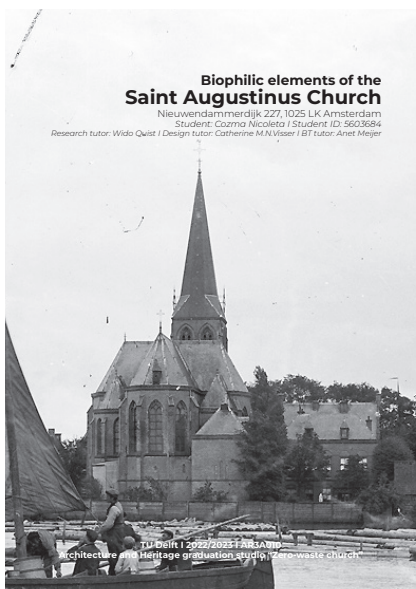


fig.3 - Biophilic Augustinus Church booklet and sample
 Author: N. Cozma, T. Sarma

fig.4 - The Ecosystem of Augustinus Church booklet and sample
 Author: N. Cozma

fig.5 - Value assessment booklet and sample
 Author: N. Cozma

4/ Heritage and zero-waste

How do you assess the relationship between heritage redesign and the zero-waste mindset?

In the current paradigm for heritage transformation, the focus is put on the values a building has, and rightfully so. The specificity of this heritage studio, however, is a “zero waste” mindset. Or, in the redesign I was bound to perform, the total material preservation of the church was not possible. The bearing walls have been pierced to allow light and air inside and one of the vaults is taken out to create an interior garden. Because of this, a lot of brick is extracted. This was solved by adapting a “reuse” attitude, and reusing everything that is extracted. The metal beams taken out from the floor are used as structure for the new openings, and the brick is either used as a finishing material or as an aggregate for the production of the hempcrete used as insulation.

Additionally, the integrity and protection of the existing structures has been of the utmost importance in the redesign. The insulation material (hempcrete) has been chosen as breathable and minimal as possible, while still being bio-based and appropriate for the programme. The climate installations have been adapted so as to not interfere with the existing ceiling, vaults and columns. The new structure is minimally touching the existing one, with only the lowest part of the existing walls being used as a support for the new structure.

3/ Approach, methods, methodology

*How do you assess the value of your way of working
(your approach, your used methods, used methodology)?*

The working method for the design studio was streamlined by the Heritage and Architecture Graduation studio methodology. First, we created case-study groups within our church of interest. After visiting multiple sites and analysing the possibilities, we settled on the Augustinus church. Several other site visits gave us insight on the building’s place in the community, but also a better understanding of the technical and functional elements of the building. Simultaneously we needed to work on the research plan. This task was academically structured within an additional course but was directly linked with our graduation project. Both the design project and the research were performed together, feeding each other, as explained before.

For the research, the main method I used was literature review on biophilic design, nature-inclusiveness and neo-gothic churches. Filtering out sources has been my main struggle, since I ended up reading and processing more than 40 books, articles, videos and interviews. Looking back, I should’ve known better how to choose my sources. However, in the beginning, I did not know exactly what the end result would look like. Because of this, looking at so many sources helped me identify the gaps in literature I could fill with my research.

Reading so many sources has also fed my knowledge about neo-gothic churches and thus helped me understand the Augustinus church. However, relying only on literature research has proved not enough at times, as the sources were sometimes either on the point of my subject, but too general in their explanation, or very focused on a subject that was only barely linked with my work.

I think that a case-study based approach, with a literature basis would have

been more appropriate for getting a better end result.

For the design, the first part of the year focused on analyses and combined group analyses with personal definition of our redesign goals.

In the group work, we took measures, impressions, pictures on and around the site. At the same time we searched through books on neo-gothic churches, for articles and archives on the Augustinus church, and were in contact with the building owner. This resulted in the compilation of 3 booklets: A general analysis, A BexEb booklet, and a Photo booklet. The results contain technical, objective but also subjective elements related to the church.

Within my personal work, I tend to usually rely on a standard pack: a sketchbook for notes and sketches, a roll of sketching paper, my computer and, sometimes, models.

For the graduation project, I started by sketching impressions of what I thought the building should question. The relationship between people and the facade, iterations on what the spatial proportions could be. However, because I stayed on this method for too long, I spiralled into not knowing what I want to do anymore. Because of this, I could not formulate my intentions well during the P2 presentation. The formulation of a clearer programme and function of the redesign has taken me out of this first mishap, and into the second semester.

One attempt for a model was made. However, at the point in time I made it, my intentions were not clear enough for it to be useful.

After I knew what I wanted to do, I started imagining what it should look like. For this, I gathered references that were linked with either redesign, biophilic design or nature-inclusiveness and that used bio-based materials. The use of references like that is inspiring to understand the possibilities, but it also is limiting at times. I found that this method shouldn't be a main priority for redesigning, but it can definitely help with visualising the aesthetics of a specific end result.

The building technology aspect was also important in the preservation of the church's integrity. To understand the existing structure, we did measurements on site and interpreted what we couldn't see with the help of examples of similar cases we found online.

For the insertion of the new structure, technical detail references were helpful, but due to the specificity and uniqueness of the situation, some things were improvised.

4/ Ethics, values and implications

How do you assess the academic and societal value, scope and implication of your graduation project, including ethical aspects?

When talking about this graduation project with people outside of the architecture field, especially with religious people, their first reaction is:

"Apartments? In a CHURCH?"

Indeed, any non-religious redesign of a church building is a subject of discord. However, when the buildings are existing, decommissioned and at risk of demolition, it is sustainably, economically and ethically rentable to redesign. Sustainably because we are reusing a building, economically because it is going to give back money that will help in its preservation, and ethically because it is preserving the values it has.

At the moment, the Augustinus church is empty. After a talk with the current owner, it is clear that, because the church has been without function for

so long, it has led to its deterioration. Its previous owners wanted its demolition, which led to listing it as a monument. This is, in my opinion, the perfect compromise between preserving the church and making it economically viable. After all, the stance I am taking with this is that respecting a building means taking care of it, and using it for as long as it serves. In this project, I propose the transformation of the Augustinus church into a mixed program for people and animals.

Now imagine saying, to the same people as before, that you want to integrate animals into their apartments. The reaction would be at least similar, if not more dramatic:

“BATS? In our BEDS?!”

The relationship we, as people, have with animals is highly circumstantial. We love our pets but kill the silverfish. A bat flying freely over our heads is scary enough outside, even more so when it is happening in our rooms. However, whether we want it or not, our wellbeing on this planet is dependent on a well functioning biosystem. For this, we need to take care of it. For this, defining clear barriers in-between the realms is important, however, with the right attention to the design, there is no cause for people and animals to co-exist and take advantage of each other within a building.

5/ Results transferability

How do you assess the value of the transferability of your project results?

First of all, the results of the research were tailored as an incentive to redesign heritage buildings in a nature-connected way. The framework can therefore be applied to other neo-gothic churches, as it is purposefully written as a general case. However, in the same example, models for other types of heritage could easily be adapted.

Then, for the design studio, the result is an example to the practical implementation of the research paper. Although the programme, layout and technical solutions are individual to the Augustinus church, I believe the overall attitude is adaptable to any kind of heritage building.

To conclude, these results are a product of their time and context. The methods, sources and solutions used are subjective to my knowledge and time available to spend on research purposes. In the future, they might become obsolete as new information arises.

My position, as an architect, has changed throughout the process of developing this project. Previously, I barely thought about thinking of the redesign of heritage buildings as being more than preservation and adaptation of a new structure to an existing one. Now, I strongly believe in the necessity of giving heritage buildings sustainable new purposes as necessary for their context. Additionally, connecting our buildings with nature is a timeless stance, with benefits for both us, people, and our natural environment.

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