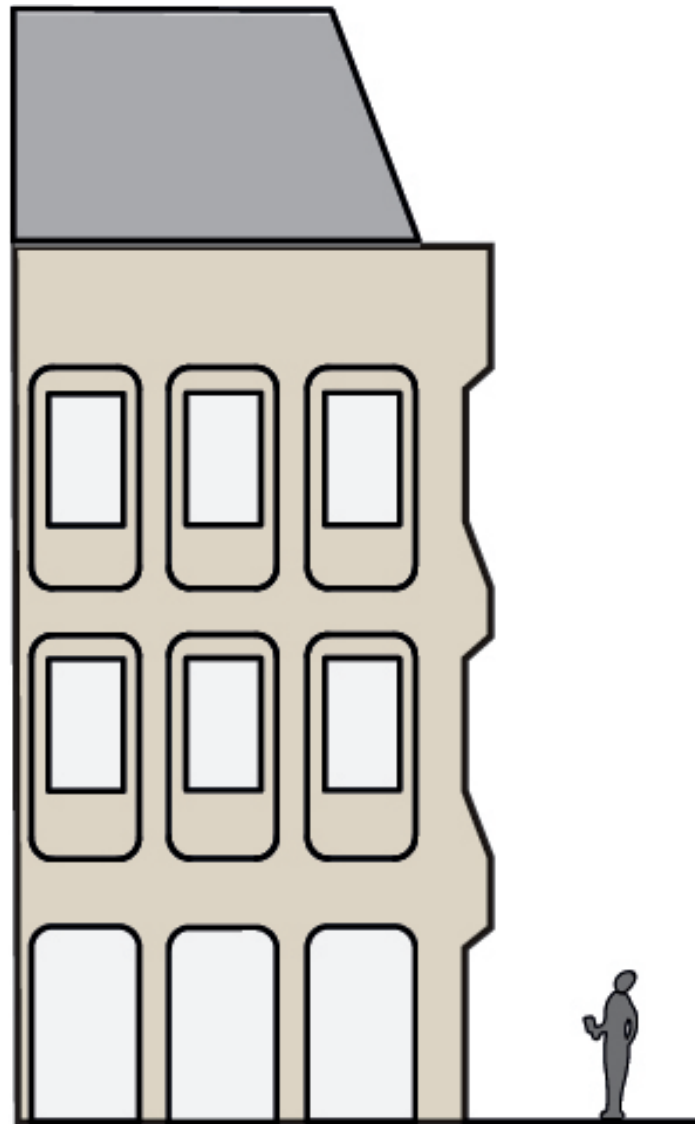


Reflection paper

Storming the Castle

AR3AH105 Graduation Studio Adapting 20th Century Heritage



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Introduction

Storming the Castle is the name I have given my graduation project. These three words metaphorically reference to my approach on the graduation project: the police headquarters in The Hague. The castle I am referring to is the facade of the extension of the police station, built in 1980, which is made out of precast concrete panels that together form a strict pattern that sends the message: 'keep out!'. This message is similar to a castle, hence the name. The meaning of 'storming' is threefold. It can be interpreted as a battle tactic, because in order to storm a castle you need a solid strategy. This resembles the research I did on post-war precast concrete facades through historic and case-study analysis, which led me to design conclusions. On the other hand, it can also be interpreted as something physical. Storming a castle often results in walls being torn down. This references to my design approach on the façade. Because my aim in the design was to make the building part of the neighborhood again, a shift in expression was necessary: from admonishing and strict to transparency and openness. This was achieved by removing precast façade elements and replace them with a glass façade.

Last, when a castle is stormed, the defender plays an equally important role as the attacker. From the perspective of the defender this meant I had to 'defend' the valuable parts of the building as much as possible, and give up some of the less valuable parts in the building. This defender perspective is a metaphor for the archival research and value assessment I did, that gave me the knowledge to know the building from the inside out.

My experience of this graduation year has been a constant play of taking on the role of attacker and defender. How this relates on a bigger scope is explained in this reflection.

Research topic

Already early in the graduation year, a value assessment was done on both parts of the police headquarters. This led to a very detailed overview of the values that were present in the monumental 1958 part of the complex. This part is a monument due of the presence of many artworks and decorations inside and the building being one of the few lasting works of the architect W.S. van de Erve. 1980 extension is not listed and had no mentioned values, except for a short paragraph in a post-'65 architecture folder made by the municipality of The Hague stating that it were only the two tower additions that made it remarkable. It struck me that the precast concrete façade in the complex was barely ever mentioned.

The research topic came up during reading about Schokbeton: the manufacturer of the façade present in the 1958 part of the complex.. Research opened a whole new world to me, showing a complex history and transition in the uses of precast concrete. Because there was so little written about the police headquarters in The Hague, I believed that the story of this façade could be linked to our construction history and development of building and material technology in precast concrete façades.

Relation research and design

The research into precast concrete facades has provided input into the design, and vice versa, in three different ways. First, research on Schokbeton has proved how important the building material and construction method is to our building history, as the innovation represented a viable transition from craft to technology, in an economic challenging time and without the help of computer aided design. Besides, Schokbeton was also transformational for the advancements that were happening in concrete technology. These conclusions led to a design that aims to show this part of the facade better. Second, research on the precast elements in the extension has given me insight in the technological advancements that have happened since the 1960's. These precast facades became integrated in the structure for the first time. Because of this, I have linked the precast concrete elements to a scientific technological value. In my design, I have made a distinction between loadbearing and non-loadbearing parts. Non-loadbearing parts lack the technological value, so removal is better justified.

Third, designing required me to thoroughly spit through the archives and find useful drawings. However, not every drawing that was needed, was made. In order to find detail drawings on the working of the precast concrete elements, other case-studies of similar buildings of a similar period of time had to be studied to deliver input in my design and research. The research required case-studies that used the precast concrete facade in a loadbearing way, and the design required these case-studies as a reference to examine how the precast façade parts were connected with each other.

Relation project and master track

My graduation topic is on precast concrete facades, the studio's topic is on adaptive reuse and the master track is on Architecture. The link here is my personal fascination for visible structures. Visible structures are structures that can both serve their structural purpose as well as reach an artistic/aesthetic effect. This studio's subject, the police headquarters in The Hague, has a precast concrete façade that is also structural in the case of the 1980 extension. This personal fascination was the reason for me to pick the building in The Hague as my graduation project, and use a research into precast concrete facades as a way to further explore the technical aspects. Furthermore, the Touch & Feel research line allowed me to focus on this small scale, as the studio focus was on materiality, which is most often linked to the façade.

My first choice for my graduation studio was Second Life, an architectural engineering studio which is also about adaptive reuse. I believe adaptive reuse should be considered way more often, and not only for heritage. Adaptive reuse does much more than preserve and bolster the values present in a building. It is an effective way to battle the housing problem, continue urban densification and reduce material use by using as much of the building (mainly the structure) as possible. My future ambition is to work on projects in need of transformation, either monumental or not.

Research methods and scientific relevance

I have chosen for an integration of multiple research designs: the Two-Phase Design. This method combines two strategies to provide appropriate checks against the weak points in each, while enabling the benefits to complement each other. A historic research is conducted on Schokbeton, in order to show how precast concrete could enter the architectural scene. A case-study research is then done on buildings constructed by Schokbeton between 1960 and 1980 to show the transition and transformation of the precast concrete façade.

The relevance of this research on a small scope is its contribution to my design, as it provided design guidelines for the redesign. Because the precast concrete façade is so present throughout the police headquarters a position on this has to be taken before redesigning. The research findings led to a steadfast position that could support my design decisions.

On a broader scope, it is relevant in the sense that we should acknowledge these post-war period precast concrete facades. These type of façades are physical evidence of the ways we lived and built back then. It is our culture cast in stone. Similar to how baroque churches stood symbol for the renaissance and prosperity, the precast concrete façade stands symbol for the 'Wederopbouw' period and technology in construction.

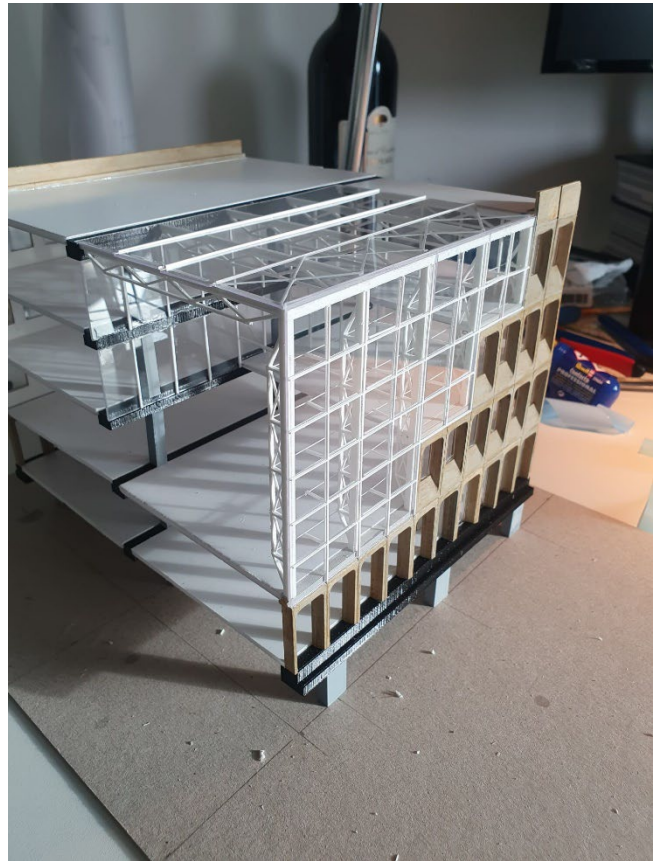
Obstacles on the way

Heritage as a graduation studio has been a challenge for me, as I was new to this field when I first started in September 2021. During my studies, I never had a project deal with heritage in any way. This led me to think of heritage as something that is untouchable and must be preserved at all costs. This position on heritage changed over the year. Instead, I took my approach to redesign in heritage more flexible, and designed the other way around by starting with the needs of that space, test a concept, and then look for ways to interfere as little as possible with the important values.

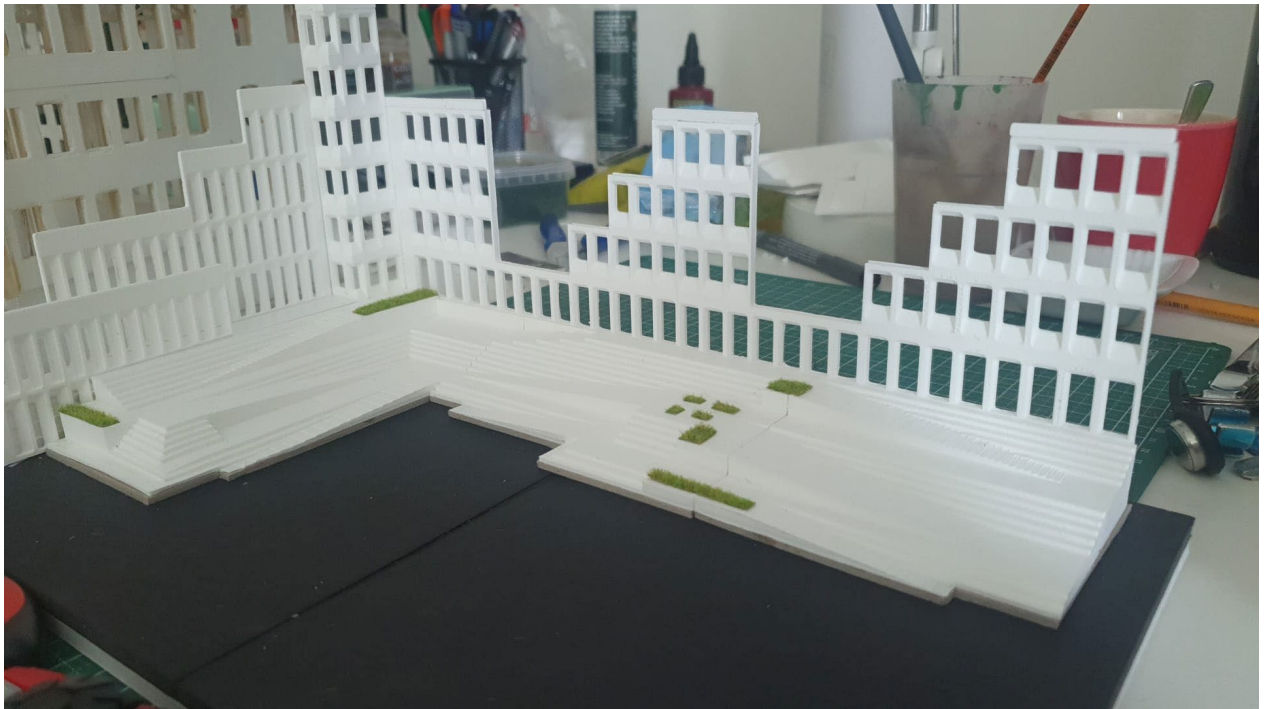
However, these design interventions were often made out of a user perspective, drawing away my attention from the building physics. Early concepts removed loadbearing façade elements together connected floors to create a more spacious and accessible central space. This would lead to conflicts with the absorption of lateral forces. A thorough understanding of the building technology was necessary before intervening on this façade, resulting in a retake of my P2. Only after the building analysis was finished, every step did not feel like two steps back anymore. The result of the building analysis meant that I could continue with my concept of creating an atrium in multiple parts of the 1980 extension. By removing precast façade panels, including the floors spanning to the façade, a 10m by 10m void was created. Because I wanted the façade to be transparent and welcoming, I went for a curtain wall with a grid that fit the rhythm of the façade. This intervention would leave three transparent parts in the façade, which gave me the idea of my working title 'Storming the Castle', as the new shape of the precast concrete façade resembles the ruins of castle (that was stormed).

Benefits of my graduation year

I found the quality standard of this graduation year higher than expected. I was confident in my visualization skills as I successfully passed the MSC1 and MSC2, but due to doubts about my research topic, I was lacking direction at the start of this year. To break this negative spiral, I decided to work on products I would require later on. However, I was lacking in visualization skills to properly show my analysis at this stage. As a result, I dove into tutorials to learn these skills I thought were necessary, leading to products such as 3d sections, maps and models. I would have been unable to make any of these products if I had not changed my mindset at the start of the year. As a result, I found great joy in especially the later design phases of my project, as this is where my model making experience would be tested. I decided to make my models with the help of a 3D-printer, as the three-dimensional shape of the precast concrete elements in the 1980 extension were unable to make with a laser cut in wooden plate.



The first model I made with my new skillset, showing the design intervention in the façade (scale 1:100)



The second model I made, showing the park in between the buildings (1:200)