P5 – Reflection

Transforming the Raamweg 47 in The Hague
to a hybrid building

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03. Reflection of the product

3.1 Product description
Within the R-MIT studio a research is being developed in the transformation of the former Europol office at the Raamweg 47 in The Hague (fig 1). This building, Huize Katwijk, was originally built as Roman-Catholic boarding school in 1928. In World War II the Germans occupied the building and added a Bunker and Anti-tankwall to the ensemble. These structures remain on site today and reminds us of the German occupation. After the war, the Dutch police department remained in the building, followed by the CRI (rijksrecherche) and Europol. Due to these different users the building tells numerous historical stories. These stories represent social, political and technical developments of the past century. Since this creates a higher value to the building, these stories must be preserved and visible for future users.

The concept at the beginning of this project was to develop a multi-functional building in and around the current building. After some research, I decided to transform this concept to a hybrid building, as I am of the opinion that this type of building has the greatest chance of surviving the current difficult vacancy era. To ensure a proper understanding of what a hybrid building entails, its definition is revisited: “in addition to its mixed-use gene, it turns against the combination of the usual programs. The hybrid scheme proposes crossed fertilisation environments and above all, the building is now as constant active environment” (S. Holl, 2011, p.43-45). The research question has been formulated as follows:
To which extent can the historical layers of the Raamweg 47 in The Hague be of added value in its transformation to a hybrid building?

The building program consists of an expat hotel, a café/restaurant and a health centre (fig 2). All functions have their own separate entrance and can exist independently. By means of a newly introduced hybrid axes/corridor, the possibility for interaction is created.

The largest part of the program, the hotel, is placed in the oldest part of the building. It consists of 37 long-stay rooms and 27 short-stay rooms. To expand the hotel’s flexibility and react to the supply and demand of hotel rooms, 16 flex-stay rooms have been added. The restaurant and café are placed in and around the bunker. A connection exists with the newly introduced park in front of the building, designed in a former masterplan together with Stefan Kok and Miyushi van Hijfte. By sawing away parts of the bunker, a functional program is created, while the monolith structure remains visible from within the space’s interior. The health centre is placed on the north-eastern side (the backside). The entrance and the fitness centre are placed on the ground floor in the old section of the building, while in a new volume, the wet and warm program (wellness centre and therapeutic bath) is placed. This has been done to prevent building technological problems with the old section. A Japanese Zen garden is draped over this warm program to create an extra thermal layer and to increase the insulation of the program (fig.3).
The old building consists of a carré and two wings. These volumes primarily fulfill the roles affiliated with the hotel. The former courtyard inside the carré is transformed to an atrium for the hotel lobby, thereby forming the building's new centre point (fig. 4). The former outer facades of the courtyard come to form the interior of this scene. A flat glass roof covers the lobby. The load of the roof is carried by large laminated larch trusses and 4 x 1cm laminated glass girders in between. A stairwell is added in the east corner to provide access to the floors above and to create a sculptural focus point in the lobby. Each step is slightly rotated so that each stair beam enjoys a different angle. When walking up or down the sculptural stairs, the visitor views and experiences the space from different angles. On top of the roof of one of the corridors around the atrium, a new corridor is placed. This corridor, part of the atrium, creates a vertical relationship between the levels and extra activity in the atrium.

3.2 Research question and main product aspects

In reflecting upon my product, I would like to start by addressing answers (why and how) yielded by the research question.

The transformation consists of several additions; each addition is in some way in dialogue with the old building. For instance: the bunker, which currently constitutes a monolith massive concrete block, becomes a functional space by the sawing away of volumes. The effect of the bunker perseveres, in that its thick walls (2,0m) are visible in the texture of cut concrete in the interior. The former small rooms of the bunker remain intact as excavation lines in the floor. History is tangible in space and creates a unique atmosphere in the restaurant. The roof connecting the bunker to the old building consists of a shed roof; one section is closed and blocks direct sunlight, while the other side is open and establishes a view of the old building’s façade. The former outer brick façades come to form the view of the interior. These examples, in combination with the contrasting materials, stress the dialogue between new and old. The old becomes a décor in the new spaces.

The hybrid building aspect in the research question relates to the multifunctional unorthodox program arrangement which, due to this combination, creates an added value to the whole. A hybrid route/corridor is implemented in order to connect the three programs. To create cross fertilization on this route, the corridor is upgraded with

Fig 4: Atrium section, centre point building
additional functions, such as shops and workspaces. This hybrid route surpasses the old and the new, once again stressing the dialogue between the two.

The monolith brick structure, with its fine detailed ornament on the outer facades, is one of the old building’s main characteristics. The uninsulated walls cause a substantial loss of heat, thereby confirming the necessity of insulation. To preserve building characteristics, the insulation is added on the inside (fig 5).

Within the Hotel lobby, I have chosen to emphasize the visitor’s experience of the original building. As such, a transparent detailed atrium roof is applied, which allows for the natural sunlight to illuminate the old. I have attempted to maintain the original qualities as much as possible, so that the original experience is maintained. The small additions, such as the height of the floor and the corridor/vide, are in balance with the old.

3.3 Coherence between interventions
The multiple additions and interventions share characteristics in terms of material and shape, allowing them to clearly form a ‘family’. To achieve a coherent transformation, the interventions are designed in a common contemporary architectural style.

Where the general façade, atrium and its surrounding rooms have been designed in detail (1/5), the other additions have been designed more globally, on a 1/100 scale. Beyond the scope of this graduation project, these additions could be elaborated on.

In 1928, Petrus Gerardus Buskens designed the Raamweg 47 on the basis of several architectural ideas and concepts, one of which was to embed the building into its landscape through the application of plasticity. This concept is modernized in this transformation project, and has led to the start of the architectural ‘family’ described above. The roofs of the added volumes attached to the old building have resurrected up from the ground and consist of one unceasingly connected surface. The green roofs, in combination with research in the folded forms of Onix architects (NL) and a reference to the shed shapes of the old building, have led to the establishment of the architectural shapes.

3.4 Material research
The concept of materials additionally relates to the embedment of the building within its landscape. The urban context of the Raamweg consists primarily of a green environment; therefore, pure natural materials have been used.

The research to the applied materials was conducted differently than before. The majority of the material studies of previous projects have been carried out on the internet. Most
suppliers of materials have websites that contain detailed information about the types of materials they offer. The reality is, however, that suppliers tend to glamorize their products and make them sound better than they are. In addition, it is often difficult to filter the right information. As such, I decided to call the suppliers. After several phone calls and email conversations, I ended up learning valuable and important properties of materials and whether or not they are truly sustainable. For instance: I was initially interested in creating a flat roof that would be partially covered by gravel. After talking with the Rhenofol supplier (who supply the pvc layer underneath the gravel), it became clear that this natural product is in fact not as sustainable as I believed it to be. When reusing the gravel it must be washed before it can be reused, additionally the heavy weighing gravel requires the building structure to be oversized and a heavy truck and crane are required for the gravel’s transportation. Having discovered this, I decided to adhere to my initial cradle 2 cradle certified zinc roof. Another interesting lesson was learned when speaking with various wood suppliers (for the lamellae in front of the façade). Wim Geurts from geurtshout.com clarified that the desired sizes of the lamellae could never be realised with Robinia wood without longitudinal connections (vingerlas). This will result in an undesired effect of the lamella. I told him about my focus on sustainable materials, after which he revealed to me his ‘secret’ supplier in Rotterdam (considering I am not his competitor within the wood industry). I paid a visit to this rough sawmill (Simon BV) in Rotterdam, who trade primarily in recycled bollards and are the suppliers of the applied wood for the lamellae.

The various phone calls and visits have caused my material concept to be altered, and has yielded the current desired formation. Through these contacts, I became more enriched with knowledge than if I had solely consulted the internet. This increased knowledge, in addition to having come to possess several tangible samples, has convinced me of the effectiveness of this technique, and I will be sure to use it again in future projects.

04. Reflection of the process

4.1 Process description

Prior to the design, research was conducted on several scales. Analysis of the urban context and a self-devised concept have led to the development of a masterplan. Together with the architectural and building technological analyses, this yielded the initial design preconditions. Combining the most highly marked values in the value assessment with the concept of hybridity and respect for the original building has resulted in a preliminary design. Reflecting back on this phase of the graduation project, I believe that the proposed urban masterplan is likely to be unfeasible: the costs of the project would be too high, despite it being of much value to the city of The Hague. As such, the masterplan constitutes a proposal; where the transformation project should be able to adapt to it, it should simultaneously accord with the current urban context.
As the majority of the research was conducted during the P1 & P2 phases of the graduation project, futile ground was established for the development of the design project. Considering that the historical layering of the building contains the most important values, this, in combination with the concept of a hybrid program and route, formed the starting point of the design. After my P2, I started testing and adjusting the design on the basis of reference research and case studies related to several design issues. The ideas yielded by this research were investigated by sketching, physical modelling and computer modelling. Considering that I started developing a 3D-model relatively early in the graduation project, I was able to develop a fully detailed model that greatly aided me during the design process. By drawing on sketching paper held over screenshots of the 3D model, adjustments could be investigated prior to adjusting the 3D model.

4.2 Process reflection

I have one mere remark about the method and process used in the studio, with regard to the first few weeks of analysis. Analysis from large scale to smaller scale (Urban→Architecture→BT) is logical and effective. Unfortunately, the building to be transformed (Raamweg 47) was selected only after the urban analysis. Since my urban analysis dealt with the vacancy around the central station area, I was compelled to redo a large section of the urban analysis. This yielded a poorly organised and time-consuming analysis in the midst of a tight schedule.

The documentation of this graduation project was better than for projects conducted in the past. My computer made a daily back-up of all the files edited on drop-box; once a week, a full back-up was run. Besides the digital back-up, I created a backup of physical produced work each Friday. Documentation of all the work produced per week has been securely saved in a number of binders. I commenced with this documentation directly following the P1 phase. As a result, the documentation of my P1 is less structured than the work produced thereafter. This method is one I will be sure to employ in future projects. It prevents the reprinting of drawings and facilitates the verification and reflection of earlier decisions. Given that my computer was nearly stolen during the Christmas holidays, this method provided motivation.

Given that all spaces within the building are of various sizes, the development of the plan initially did not commence with a generic solution. Following considerable alterations in the plans and 3D model, I came to realise that despite the building’s complexity, a generic solution is applicable in the most situations. For instance: in terms of placement of hotel rooms, I initially placed as many rooms as possible between the existing walls. Due to the building’s transformation over the years, and the fact that the walls diving the rooms are not load-bearing, this method resulted in an unequal distribution of rooms per floor. This, in turn, created problems in terms of vertical installation ducts. The solution to this was simple, i.e.: find a generic solution for all floors. This eventually resulted in a funnel in terms of room size: the concept of placing equally-sized apartments on top of each other, and larger apartment on the upper floor.
4.3 Lesson learned

The writing and research related to the position paper has proven a tough process. It constitutes a new way of dealing with the intentions of the design product, process and related epistemes. Considering that this is my first transformation project, the research related to the position paper was particularly helpful for familiarising myself within the field of R-MIT. It created futile ground for the design.

In reviewing my position paper, I found H.J. Henket’s quote to be highly applicable to my standpoint on refurbishment: “there is very little room to manoeuvre both in spatial and in a material sense to suit the new.” It may have been wise to take these words into account to a greater extent. One of my tutor’s feedback comments on my P3 was the following: “the building and the design is complex enough, don’t make it more complex”. I think these words neatly and justly characterize my design approach. For the most part, I tend to find an overly complex solution for a design issue, as the obvious and easy solution often seems boring. Although I tended to end up with the most sober option. For instance: the atrium roof originally had the shape of a shed and a pyramid, I have chosen a flat roof in my redesign. This originates from the fact that parts of the four surrounding walls have a different height, and that three of the four connecting roofs are sloped. This is potentially one of the most important lessons I have learned during this design process. Prior to this project, I have gained experience solely with the design of new buildings, during which one is able to create new concepts and adjust the design at any point. Within R-MIT, one must deal with an existing building that limits one’s opportunities for free manoeuvre. At the beginning of the project, I presumed that transforming an existing building would be demanding particularly in the first semester, and that once the building is well ‘understood’, it would become a more easy task. Experience has proven the opposite to be true.

My main advice to future R-MIT students – tasked with the transformation of an existing building – would be to not consider the existing building as being ‘holy’ or untouchable. One must aim to search for generic solutions. Aim to maintain primarily the highly valuable aspects of the building and do not fear to apply your own concepts. Do not let the latter be threatened by walls that may seem like obstacles. Additionally, aim to design ‘soberly’ when dealing with a fine detailed and ornamented building like the Raamweg 47.