

P5 Reflection Paper
Hembrug, a culinary centre



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'Revitalising Heritage'
Heritage & Architecture

Introduction

The former military production terrain Hembrug situated in Zaandam is in decline since its closure in 2003. The terrain, with over more than 100 buildings, of which 50 monuments, is in need of a new function. The assignment of the graduation project is to focus on a part of the terrain and revitalise it with a new function. With the increasing shortage of chefs and especially specialised chefs, I want to transform part of the terrain into a culinary school. This school will not only focus on educating freelance chefs to become specialised chefs, but will also help to reduce the loneliness of elderly. The students prepare meals during their classes which can be served to the elderly living nearby. Food brings people together and the collaboration of students and elderly is proven to be successful in decreasing loneliness.¹ This multigenerational learning contributes to making Hembrug a culinary centre in which students can learn to become a chef, residents can grow their own food, children can learn how food is produced and visitors can taste the culinary heritage of Zaandam.

The reflection paper discusses the development of my graduation project and looks into my position as a heritage student and as a future architect, and discusses the relation with the Master Architecture within the faculty of Architecture, Urbanism and Building Sciences. It elaborates on the research and design process, including the used research methods and approach, and the influence of literature. It concludes by reflecting on the project's position in the wider social, professional and scientific framework, as it checks the transferability of the project's results.

¹ Fokkema, T., van Tilburg, T. (2006). *Aanpak van eenzaamheid: Helpt het? Een vergelijkend effect- en procesevaluatieonderzoek naar interventies ter voorkoming en vermindering van eenzaamheid onder ouderen*. Den Haag: Nederlands Interdisciplinair Demografisch Instituut

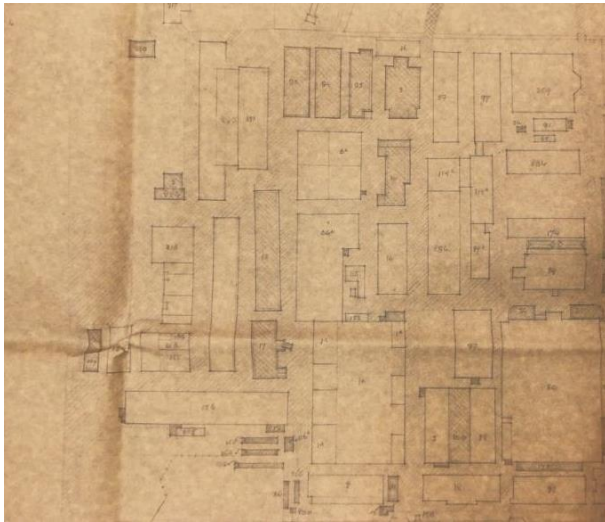


Position

As a future architect, I think it is our job not to build big exuberant new buildings, but to look at what a place needs; what the user needs and then decide whether a new building is necessary or that an existing one can do the job with some adjustments. We live in a waste economy, in which we replace a product with a new one even before the end of its lifespan is reached. We see this behavior in our building stock as well. When a building no longer fulfills the needs of the user, it is abandoned or even demolished for a new one. Not only is this behavior changing cities, as some parts of the city are left to deteriorate and become unpleasant places for nearby residents, but it affects our ecological footprint as well. By demolishing and throwing away the old and rebuilding with new materials, we deplete our resources and aggravate climate change. Therefore, it is our task to use what is already there and to upgrade it with local materials in a way that it is ecologically in balance. Having an ecological balance, or being eco-friendly, means that environment, people, animals, soil, water and light should all be taken into account when designing new or remodeling the old. This brings a certain kind of aesthetics as the old and the new engage in a conversation. The French architects Lacaton and Vassal describe how this kind of aesthetics comes into being: "Aesthetics result from the process. If thinking, the participation, the generosity, the ambition, and the freedom are maximized, the aesthetics, the beauty, will be there in the end."² I believe this to be true, as it is the result of the intentions, the motifs of the designer that adds quality to the building.

As architecture students we are taught to fulfill the demands of an assignment, but I think, in the beginning, we have to question the assignment. Maybe it is better to do nothing, to leave the building as it is and to only do some maintenance work. This can be the result from ecological reasoning, as well as from historical, social or financial reasoning. As a Heritage & Architecture student I believe that

² Lacaton, A., Vassal, J.P. (2015). *The Incidents; Freedom of use*. Cambridge: Harvard University Graduate School of Design



the narrative of a building or site and the social relevance of it should be preserved. The battered buildings of the Hembrug terrain reveal a story of production and resilience; of persevering and continuing the production during war. This deterioration, “this imperfection, is beauty.”³ Similarly, we consider the wrinkles on the face of an old man as beauty, as they reveal the history of his life; his narrative.

Hembrug within Architecture and the MSc AUBS

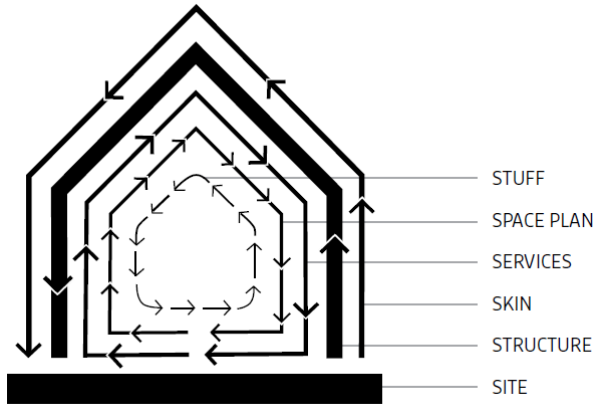
In the BSc and MSc of Architecture, a student takes on the role of designer; often as a designer of new buildings. This approach differs from the approach of Heritage and Architecture students. Every building is designed for a specific purpose; once the original function is ending, it is often demolished or abandoned. Heritage and Architecture students make a transformation to a new function feasible by doing interventions; they revitalise the building. When it comes to monuments, to maintain the vitality of a building, interventions are evident. *“There is nothing as changeable as a monument”*.⁴ With a desire for authenticity, innovations lie in the programming and the infill of the space. To revitalise a building one should focus on: *“sensitivity, kindness, attention. An attention paid to people, users, structures, trees, paved soils, bugs; to everything that already exists and that has been allowed so far to host, to guide, to charm.”*²

Research and design

Research and design are two topics which cannot be seen separately from one another. A designer will have to do research in advance and a researcher will have to design his research. I designed my research in a way, so that I could understand the narrative and social history of the site. This included visiting archives, to find old maps,

³ Eek, P.H. on Strijp R. in Meurs, P., Steenhuis, M. (2011). *Reuse, Redevelop and Design*. Rotterdam: NAI Publishers

⁴ Meurs, P., Steenhuis, M. (2011). *Reuse, Redevelop and Design*. Rotterdam: NAI Publishers



floor plans, pictures and letters as well as talking to former employees. By focussing on the context during the research, I was able to grasp the historical setting of the site with its history. By doing so, the uniqueness of a site can be discovered. I noticed that by studying the context I became more aware of the qualities of the site. This helped me to make certain design decisions, such as keeping the hierarchical North-South orientation, and these decisions, again, led to new research questions. This research and design interplay is not only found in architecture, but in every sector; even in the culinary sector. The chef designs a dish by doing research on the ingredients or cooking method. If the dish isn't as tasty as he or she likes to see it, than further research needs to be done.

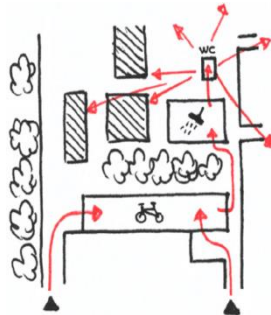
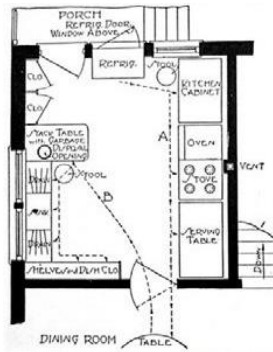
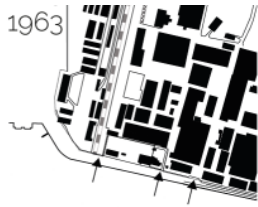
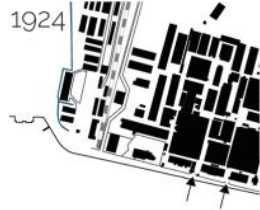
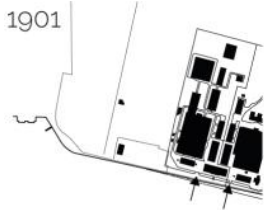
Research method and approach

The graduation project was divided into a research phase and a designing phase. In the research phase we – the whole group – analysed the context of Hembrug and the buildings on it, in order to find the qualities of the terrain and value them. Later on in the research phase, we valued these qualities using the Value Matrix. This matrix is developed by the Heritage and Architecture department, based on the matrix and S-layers of Brand and Riegl.⁵ For the analysis, I chose to use two approaches: a typological one and a social one. The typological approach focused on defining the building types, with consideration of context, history and culture.⁶ The social approach focused on studying the action, e.g. movements of the employees.⁷ By using these approaches I was able to retrace aspects from the past which are no longer visible in the present.

⁵ Kuipers, M., de Jonge, W. (2017). *Designing from Heritage*. Delft: TU Delft – Heritage and architecture

⁶ Jacoby, S. (2015). Typal and Typical Reasoning: a Diagrammatic Practice of Architecture. *The Journal of Architecture* 20(6) London: Architectural Association School of Architecture

⁷ Berkers, M. *Praxeology, Investigating Social/Spatial Practices* [Lecture]. Delft: Faculty of Architecture and the Built environment



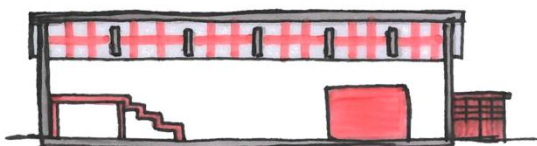
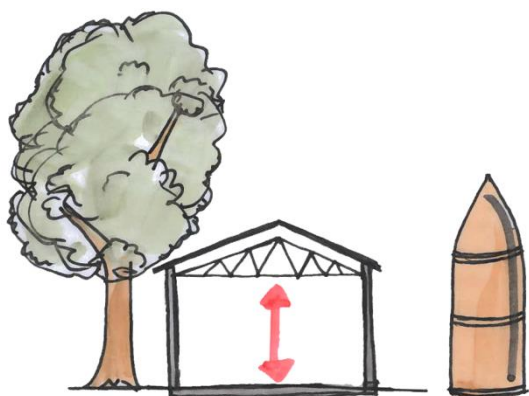
Groat describes in his book *Architectural Research Methods* that “*Investigating the ‘old’ and the ‘new’ requires the researcher to use several methods in order to obtain evidence from a moment in time, which is not his or hers.*”⁸ By studying maps I was able to get an overview of when which building was built and when which one was demolished. This information was put into a chrono-map, which helped us to display the layers of time of the site. This revealed that the present green lawns were once built with production buildings and washing- and storage halls.

By implementing a social approach I was able to understand how the employees would have moved around the production terrain. Christine Frederick observed how women moved around in the kitchen in order to make the household work more efficient. She drew these movements into floor plans.⁹ Similar to her approach, I made a drawing which showed the employees’ movements from building to building. As a result, I became aware of the interrelationship between the buildings. I valued this highly and preserved this in my design proposal.

Along with visiting the Hembrug terrain, I visited a culinary school in The Hague as well. This provided valuable information to check whether my design proposal was in line with the needs of actual students. One can find a lot of information on the internet, but actually visiting a culinary school gives the benefit of experiencing it in a sensory way. The smell, heat and sound of a culinary school should be part of my design and can only be understood by doing on-site observations. After my visit I realised that the aspects of ventilation, acoustics and making a clear organisation within my floor plans needed extra attention.

⁸ Groat, L., Wang, D. (2013). *Architectural Research Methods*. Hoboken: John Wiley & Sons Inc

⁹ Berkers, M. *Praxeology, Investigating Social/Spatial Practices* [Lecture]. Delft: Faculty of Architecture and the Built environment



Furthermore, I investigated how food and architecture are related. Good food brings people together, so does good architecture. If the architectural setting is right strangers will connect, but if it's not, these interactions won't happen. By giving the users space and therefore freedom to use the space as they like, meet ups can take place. The (urban) design of my culinary school contributes to making these connections, through food, gardening and routing. As mentioned above, connections between elderly and students can decrease loneliness, so it is important that these connections will happen.

Design and literature

In the beginning of the graduation project, I worked quit intuitively and found it hard to formulate why I made certain design decisions. For the MSc 1 and 2 I wasn't able to choose the Heritage & Architecture track, due to the limited spots available, so I wasn't familiar with the terms and positions applicable to heritage buildings. By reading several books on designing with heritage, light, pragmatism and spatiality, I was better able to formulate my interests and my position as a Heritage & Architecture student and as a future architect. For instance, the book *The Wandering Maker* taught me that when a student becomes aware of his position towards design and develops his design motifs and his own style, an authentic product can be produced.¹⁰ This authenticity was lacking with the first P4 presentation as I was struggling to formulate my position and motifs. My favourite quote of the book is: *"By framing the personal motifs and choosing his own path, the designer is able to give his quest focus. That's what determines the designer's ultimate position and gives the design process and the result a personal 'flavour'."*¹⁰ The reason why I like it is quite ironically. With the P4 evaluation it was said that my personal 'flavour' was missing, so when I read this book afterwards I only wished that I had read the book before. It

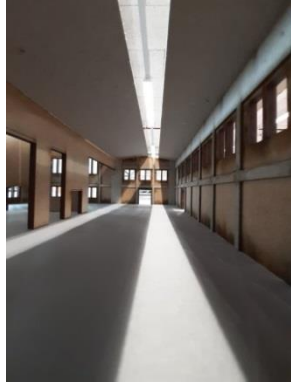
¹⁰ Spaan, M. (2019). *The Wandering Maker*. Amsterdam: Architectura & Natura



would have helped me to prioritise developing my motifs rather than working on the project's result.

By looking into pragmatic architects, I became aware of how they conceive space and how they create quality with their pragmatic approach. I read a book on the manifesto of the architects Lacaton & Vassal and was intrigued by their approach and design position. Their opinion is to never demolish, to never undo, but to strengthen the balance of existing urban organisations.² A project that caught my attention was the FRAC Nord-pas de Calais in Dunkirk as their vision, tender and compassionate, is similar to my vision for the Heat Treatment building. Their assignment was to fill the last remaining hangar in the former big industrial harbour area with an art centre. The hangar was used to repair big boats in the past. The building was preserved because of its image; for what it represented, but Lacaton and Vassal also valued the inside of the building. They said: *"We wanted to think about the inside, because the energy had been inside. Inside had been the work, the people. Inside is where the capacity was. And it was strange to be asked to fill this space with a new architecture, with new floors."*¹¹ This vision is in line with my design motif, as I don't want to fill the Heat Treatment building with floors and walls and thus losing its spaciousness. This spaciousness, this height, refers to the past; to the production and the employees of Hembrug. So, the strategy is to use what is already there, *"not in a conservative way but rather as an opportunity for continuance, which means looking ahead, moving forward."*¹¹ By upgrading, the decay will stop and a second lifecycle will start. In the terminology of reduce, reuse, recycle, the building is reused again as it is maintained, adapted and its lifespan extended. Associated strategies are maintenance, conversion, infill, renovation and material recycling. For the bicycle shed the strategy of Gestalt recycling was used as the former appearance of the demolished forgery building was brought back with new materials.

¹¹ Petzet, M., Heilmeyer, F. (2012). *Reduce, Reuse, Recycle*. Ostfildern: Hatje Cantz Verlag

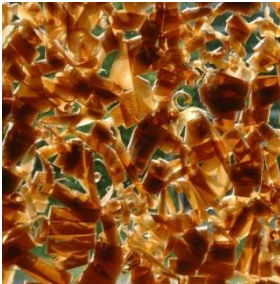


Light

Life on earth depends on sunlight; for humans it regulates our biological clock and helps us to stay focused and energised.¹² Therefore, I think that daylight should be incorporated in the building's design in a way that it positively influences us physically. With daylight comes shadow, which can add quality to, and enrich the interior or exterior space. It can reinforce or soften a space and it influences our experience of space and time. *"Space is created in time. Working with light and shadow makes it possible to create spaces that exist for no longer than a second."*¹⁰ To test how natural light and shadow influence the interior space of the Heat Treatment building, I made several scale models. I used models because the aspect of light and shadow cannot be understood by making drawings or renders. The first model studied the amount of sunlight coming through different sized roof openings, as I was wondering whether I wanted to bring back the former skylights. The second model studied how the interior space and atmosphere would change during the day. I chose to test it with the original sized skylights.

After the first P4 I changed my roof design, as it was not in line with my heritage vision and design approach. I revisited the building and realised that the abundant light and the shadows of the beams and trusses give the atmosphere its charm. Therefore, I decided to preserve this quality and to design a new roof that enhances this interplay between light and shadow. I was inspired by the Christ Pavilion in Volkenroda, Germany, as the passage from the cloister to the church is surrounded by double glazed panels with small objects trapped in between. The objects' unexpected setting creates a surreal atmosphere with different colours and patterns on the floor. In the third model, I tried to incorporate this pattern play and tested different roof designs against different sun angles and lighting conditions during the day. I was surprised by how well the model per-

¹² Edwards, L., Torcellini, P. (2002). *A Literature Review of the Effects of Natural Light on Building Occupants*. Golden: National Renewable Energy Laboratory



formed when doing the solar studies; it is almost as if a photograph is taken of the actual building with sunlight coming in. From the different versions I favoured the version with the integrated solar cells in the glass the most. In this way, the solar cells create a pattern on the floor and walls that moves during the day while letting in an abundant amount of daylight.

Ethical issues and dilemmas

The buildings on the Hembrug terrain have no insulation besides air in the cavity wall and are draughty. They do not meet the building regulations for housing, let alone for education. Schools require a carefully designed ventilation system with a proper insulation value. Knowing this, I encountered the dilemma of either changing the program or reevaluating some cultural values in order to ensure a pleasant indoor climate. It was without saying, not an option to compromise on the students' welfare. I chose to look at the cultural values and see which one(s) can make way for a more pleasant indoor environment. For instance, the existing floor of the washing hall shows the history and the organisation of the space, but it is significantly damaged. The floor isn't suited to place cooking islands on it, with regard to the structure or hygiene. Therefore, I chose to demolish the existing floor and replace it with a new one. This new floor will have a reference to the red floor tiles on which the former washing basins were placed. By doing this, I created an intentional commemorative intervention, which adds a new value layer to the building.

Social, professional and scientific framework

This project explored the possibilities of accommodating education in heritage buildings. School institutions rarely choose to reuse existing buildings that had a non-educational function in the past. By redeveloping Campus South into a culinary school I wanted to show that reusing buildings for educational purposes is possible. This project focused on the relation between a culinary school and nearby elderly housing. The school will work together with the elderly by sharing knowledge and prepared meals in order to tackle the lone-

Do you know me?
Do you know who I am?
I was once surrounded by water.
A peninsula, called the Hem

I was built to make weapons.
Trained to be lethal with one shot.
I worked with heavy machines,
And it was always so hot.

But can I be honest?
It was never my intention,
To kill with my creations.
I did it for your protection.

I served a long time.
Now I'm injured and old
Left alone to deteriorate.
My work put on hold.

So will you help me?
And take over my task.
Care for my remains.
That's all I want to ask.

Make me revive again,
And give me my peace.
Take care of my scars.
It won't be with ease.

I can picture a new me.
Bring a smile on your face.
I'll show you around the terrain,
Which is a green and open space.

Still, I want to protect.
Like I always did.
Maybe not the army guys,
But someone with small kids.

I will teach these little fellows.
On the history of my life.
Starting at the beginning,
With the production of the M95.

So now that you know me.
Can you see that I am more?
I might be an old man.
But I am more driven than before.

liness and isolation of elderly. The elderly people will have a shared greenhouse on the terrain in which they can connect with other elderly and students. They can gather in the expedition building to play board games and have a coffee or lunch, prepared by the students. The greenhouse will also be used for workshops to teach children how food is produced, as a lot of them nowadays don't know how food is produced. The elderly can give these workshops and with this intergenerational learning both parties can benefit from each other. The elderly, for example, become more mobile and happier.¹³ In a certain way, the project revitalises the Hembrug terrain as well as the elderly living nearby. This feels like an answer to the poem I wrote for the Etude, in which we had to express our impressions of the terrain.

When looking into the applications of the result in practice, it has to be financially assessed to determine if the project is viable. Architecturally and socially it is viable to reuse a heritage building for culinary educational purposes in combination with elderly housing.

¹³ Newman, S., Hatton-Yeo, A. (2008). Intergenerational learning and the contributions of older people. *Ageing horizons*, 8(10), 31-39



Conclusion

In the current waste economy, we have to stop demolishing building and start looking at what we have at hand to reduce our footprint. Being eco-friendly, means that environment, people, animals, soil, water and light should all be taken into account when remodeling the old. This brings a certain kind of aesthetics as the old and the new engage in a conversation. Aesthetics is the result of the intentions and the motifs of the designer. During the graduation project, I tried to define my position and motifs and tried to tackle the challenges corresponding with housing a culinary school in heritage buildings. The structural and climate technical challenges clashed with some of the cultural values. However, the students' welfare was the main focus point, so solutions were found to suit both the students as well as the history of the buildings. The feedback of my tutors helped me to find solutions for these challenges and encouraged me to research the technical aspects of a cooking school and all that it entails, such as acoustics, smell and heat. They also guided me in formulating my position in heritage and my position as a designer. I was too much focused on the result and the details of the design that I forgot to take a step back and reflect on what I had designed and why; to take on a position and ensure coherence throughout the whole project. Just as a chef has to put his character into his dish and show his creativity to get a Michelin star, an architect has to put his creativity and character into his design to make it a good design; a design with a personal touch.

Images

- Cover page Lorenzo, R., Manzano, O. (2012). The Wrinkles of the City, La Habana, Cuba. Retrieved from www.jr-art.net/projects/la-havane-cuba
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