Mental Health Center Hembrug
Revitalizing Hembrug, to revitalize society

Project Journal

Chair of Heritage and Architecture
Faculty of Architecture and the Built Environment
Delft University of Technology

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16-04-20
“We can always see the original soul through the eyes, the eyes are the only things that never change”
Dear reader,

This journal is a collection of my work and process that has been done during my graduation project ‘Mental Health Center Hembrug. It’s my personal diary, sketch, scrap and photo book. The highlights and all the ideas and roads that have been taken can be found in here. The book is designed as a travel journal with all the locations and events that have passed; not only in real life but also the destination my project went in my thoughts. I went crisscross throughout the Netherlands: Eindhoven, Maastricht, Tilburg, Utrecht and of course Amsterdam and Zaandam, did Pitches, workshops and presentations: P1, P2, P3, P2 ‘again’ until my P4 and saw imaginary destination: Hotel Restaurant-Bar Hembrug, Shopping Mall Hembrug and my final destination Mental Health Centre Hembrug.

I wish you a lot of reading pleasure and I hoop you can also enjoy the journey I took the past year.

Job van den Berg
My memory of Hembrug

- Forest
- Ruin with glass
- Big white building
- Sheds in the forest
- Restaurant
- Pipes
- Water
My impression of Hembrug was a lot different then the first time. The first time I used “abandoned” as a word to describe the area. This because it felt like nature had taken up the buildings again. The border between buildings and green space felt at some places faded. But this time it was winter and the trees were bare. My eye was much more led to the buildings instead of the trees. Therefore I used the word “contrast”, contrast between buildings and green and contrast between time of the year.
Section of Hembrug

Noordzeekanaal

Waterfront

Production buildings

Pipes construction

Sheds in the forest

The ‘Plofbos’

Workers housing

The Zaan
In redevelopments where the outcome is not clear yet, this incubator can give a perspective for the redevelopment. It shows the possibilities of the area and attracts other functions. These incubators are mostly temporary but they can also evolve and be part of the final redevelopment. The building works as a research object, a test case to help in the process of the redevelopment and give new insights and possibilities.

In some areas, it can be hard to see the final result of a redevelopment. People don’t actually know if the redeveloping will work and they are holding back. This incubator is the first building in the redevelopment and is an example for the further development. Other project developers use this example, and investors gain trust from this example and start redeveloping afterwards.

Most of the areas that have to be redeveloped are having trouble with a bad image and less activity. Public attracting incubators are independent of the area but can attract a certain group of people and let them become acquainted with the area. The building works as a magnet to other people, and more people leads to more activity, request and development.

Some areas have a strong historic value. With the transformation of a building that is characteristic for this history, it creates this historic notion and the importance of the building and the area. The building is an example for the whole area and even after the redevelopment is still has a strong effect on the people. The building highlights the importance and the meaning of the area and the.
**Strijp-S**

- Building feels as a wall because of the glass brick ratio.
- Old pipes work as a gate to enter the area.
- The pipes define an extra space between the building and the public space.
- No interaction on the ground floor.
- Split trees Trademark West 8.

**Ceramique**

- Park makes a connection with the Stadspark on the other side.
- Buildings of the same typology but different executions.
- The old wall is marking the edges of the terrain and creates a semi-public space.
- Total area is lifted to make parking spaces possible.
- Original ground level.
- Old workers houses.

- The Maas
- New Avenue
Visit to Hemburg
Ensemble characteristics

Space
What is a campus?

“The grounds and buildings of a university or college”

Latin (campus, campi)

1. campus
2. level field/surface
3. open space for battle/games
4. plain
5. scope
6. sea
Historical research on the infrastructure
First questions I had

1. What is the relationship between Campus North and the main axe?
2. How does Campus North work in a connection between the forest and the production area?
3. What is the influence of build or not build on the open square?
4. How does Campos North work as the new entrance of the area? (from back to front)
5. What was the production line and how did this relate with campus South?
6. How to keep the monumental value?
7. What to do with the construction? (Use or reuse)
Research methods workshop

“A Building is not a static object its a continuous process that flows”

A Building as a process

Landscape = Context

How can we as an architect interfere is this process?

How can we chance the landscape and influence the flow?
Axes

- Original border
- West border and main axis
- Main structure forest
- Old railroad
- Water structure
- North connection
- Polder structure
- Main structure campus north
- New monumental axis
Week 3.7
25-03

Borders

North Border

West Border

South Border

Organization

East Border
1:1000 map of the Site

59%  24%  7%  6%  3%  2%
Sound Pollution

- **Westerspoor-Zuid**
  - Sound pollution: 60 - 65 dB(A)

- **Achtersluispolder**
  - Sound pollution: 55 - 65 dB(A)

- **Westpoort**
  - Sound pollution of the N203 and N516:
    - 63 dB
  - 20 Ke-countour of Schiphol:
    - 50 dB
    - 51 dB
    - 52 dB
  - Sound pollution of Schiphol:
    - 55 - 65 dB(A)

- **Schiphol**
  - Sound pollution:
    - 55 - 65 dB(A)
    - 60 - 65 dB(A)

- **20 Ke-countour**
  - 63 dB

- Measurements:
  - 45 - 63 dB
  - 52 dB
  - 51 dB
  - 50 dB
## Cultural Value Matrix

<table>
<thead>
<tr>
<th>Cultural Value Matrix</th>
<th>Age value</th>
<th>Historical value</th>
<th>Non intended commemorative value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surrounding/setting</td>
<td><img src="image1" alt="Water structure" /></td>
<td><img src="image2" alt="Plofobs" /></td>
<td>The roads where the train tracks used to be</td>
</tr>
<tr>
<td>Site</td>
<td><img src="image3" alt="Monumental tree" /></td>
<td><img src="image4" alt="Axes of Campus North" /></td>
<td>Position Weapon Depot by demolition of 309</td>
</tr>
<tr>
<td>Skin (exterior)</td>
<td><img src="image5" alt="Typology of façade Weapon Depot" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Structure</td>
<td><img src="image6" alt="State of the art engineering" /></td>
<td><img src="image7" alt="Cranetack &amp; columns Machine Hall" /></td>
<td>Extruded crane as visual guide landmark</td>
</tr>
<tr>
<td>Space plan</td>
<td><img src="image8" alt="Lengthwise Machine Hall" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surfaces (interior)</td>
<td><img src="image9" alt="Floor tiles of Weapon Depot" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td><img src="image10" alt="Integrated ventilation Weapon Depot" /></td>
<td><img src="image11" alt="Hoist beams Weapon Depot" /></td>
<td>Extruded crane as visual guide landmark</td>
</tr>
<tr>
<td>Stuff</td>
<td><img src="image12" alt="Watchtower 217" /></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit of place</td>
<td><img src="image13" alt="Trees next to Machine Hall" /></td>
<td></td>
<td>Low Density</td>
</tr>
</tbody>
</table>
### Cultural Value Matrix

<table>
<thead>
<tr>
<th>Use value</th>
<th>Art value</th>
<th>Rarity value</th>
<th>Other value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking lot</td>
<td>Typologies</td>
<td>Hembrug as old military terrain</td>
<td>Connection to the main roads</td>
</tr>
<tr>
<td>Connectivity of buildings through public space</td>
<td>Axes road/ viewline to Weapon Depot</td>
<td>Ensemble on border of Hembrug</td>
<td>Stand-Alone Campus Structure</td>
</tr>
<tr>
<td>Assembly of the trusses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spatial freedom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skylight</td>
<td>Entrance hall Weapon Depot</td>
<td>Tiles Weapon Depot</td>
<td></td>
</tr>
<tr>
<td>Transport doors Weapon Depot</td>
<td>Extruded crane of Machine Hall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoist beams Weapon Depot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sliding doors Machine Hall</td>
<td>Lighting</td>
<td>Loading docks of Weapon Depot</td>
<td></td>
</tr>
</tbody>
</table>
## Personal Values

- **Approach to buildings**
- **Transparency, openness and relationship with the outside**
- **Open and flexible structure**
- **Typology as blocks in the field**
- **Connection to the forest**
- **Shared public spaces**
- **Interaction with the surroundings**
For me it's about the two faces of the site, on one hand the open campus structure: the freestanding buildings in the public space, orientated towards all directions, the repetitive patterns alongside all faces and the mix of typologies, which together form an uniform unity. On the other hand the forest, with his history and roots deep inside the past, gives the area its curious atmosphere. A roof of leaves penetrates the area and is meeting the open shared space in its core. It’s about the connection of those two worlds and how we as users are part in this. The forest was always a safe haven, a place to shelter and to protect yourself when the sky was falling, but nowadays it can watch over you when you are escaping for modern society and find yourself peace and happiness. To see all of this your eyes are going trough the buildings; light is falling on you, when your eyes are reaching trough the twigs. Sight Lines are racing past you and disappear between the trees in the horizon. All of this is lying in different time layers on the area and now a new layer is painted over the area but we can still see his original soul through his eyes, because they are the only things that never change.
Conclusion

By analysing all this information and relating it to the main question of this research “How did the functional logic of the Artillerie Inrichtingen influence the character Campus North has today? we can determine the following:

We can conclude that the structure that is still visible is directly related to the functional logic of the site. Characteristic objects, like the tower, Stelcon plates and the crane structure are designed as functional objects, but are nowadays important elements of the character of Campus North. The typography and the development of the area had not only visible traces like the water structure to drain land, but also in the subsurface where different soil composition can be found which resulted in different foundations of the buildings. The functional structure, related to the rational grid the area is developed on, are still present in the current situation. Because Campus North is placed on the former edge of the terrain, the different expansion periods of the terrain can still be recognized.

In the current situation Campus North consists mainly of large industrial buildings built in the third building phase. The appearance of those buildings is characterised by the production of weaponry and civilian machinery. The weapon depot in contrast, is built in the first building phase and distinguishes itself by its neo-renaissance military building style. Several buildings of the first and second building phase have been demolished and replaced for the larger manufacturing halls that were needed for the new production of heavy artillery and civilian machinery. Since this third building phase several buildings have been demolished that resulted in the low density of buildings and the large amount of open space the ensemble has nowadays.

The Weapon Depot has always had an important position in the Hembrug area. Since the change of its function from a depot to an office, it was used as the headquarters of the factory and as the location of the headquarters, Campus North was also of importance. Especially when the square in the heart of the Ensemble was created after the demolition of building 309 and the main entrance was changed from the south border to the north, Campus North became a landmark position.

For the Machine Hall we can conclude that the function of the building has been a strong influence for its appearance. The machine hall is a clear example of the change in production that followed after the third building phase as it is one of the largest buildings on the whole Hembrug site. The building has fallen into disrepair, but the size, construction and appearance of the building form still a clear reflection of the production of heavy civilian machinery tools.

All these findings contribute to answering our main question. In the future we would like to analyse what is the tolerance of change. By doing so we would like to see what the tolerance of change for adapting the campus is without losing its characteristic value that we attributed as being of higher value for cultural and historical significance.
Spring break, Throwback

Small road north of the foundation

East border near building 8

East border near foundation
West border near the big tree

North border near building 320

Road in front of building 320 near the construction

South border near building 8
First program for campus North

New Building
Old 0 m²
New 1500 m²

Demolishing of the foundation, new building of 15m by 30m with 3 floors

New building will be 4/5 apartments each floor around 100/125m²

Buildings 320
Old 3900 m²
New 3000 m²

Demolishing of the annex on the west and opening the building

Left part will be a public boulevard connection with the forest
Right part will be 7 shops of 240 m²

Buildings 8
Old 2300 m²
New 2300 m²

Nothing is demolished an additional service space is placed in the center of the first floor

Ground floor will be a hotel with rooms of around 20 rooms each 40 m²
First floor will be 2 big restaurants/bars/lounges of 500 m²
“The forest was always a safe haven, a place to shelter and to protect yourself when the sky was falling, but nowadays it can watch over you when you are escaping from modern society and find yourself peace and happiness”.

Society??
### Growth burn-out symptoms

- **2007**: 11.3%
- **2008**: 12.4%
- **2009**: 12.6%
- **2010**: 13.1%
- **2011**: 12.8%
- **2012**: 13.1%
- **2013**: 12.4%
- **2014**: 14.6%
- **2015**: 13.6%
- **2016**: 14.9%
- **2017**: 16.1%

### Mental health diseases

**Burn-out symptoms per municipality**

- **1. Almere**: 23.9%
- **2. Haarlem**: 23.2%
- **3. Amsterdam**: 23.1%
- **4. Haarlemmermeer**: 20%
- **5. Zaandam**: 18.6%
- **6. Groot Amsterdam**: 18.1%

### Average 17.3%
GGZ Nijmegen

Master-plan
- 15 ha
- 254 Patients

Treatment and patient building
- 3,200 m²
- 39 Patients

- Public vs Private
- Day vs Permanent
- Individual vs Group

Reception  Audio and visual room
Toilets     Group therapy rooms
Individual therapy rooms    Sporthal
Waiting rooms   Changing rooms
Livingrooms    Music room
Garden        Theater
Petting zoo    Costume room
Archery       Creative spaces
Log cabin     Storage rooms
Conference room Luchroom Offices
First sketches
I INTRODUCTION
Already at the start of the study in the bachelor research methods where provide by teachers and lecturers. Subconsciously the first methods like research by design where used in the formstudy courses, where the design was created by constantly reflecting on the models you made and use them as an input in the next model. Later, heuristic techniques like architectural mapping became part of the research. In most of the cases an architectural map, like for example a Nolli map, was made, which was analysed to find the essence. In my research and design process, I saw already at the end of my bachelor that my process not only a continuous interaction between analysing and designing was but also an interaction between concretizing and abstracting.

Some of the research methods provided by the lecturers were sometimes already subconsciously used in my research but because of the lectures I can now put those research methods in a framework. Especially the lectures of Klaske Havik on Spatial Narratives and Eireen Schreurs on Material Culture and Culture of Materials where interesting for my own research project. This has to do with the studio of Heritage where I am in. The studio differences itself from the others studio because there is already an existing situation, you are not only dealing with a location but also with its buildings. The location for this project is the former Artelerie Inrichtingen in the Hembrug area in Zaandam. Important for a heritage project is to address its cultural value and the elements, which ensure this value. As a tool to analyse this values the cultural value matrix is given to clarify all these values and to arrange all these values. One of the most important values for a heritage project is the historic value. In the lecture on Material Culture, Schreurs quoted Tim Ingold "An artefact is a materialisation of a thought" and in this quotation, two of the most important aspects of historic value are coughed.

The reason to grasp this cultural value of the site is to make an argued decision to preserve or demolished an element. What are the limitations of the design to preserve its cultural value? Important for this is to find the elements, which are containing the historic narrative, but this works also the other way around in a design. Not only in a way how a narrative can be materialist in a design but also in the way an investigated narrative can be materialized in a research. Because how do you show the value of a narrative? This interaction lead to the subject of this self-assessment on the research methods I used in the research on the Hembrug area in Zaandam. The main research question I asked myself is: How is in the research on the Hembrug an interaction used between narrative and materialisation to address the historic value? Tschumi already addresses this impotence, he says on this: "Architecture does not exist without drawing, in the same way that architecture does not exist without texts." I

In the first part the research methods will be discussed that are used in the research on Hembrug. The second part will be a reflecting on how other people used these methods in order to achieve their goal. In the last part my own research will be relate to this methods and how they are used.

II RESEARCH-METHODOLOGICAL DISCUSSION
It would not be peculiar that a Heritage related research mainly is focused on doing architectural historical research. Wang describes historical research as an interpretation of the historian's point of view and the output of this research is a narrative.2 According to Lucas a historical precedent can be used to substantiate present practice of architects. By understanding the past we can argue our present day actions. Especially focused on the historic value, research can clarify a decision of maintain or demolish an building or element.3 Because in heritage you are dealing with an existing context, this research is starting with this current situation so the base is a context led research. In this research we as a researcher have an important roll in the research on the historic value. Because the historic value has to do with the way in communicating a narrative, we are the receiver of this narrative, making it an emic research.

The way of researching in heritage is a four-step process.4 The first step is the chrono-mapping. In this phase the historical and current data is collected and mapped out in words, maps or diagrams. The reason behind it is to give insight in how the site evolved in its current state and what we can still see and trace back to the past. The second step is the value mapping. The goal of this value mapping is to give an overview and structure to organize all the values found during the chrono-mapping. As a tool you can use the cultural value matrix made by the department of Heritage and Architecture. There are more research tools like this one, for example the Burra Charter and the Nara Grid. The last one does have lot similarities with the cultural value matrix but is much more focused on conserving instead of designing.5 The third step is the Mapping Levels of Significance. Where in the Value Mapping it is about the qualitative research to address the values, it is in the Levels of Significance about the quantitative research on how important the values are and how they are arranged in relation to each other. The last step is to Defining Dilemmas. Because of some values are conflicting with the modern requirements and contemporary visions.

A way to organize these values is the division according to Riegls values. In his essay on Cultural values he sees the values as different lenses in which way you can look at the monuments. He argues already the similarities and differences between a historical and an artistic value. The most important difference is that the narrative that is behind the monument is brought to the viewer his conscious. This can be done with the use of the visual materialisation or a narrative inscription. Most of the time this is an interaction between both methods, which amplify each other.6 Value is an important aspect in the meaning of a building in its context. These landmarks, how Lynch is calling them, are determined for a major part by there historic value. He says: "Once a history, a sign, or a meaning attaches to an object, its value as a landmark rises." 8 It is even possible to give the building a not excising value, just by planting a narrative in the viewers conscious. An great example is the 'I am a monument' (fig 1) by Venturi in his Leaning from Las Vegas research.7 People are seeing value where they want to see value.

In more recent publications is often searched for an explanation of this historic value and how it can be found, addressed and visualized. Most of the time there is an overlap between historical and age value but the main differences is that the age value just has to do with time and that historical value has to do with event. Paul Drury defines the historical value with: "Value deriving from the ways in which past people, events and aspects of life can be connected through a place to the present".9 This indicates that the place or element has a connecting roll in communicating this history to the present people.
III RESEARCH-METHODOLOGICAL REFLECTION

One of the most challenging aspects is the method to show these historical values. Because how do you express values or even architecture in a narrative and how do you visualize a narrative? I focused on two different types of researcher and both have their own personal view on the use of a narrative and a material and the interaction between both.

Trachtenberg has written a book on architectural history and architectural monuments where he tries to reveal those historic buildings to the reader. He uses a combination of word and images. On the ‘word’ he says: “To describe the building a mastery of specialized vocabulary of architectural writing is needed.” For a non-native speaker like me this is much harder then a native speaker because it requires a very high level of vocabulary to describe architecture because in architecture it is much more about experience and feeling. To understand a building the images is for most people much easier to understand, but how do you capture an architectural monument in illustrations? He divided the image in two types, photographs and diagrams. Photographs are the most common method to understand a building, but in most photographs you lose a lot of important information and details, which are essential to show a building his value. Trachtenberg says: “Traditionally, architects have been deeply involved in the design and crafting of detail, which was a major means of architectural expression.” He even argues that a Greek temple or Renaissance facade can be seen as a giant intricate sculpture made entirely of detail. To show those details, which are the most important part to understand those values, he use a combination of detailed photographs and diagrams. In diagrams he shows the structure, space and proportions of the buildings. Tools he uses are the: plan, elevation, cross-section, the isometric projection and the perspective drawing. A thing he don’t address is the difference between the loss of information and the reduce of information. Because in most of the cases a picture or a sketch can also be seen as a lens or a filter which reduces the information to show the essence of a building and its value.

In words and buildings, Forty talks about the relationship between architecture and language and how words can be used to describe architecture. One of his aspects was the relationship between language and drawing. The conventional view of the process of architectures shows a chronological relation between drawing and language.

Idea → Drawing → Building → Experience → Language

In this case the language can be seen as a step in the process to evaluate the design but actually is language a tool tot use through the research and design process. Words are for example used to give the idea to the architect and are used to describe the plans to other stockholders. With the use of pictures and words you always have a kind of data loss of the original building, so the pictures and words could never replace the actual building. This problem you can also see in our research because we where not allowed to go in a building because of the asbestos. Despite that we had historical drawings, plans and pictures of the inside of the building we were missing a kind of experience and understanding of the building.

Because of the differences between using words or drawings an interaction of methods can help you in your design. A drawing is very exact; it can help you to be precise and concrete, and language is much more vague but this can help you to describe difficult elements like mood and atmosphere. To show differences a word can help much more then a drawing, because almost every word has its opposition, for example light and dark, and open and closed, but the opposite in a drawing is still the same expression of a drawing. Another feather of language is the use of metalanguage. We can use words to explain our words so we have the same interpretation of the word. Drawing on the other hand can have multiple interpretations by all the viewers. The effect of time and sequences does also differences in the methods, while the drawing is a one-moment shot, a sentences has a start and an end. Also experiencing a building it is not possible in one moment but it is a sequences of moving and looking. At last a drawing show much more then you can tell with words. To describe all the date of a plan in words you need much more then just one drawing. If you relate this to historic values the way of defining this value depends on the degree of concreteness. Values that have to do with the surroundings, site and spirit of place are much easier to express in words than in drawings. On the other hand, concrete materialized values such as skin or structure related, could easier be addressed with the use of pictures or drawings.

IV POSITIONING

At the start of my research I was mainly focussed on heuristic technics. Before we focused on the area we analysed case studies in order to create a toolbox of references for our own research. After the case studies we started with analysing he area. Because we didn’t know what we where looking for heuristic methods where a good start to grasp the location. I stared by mapping the location in sections and plans like a Nolli map. (fig 2) With the chrono-mapping it was a lot about collection rough (historical) data.

The lectures and the literature gave me a new interesting view on dealing with this data. The distinction between analysing a building with words and to give a narrative a materiality intrigued me. I used this in the research on the borders of the area. (fig 3) To use this method on the borders was really helpful because the borders have the problem that they are on the one hand very concrete, there is a line and that is the border, and on the other hand has the location of this line to do with the feeling and how you experience the border. This can be related on the differences Forty address between the use of words and drawings. After the boarders were analysed in drawings, the use of words was used to show the differences and to connect all the elements in an annalistic drawing. (fig 4)

This way of analysing is also used in the way of presenting the research. Firstly my personal narrative based on the research is materialized in the form of a creative expression. (fig 5) I combined make-up and architecture to give a materialized expression of my thoughts with my own face as the canvas for the design. After this ‘dressing’ a play with words is used to describe this idea in a narrative way. It was interesting to see that the drawing, without saying anything, brought up different ideas and interpretation by each person. None of these interpretations was wrong but they addressed different elements of the same concept.

With the use of this method, values, which are normally hard to explain in heritage because they have to do with feeling and experience, can be pointed out quite exact. A narrative can help a building or element to show its historical value and a historic narrative can be materialized in a detail or expression of the building. In heritage one of the key elements is to understand the meaning of a building or a place. If you can figure out what the story is behind the building you can trace this story back to the elements telling this story.

If I look back on the research question: How is in the research on the Hembrug an interaction used between narrative and materialisation to address the historic value? You can see that both methods are part of a heritage related research. Both are used is a complementary way and not supplementary. They are not telling both half of the story because, either the narrative is not understood or either the narrative has many interpretations. To understand the historic value a combination of word and the physic material is needed because the experience is an important part in the value determination. As I said in the beginning, for me research and design is a continuous process of concretizing and abstracting and with the use of narrative and materialisation you can contribute in this process.
Program

Entrée with desk two employees
Seats in entree
Toilets x2 (men, women, disabled)
Seats in the hall
4 creative rooms
6 living/relax rooms
Music room
Large sport hall
Small sport room
chancing rooms and showers
6 therapy/workshop rooms
Offices
1 on 1 rooms
Pet farm
Technical room
Theater room
Costume room

Privacy vs light

Glass
Week 4.7
03-06

Concept for the location

Orientation

Traffic

Infrastructure

Extra mass
Concept
Weapon depot

North-South orientations

Removing the concrete core

Rhythm and construction

See-through and daylight
Concept
Machine hall

Annexe and Windows

Typology and Symmetry

Wooden facade
Functional plan

Influence of the construction

Interaction with the rest of Hembrug
Weapon Depot

Urban plan
Site model
1:500
Week 1.1
02-09

Visit to De Hallen in Amsterdam
Workshop Detailing

West facade

East facade

Interior

Exterior
Week 1.2
09-09
Visit to Janskerkhofcomplex and LETTERENbibliotheek

Time layering
old window

Ventilation concept
Reinforcing construction
**GLASS**

**Value:** The buildings are orientated towards all directions with a repeating pattern and a grid.

**Problem:** The windows don’t meet the current requirements for insulation and the glass has to be replaced.

**Dilemma:** Replace, Raise, Re-use or Redesign?

**Questions**
- How to increase the connection between inside and outside?
- What to do with the steel window frames?
- How does the type of glass relate to privacy?
- How can the skylights be improved?
- How are the openings related to escape routes?
- How is the glass entrance connected to the façade on the horizontal external truss.

**Value:** The buildings are orientated towards all directions with a repeating pattern and a grid.

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- How to increase the connection between inside and outside?
- What to do with the steel window frames?
- How does the type of glass relate to privacy?
- How can the skylights be improved?
- How are the openings related to escape routes?
- How is the glass entrance connected to the façade on the horizontal external truss.

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**BRICK**

**Value:** The materiality of the buildings in the same style of bricks connects the buildings and creates, despite all the different types of typologies, unity in Hembrug.

**Problem:** The brick facades don’t meet the current requirements for insulation

**Dilemma:** Inside or Outside?

**Questions**
- How does the insulation of the bricks relate towards the function?
- What is the value of the interior brick?
- How can the climate system be used to decrease the insulation needs?
- How is the HWA integrated in the brick façade?

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**STEEL**

**Value:** The steel construction gives a spatial and historical value to the building.

**Problem:** The steel construction is not fire resistant and without the crane the horizontal truss is not carrying any loads and is only there for stability.

**Dilemma:** Useful or useless?

**Questions**
- What effect does the colour of the fire resistant paint have on the experience of the construction?
- How can the horizontal truss be part in the interior design of the building?
- How to connect the exterior and interior truss with a minimum cold bridge?
- How can the external horizontal truss be used to decrease the sun entry on the glass entrance façade?
**WOOD**

**Value:** The openness and freedom is a spatial quality and the natural materials create a peaceful environment between the rooms and create a contrast with the construction to emphasize this more.

**Problem:** There is lack of human scale in the experience of the space.

**Dilemma:** Height or too high?

**Questions**
- How to connect the steel construction and the wood?
- How do the shape, dimensions, directions, pattern and materialization of the wooden elements affect the experience of the space?
- How does the appearance of the wood affect the experience?
- How can wooden elements be used to translate structural urban elements in a building? (Building as a city)

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**GREEN**

**Value:** Nature is taking over the area and creates a pleasant climate and the forest is a natural backbone for the area.

**Problem:** To mechanical climate the whole building a lot of energy is needed.

**Dilemma:** Greenhouse or Green in house?

**Questions**
- Which climate is preferred for the in between space?
- How are the green elements connected to the building?
- How are the green elements be watered?
- Which type of green can be used and fits the location a climate?

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**WHITE**

**Value:** The Hembrug area is a peaceful oasis of the chaos of the city where you can find yourself peace and happiness.

**Problem:** The construction and all the wood can create chaos for the people who will be treated there.

**Dilemma:** Show or Hide?

**Questions**
- How is the counterpart of the steel and wood, the white, materialized?
- How can white be used to hide something and gives peace in the building?
- How is the steel and wood connected with the white?
- Which type of wood can be used and fits the location a climate?
- How to connect the steel construction and the wood?
Week 1.4
23-09

3D base model
How can the human scale be brought back in the redevelopment of large and open industrial heritage by treating the building as a city?

**Building as a neighbourhood**
Green roof park

Impressions
Hotel Jakarta climate principle

Heating and ventilation

Red = air inlet
Blue = air outlet
Week 1.6
07-10

Constructions

Mushroom Columns

Columns and Beams

Hanging roof trusses
Roof pattern research

1. Grey = glass solar panel
2. Black = clear glass
Concept re-thinking

New entrance
Campus North

Creating protected environment

Old railroad structure

Main structure Hembrug
Construction model 1:200

Top view

GGZ Entrance

Theater foyer
Mental Health Center Hembrug
Revitalizing Hembrug, to revitalize society

Ground Floor 1:200
First Floor 1:200
Aspect 1

The relationship between research and design.

* Research and design is for me a continuous process of concertizing and abstracting. You have to dive in the research to give a concrete answer on a design question. With these findings you zoom out again and reflect on the bigger picture. I want to use the information on my view on this in my AC3 paper and how this is used in my graduation project.

Aspect 2

The relationship between the graduation topic, the studio heritage, the master track Architecture, and the master program Architecture, Urbanism and Building Science.

* Beside the relationship between each layer I want to elaborate on the relationship between Architecture an Heritage, because in this perspective you can make from heritage architecture, but how can architecture, urbanism or building technology become Heritage? Is this organization structure a pyramid or a circle?

Aspect 3

Elaboration on research method and approach chosen by the student in relation to the graduation studio methodical line of inquiry, reflecting thereby upon the scientific relevance of the work.

* This was the subject of my research method thesis. We used the CV Matric to find the values but how can cultural values be addressed? During my research I discovered that a combination is needed of both a narrative and materialization. They don't tell both half of the story but the have to be combined to understand the whole picture. To do this, a combination of visualization (pictures, drawing or better the actual thing, because to other two can be helpful to highlight and see the object through a filter but you will always have a kind of data loss) and words is needed. To have value, the object has to have a narrative and this narrative has to become acquainted in a way by the observer.
Aspect 4

Elaboration on the relationship between the graduation project and the wider social, professional and scientific framework, touching upon the transferability of the project results.

• With a surplus of vacant industrial buildings the re-use of this buildings is a hot topic these days. We don’t live in a time anymore where we can demolish with no reason and build a new suitable building on the same place. We need to find smart solutions to deal with these buildings in the form of re-use, redevelop and redesign. Most of these massive industrial buildings are missing the human scale. The results of my research on this can help architects in the future with the transformation of large industrial building. How can a building that is made for big machines transformed to be made for people.

Aspect 5

Discuss the ethical issues and dilemmas you may have encountered in (i) doing the research, (ii, if applicable) elaborating the design and (iii) potential applications of the results in practice.

• With the use of the CV Matric in the research you will come across conflicting values. Because these values are qualitative and not quantitative to rank these values is quite hared. The researcher has to compare these values and organizes them in an ethical way and argumenta why one value is more imported then the other.

• In de design you have to put yourself on the edge between what is the tolerance of change without lousing its value. Because in mine opinion a building can have a very high value, without a function it is worthless. Buildings are made to be used en not to just stand there and be pretty. We as architects can better make smart interventions in the original design if the outcome become a useable building.

• In the application of the results in practice, the results can help to make the ethical decision between demolishing and re-use because the results are showing the possibilities and opportunities
Visit to the Lockhall in Tilburg
Roof intervention daylight model
Week 2.1
11-11

3d Model progress

Therapy rooms

Waiting areas offices

Theater

Double windows offices
Ventilation ducts

- Double windows
- Offices
Construction types

Option 1

Hanging roof trusses

Option 2

Detail

Mushroom Columns

Water storage with Columns and Beams
Climate system

- Natural ventilation
- Cool air under the trees
- Thermal energy storage

**Summer**
- Solar heating
- Floor heating

**Winter**
First sketches detailing

New roof lights

Construction green roof

Living rooms

Interior cladding
West facade

East facade
Week 2.6
16-12

Improved elevations

South facade

North facade

East facade

West facade
Room dividing poles model
Room dividing pole detail

Tensioning the pole

Turn on Mounting plate
Balcony and pavilions

Balcony section

Forest pavilions

Section pavilion
Week 2.8
13-01

P2

Go!
Mental Health Center Hembrug

Revitalizing Hembrug, to revitalize society

Masterplan Campus North  1:500

Heritage and Architecture, Revitalising Heritage, Hembrug

Job van den Berg, 4287762
New entrance
Roof design

Forest pavilion
Artistic staircase experiment
Detailing

Therapy rooms
Interior wall
Therapy rooms
Exterior wall
Isometric exploded view

Therapy rooms

Living rooms

Theatre
Winter
Concept
Weapon
Depot
Concept
Machine
Hall
“The past cannot be changed, forgotten, edited or erased ... It can only be accepted”

“Hembrug was always the place which gave the people the tools to defend themselves”

Layering in creating personal space and a protected environment
Functional concept of a mental health care

Original approach

Boston model

Multifuncional use ‘open campus’
The 5 aspects

Utilitarian

The function of architecture and the project

Complementary architecture

Interdisciplinary designing in a search for complementary interaction

Narrative Buildings

The use of narrating and materializing in the research on cultural values

Raison d’être

Research as a tool to justify the design

Ethic

Functionless and fake architecture

Reflection paper

Symbiosis

Reflection and positioning paper on the graduation project ‘GGZ Hembrug’

Symbiosis

1 “The relationship between two different living creatures that live close together and depend on each other in particular ways, each getting particular benefits from the other.”

2 “A relationship between people, companies, etc. that is to the advantage of both”
In the graduation project is mostly search for a way of research and designing where multiple aspects can benefit from each other. By looking at a project from this point of view architecture can work in a complementary way instead of a supplementary. Especially in heritage the new intervention can work as a symbiosis. The old and the new interact with each other and both achieve benefits from each other. In this way of thinking, one plus one is not two, it is three. The DNA of the old Building, his heritages, merges with the DNA of the new intervention and in this way new architecture is created with an even greater value.

The research and design process in a circular motion moving from abstract to concrete.
P4 GO!

Mental Health Center Hembrug
Revitalising Hembrug, to revitalize society

Weapon depot

Week 3.5
09-03

Job van den Berg, 4287762
Heritage and Architecture, Revitalising Heritages Hembrug