Hembrug the community

- A place for everyone on a former military industrial site-

Reflection paper
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Soumaya Boujamaa
4287258
s.boujamaa@student.tudelft.nl

Introduction

Hembrug, a former industrial military site which is loca-
ted in Zaandam is being transformed since its re-opening in 2018. The factory closed its doors in 2003 and after it was re-discovered in 2010, plans were made for the Hembrug site which correspond with the plans of the surrounding cities.

For this project the following research question was formed: How can a community center and other supporting functions contribute to creating a new community at Hembrug and still keep its self-contained characteristics?

This reflection paper shaped itself around this question. It will discuss how the design for a part of Hembrug was formed, what struggles came with it and how it could possibly contribute to society and the views of architects.

Inclusive Design

Nowadays the less abled people are integrating more and more into society. In the past they were very dependent on their families but today employers and society become more open towards them. Around 1970, Ronald Mace, an architect who sat in a wheelchair due to Polio, became the first person to include less abled people in society, especially via architecture. He introduced the term Universal Design. Nowadays, this term is widely known as *Inclusive Design*.

"*Universal design can be defined as the design of products and environments to be usable to the greatest extent possible by people of all ages and abilities. Universal design respects human diversity and promotes inclusion of all people in all activities of life"* - Ronald Mace

Ronald Mace, the man who founded '*The Center For Universal Design'*, wrote a book in which the rules of Universal Design (or *Inclusive Design*) were portrayed. However, it was not clear how to apply these rules onto a design (Mace, 1988). The same can be said for Jos Boys, who wrote an interesting book on *Inclusive Design* (2014). She describes how less abled people are seen by society, their feelings towards society and the misconceptions about them (Boys, 2014). One might bound to a wheelchair and abled people might see a weakness in that person and feel sorry for him or her. This misconception bothers less abled people the most. They then do not feel excluded by their disability but by the people surrounding them. This, together with obstacles in the public space, makes them feel as if they do not belong (Boys, 2014). Jos Boys also emphasizes the importance of understanding the future users of a building and not merely see them as 'users' (2014). Both the users of a building and the architect are simultaneously users and architects. It goes both ways. Without the architect the building will not be there. A building without users is not a building anymore but merely a ghost town. Listening well to the needs of all people and not merely the 'norm', helps architects to design inclusive buildings which can be used by anyone (Boys, 2014).

Goal for design

For this design, a small research study is done on the Dutch society: their wishes, their needs and the different age groups, backgrounds and households. This resulted in a program which consisted of giving space to the future inhabitants of Hembrug to meet each other and make it their own. Another program which will be introduced is a public one which also invites people from outside of Hembrug to visit the Hembrug site.

A community of future inhabitants can be realized and visitors of Hembrug can also become a part of it. The combination of creating both a community and a public space seems controversial but the thought of creating a community is open minded in a sense that not only future inhabitants of Hembrug will be welcome. Hembrug will be open to everyone and the inhabitants can find their place as well as the visitors. This, without making the visitors feel as if they are invading a certain space. According to Hajer and Reijndorp it does not work if a public space is already completely designed to be used by people. If a public space is specifically designed as such, then it will not be used. Another aspect which is also discussed by him is the fact that people are always trying to find their own groups of people which they feel well connected. This is not a problem in itself. It happens when a big group of people will enter a public site all at once (2001). In this case, the people from outside Hembrug as well as the future inhabitants of the site will come together so in this way neither would be feeling as if they were invading a certain space.

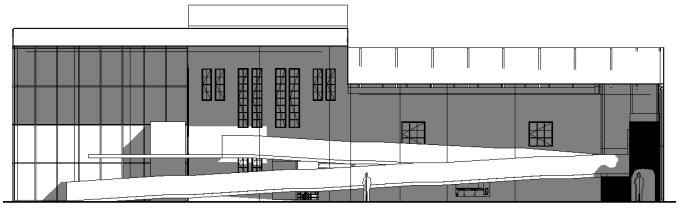
These researches combined lead to an important part of this design in which the experience of all future visitors are thoroughly thought through. Here, it is not only about visual architecture but also about what people feel; the textures of components in the building, as well as the smell and what they hear (Solano, 2015). We do not merely experience buildings with our eyes but also with our touch, scent and ears. If someone lacks one of these senses, other senses are hightened which make those specific other senses far more important.

Designing with Heritage

Together with the historical research on the building and the site itself, choices in the design could be made. The outcome of the historical research was a view on the new design, in which the existing buildings were preserved as much as possible, as well as their character but at the same time a new layer would be added, which corresponds to the needs of the new programs and their users. This approach can be called the non-designed presence or the designed presence (Meurs, 2016). For the non-designed presence, as it says, there is no need to really design something. The existing walls and roof could be enough together with new furniture. Designed presence is where you do design something new, for instance an expansion to the existing building (Meurs, 2016). Designed presence can be done in multiple ways. In this project an expansion is designed, made of a material which keeps the existing building mostly visible. However, the material seems in contrast with the existing building. The materials might be different but the shapes are the same. In this way the expansion is still in harmony with the building instead of clashing with it. With this approach the respect towards the existing building stayed.

After the historical research certain parts of the buildings and the site were given specific values. This, however, did not make it easy to combine it with the needs of the future programs and users.

The importance of this studio is to revitalize the buildings which are located in a certain part of Hembrug. This means that the buildings should be used again, otherwise they will go into decay. Therefore, the needs of all people should be taken into account. The accesibility to different levels in the area was a very important aspect of the design at first. The intention to make a building without elevators and only ramps was well placed, but not



practical (Fig. 1).

Fig. 1 Section with the long ramps

The ramps would be long which is not friendly to the users who are, for instance, in a wheelchair. An elevator was necessary in this case, which does not correspond with the views of *Inclusive Design.* In this case with an existing building it was not possible to look at split level floors or other solutions. The height of the added entresols depended on the existing building and therefore the length of the ramps depended on these heights as well. With existing buildings there is still a struggle with the capability of applying the theory of *Inclusive Design* when it comes to accessibility. Another part of *Inclusive Design* is the use of other senses to know which way to go or in which space one is, which has been thoroughly investigated.

Approach

As mentioned earlier, several research studies were done in this design project, which all had the goal to come up with great support for the future design. However, they were all different from each other.

The historical research mostly consisted of going through archives, specifically old floor plans, maps and pictures. However, merely these sources were not enough in my eyes. Therefore, I tried to get a grasp on how it might have looked like from the perspective of the employees who used to work at the Hembrug site. For this gap in the historical research sketches have been made of how employees might have entered the site with their bicycles (Fig. 2).

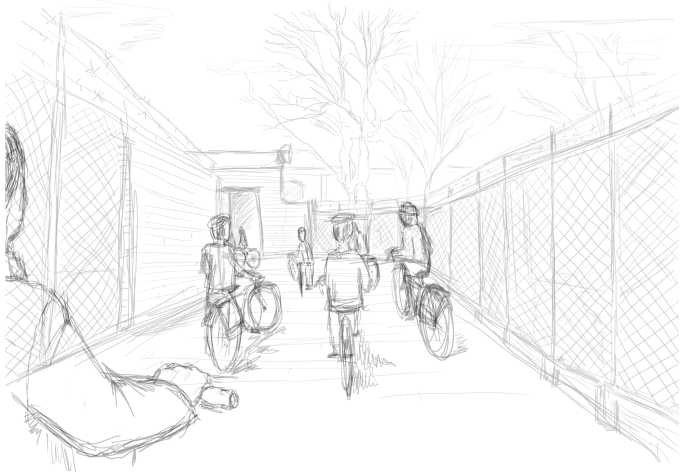


Fig. 2 Entrance to the bicycle shed

According to Collingwood an important part of historical research is imagination (Groat &Wang, 2013). During my research not all the blanks could be filled, not everything was photographed or clearly written. In these situations the mind steps in, in order to try to fill those blanks. Gordon Cullen was an inspiration for this aspect of the research. He invented the townscape. With sketches from eye level he made a connection between the visual on ground level and the view from above as an urban planner, trying to get a hold on the experiences of the users (Cullen, 1971).

For the research on society the Centraal Bureau van Statistieken was the main source. Based on data, diagrams have been made so there could be

a clear overview of all the numbers for each different aspect. Also, some articles of newspapers which were online helped with getting a grasp on what Dutch Society is lacking. Furthermore, a short documentary on two specific age groups show how they could interact with eachother and could benefit from each other in a very positive way.

Regarding the research on *Inclusive Design* and how to apply it to buildings: it was more than reading the theory, simply following the rules and applying it to the design. As mentioned above, there is no clear guide on making a building inclusive. Some rules have been set in theory, on paper, in (spoken) words but they can not be literally translated into a design.

This form of designing lies tremendously close to me because I myself have experienced exclusion in a public building, a museum. I have epilepsy and there were no warnings that a certain part of the exhibition existed of flashing lights and dark rooms, which can cause a seizure. I had to take a whole different route than the 'mainstream' people which made me feel like I was less than them. I felt what many people feel nowadays and I would like to act on that as a future architect and make a difference in peoples lives. Therefore the research on Inclusive Design was done in a whole different way.

In order to understand the abilities of someone who would be (partially) blind, I myself tried at home to test how it would feel as if I were blind. I had to figure out by touch and sound where I was and got scared when I felt something very cold or very hard. In this way I realized how important the right material choice is.

Someone in a wheelchair is mobile on even levels but they can not take the stairs so they have to use the elevator when going to another level. They also see the world from a different perspective than the ablebodied mature person. Their eye level is much lower so they experience spaces differently. The whole range of eye levels and the mobility of all people should be taken into account.

Another aspect is being deaf, in which I imagined a totally silent world. This was simulated by wearing my headphones to see what other senses got hightened. It turned out to be not only the visual one but also the touch and smell. With illuminated signs you can make a deaf person aware of something and by touch you would know when someone is walking towards you. Again, the use of the right materials is very important in this case.

Not only do we experience spaces with our eyes and ears but also with our noses. The scent in a certain room is very distinguishing from another. To create a common ground for all these people, accesibility was taken into account as well as the use of materials in such a way that the touch and the smell became very important.

In 'Architectuur door andere ogen' (Architecture through other eyes) the personal experiences of visually impaired people is discussed (2012). Some of them were born blind and some became blind at a later age. The book consists of 3 CDs in which these people tell how they experience a building which they would visit during an interview. The second part of the book consists of principles of inclusive design. This book gave me more insight in how less abled people experience buildings and how a building should be designed in order to make it comfortable for everyone. An example is given in figure 3.

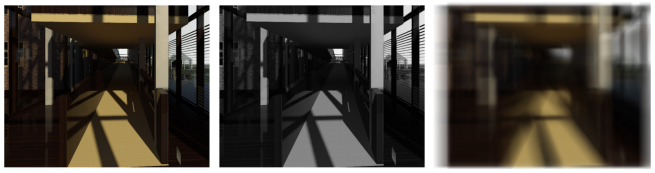


Fig. 3 The use of different colours/materials are important to see clearly for the partly visually impaired people

For this research I actually experimented on myself in such a way that I tried to become other people with other abilities and try to experience what they would experience on a daily basis. This approach, however, makes the research less reliable because it was still partly done through my own perspective. Fortunately the book 'Architectuur door andere ogen' was read. This helped me with setting up rules for the design which I could not have come up before reading it.

I could have interviewed people who are less abled but that would not have necessarily helped me with my design. As Boys says in 'Doing Disability Differently', one can only come up with a solution as a designer, because the people who are less abled only notice when the design is inconvenient for them. The moment it is designed for them they would not notice it. In the same way abled people do not notice anything wrong because they do not know these struggles(Boys, 2014).

Apart from these approaches, which were used to find out how materials can be chosen and what people might experience, the method of sketching and working in Revit was very important as well. In this way the ideas can be visualized in eye level perspective in both sketches or 3D models. The visualization of these ideas help to understand what people might experience and how the right materials can be chosen.

Goal for (heritage) architecture

"Try to preserve buildings as much as possible, adjust them in such a way that a new program fits well with the theme of inclusive design and let it inspire other architects to do so well." - Soumaya Boujamaa

I hope this design can be of importance for future projects; making architects aware of the experiences of spaces by all kinds of people with all kinds of abilities. In this design this was realized by looking at contrasting colours and textures as well as different acoustics and 'honest' accessibility. Architecture does not only have to be visual. We experience architecture not only with our eyes so a common ground on triggering other senses could also be useful. Also, an *Inclusive Design* does not necessarily have to be in new buildings. Old ones are also capable of being an *Inclusive Design*. There are still some restrictions to it because values need to be combined with the rules of *Inclusive Design* and the creativity of the architect but this does not mean it is impossible.

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• Aspect 1 the relationship between research and design.
In a previous thesis the subject of inclusive or universal design was discussed. For this project this subject again was inspected to put the theory into practice.
Research on the buildings which resulted in values given to components of the building which had influence on the design.

• Aspect 2 the relationship between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master program (MSc AUBS).

• 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.
Through different methods on analysing Campus South
• 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.
• 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.