REDESIGNING COMMUNITIES

REALISING COHOUSING IN EXISTING BUILDINGS

P4 REFLECTION PAPER

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INTRODUCTION

The architecture graduation project 'Redesigning Communities' stems from a yearlong research- and design led process. In the future more and more people will live in cities, creating an urgent need for housing. Therefore the question rises; what kind of homes do these people need? How are we going to realise them and where? The project focusses towards post-war New Town of Almere and specifically the city district of Almere Haven.

Central in the project was the question how densification could strengthen the qualities and help solve current problems, without 'compromising' heritage values and identities. The potential of existing building structures was researched and how they could become part of the solution in the housing demand.

In the individual project the residential neighbourhood of 'De Werven' within Almere Haven was chosen for the design brief. While this specific neighbourhood with its building blocks is unique for Almere Haven, its typology however is not. Therefore the design solution for this specific neighbourhood could also be the solution for numerous similar neighbourhoods in the rest of the Netherlands.

Fig. 1: The iconic 'Kerkgracht' in Almere Haven

Theme

The past generation has built more than all previous generations combined. The houses got bigger, families got smaller and our lifestyle more consuming. Times however have changed so that nowadays we are faced with multiple social problems – such as aging and loneliness – and environmental problems. Living more social and reducing consumption is therefore crucial for our society nowadays.

The focus on relationships, community and reducing resources led to the subject of cohousing; a residential community that shares resources, facilities and that undertakes joint activities. This type of living suits – and can even improve – social cohesion within Almere Haven and the feeling of being part of something.

The original thought of 'De Werven' was to create small, social neighbourhoods within a larger residential neighbourhood. Implementing cohousing within this typology therefore suits the original intention. By changing the housing typologies a community is realised for different family situations suitable for all ages. For the transformation the present existing materials will be harvested and reused to establish a circular and low-energy living environment. An environment in which the individual is just as important as the community.

ASPECT I | Relationship between research and design

Doing research in different phases and stadia has been the largest part of this graduation project; research by data and research by designing. In this chapter the different research methods and their outcome within the design will be elaborated.

Location research

The first research executed was that of Almere Haven itself. While the research focussed towards the origination and growth of Almere Haven, a large part of it also went about the social aspects of living in Almere Haven and how inhabitants see their surroundings. This meant that part of the research was executed as desk-research through archives, books and on the online web. Another part of the research was executed as field-research by talking with locals and by asking them questions through surveys.
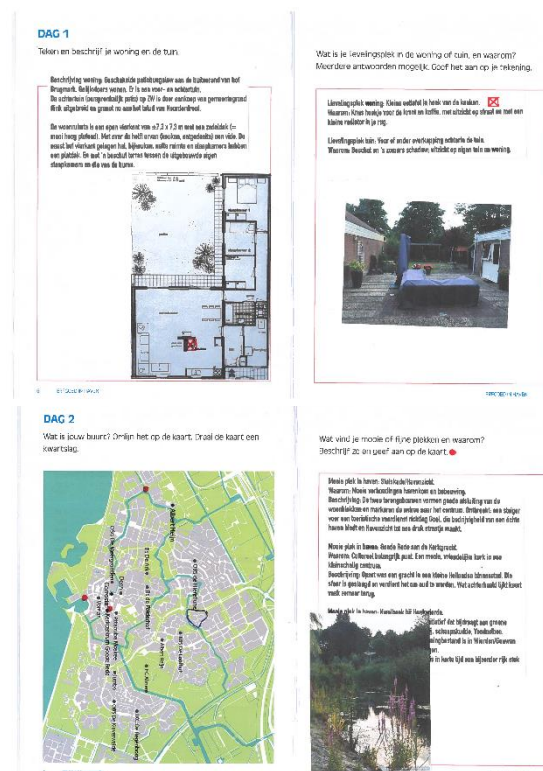

Figure 2: Example of two pages from the conducted surveys in where inhabitants explained the qualities of their dwelling and surroundings.

[1] Stankey, McCool, and Stokes, 'Limits of Acceptable Change: A New Framework for Managing the Bob Marshall Wilderness Complex'.

While the desk research was informative, useful and even crucial to understand how Almere Haven originated, it was however the field research - specifically the conversations with residents - that turned out to be the most important for coming up with a theme and in the further (design) process. It gave understanding in how proud local residents are for living in Almere Haven and that they truly feel at home. At the same time it gave an understanding how the pioneering-mentality of the first inhabitants to this day plays a big role in the communal identity. And also how this feeling is fading away mainly due to the time that has passed ever since. Improving this feeling became a starting point for the design. A concept suiting the (social) atmosphere was therefore found in the form of cohousing.

While the field research did lead to interesting outcomes, the surveys made beforehand by the tutors were, for my process, limited in usable outcome. The surveys where mostly focused to the personal living environment, while it would also have been interesting to focus them more towards liveability and social problems within Almere Haven.

Densification research

In the second research executed in a group we researched the possibilities for densification within Almere Haven, based on the system of 'Limits of Acceptable Change'[1]. By discussing different scenarios for densification we rated the risks and the chances for occurring. By graphing the outcomes a comparison could be made between the scenarios for concluding which scenario would be more suitable in which situation.

It was interesting to see how collectively we agreed with how some – on first chance extreme – densification scenarios were feasible, while other – on first chance very feasible – densification scenarios turned out not to be so realistic. While the densification studies gave insight in the possibilities, it was however the methodology that I profoundly appreciated. It is interesting that by combining opinions and visions a commonly worn outcome can be reached using this methodology.

For the design this process envisioned that there are a lot of possibilities for densification and that – as long as the surrounding is taken into account – quite a lot is possible to realise. These different possibilities for densification of De Werven formed a starting point for the design process.

Cohousing research

The process started with a fairly elaborated research regarding cohousing. The research started by analysing the current (social) problems on a national- and local level. This was executed by analysing multiple statistics and research documents. Outcomes from conducted surveys were integrated on the local level. It gave insight about Almere Haven directly from its residents. The combination of the two formed the starting point to create the more social housing situation. Here again it showed how the community was leading for the design.

After this chapter the terminology of cohousing was elaborated including its history. With different models an insight was given in how the social structures work differently than in a traditional residential neighbourhood, and which types there are. After choosing a type the research continued with analysing case studies.

Combined with on-site interviews it led to the 'design principles'; the first step towards a design. These design principles formed the basis for the qualities that had to be integrated within the design and therefore helped structure the design process.

The local building complexes were analysed whether cohousing would be feasible in them. They were assessed using the design principles and the building values based on Riegl's[2] cultural value typology. By assessing initial designs with the system of 'Limits of Acceptable Change´ a considered decision was made for the most suitable building complex.
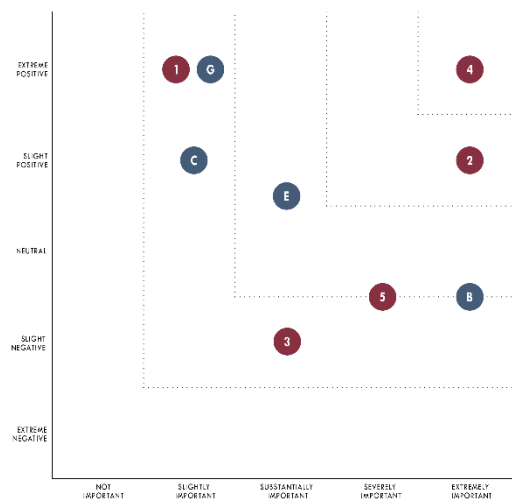
Fig. 3: Graph showing part of the assessment methodology for choosing De Werven

The assessment resulted in a considered decision for the most suitable building process, but it also created understanding in ´De Werven´ and it resulted in the idea of re-creating the classical courtyard-typology (in Dutch; hofje typologie) that has stayed intact within the design during the whole process.
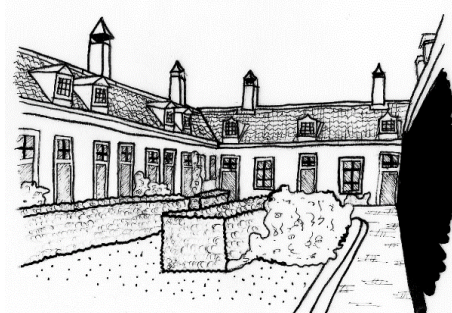
Fig. 4: Initial sketch for envisioning the courtyard typology.

[2] Bond and Worthin, 'Heritage Values and Cultural Significance'.

Design process

The design principles formed the basis for the design. They were used as support pillars to assess the completeness and quality of the design. While this assessment did not occur constantly on paper, the principles were still constantly present on the background.

Designing the cohousing community was mainly executed by drawing the same situation over and over again and by constantly changing small aspects. This trial-and-error design process was enriched by studying references and understanding how others solved similar situations. This process was done on paper, but also in a digital model. On paper for initial simple sketches, digital for fine details.

There were also situations in where I had to rethink my methodology. An example was when during the technical elaboration of the dormer window I found out that it was quite narrow. By analysing the spatial quality on the interior I found out that it would result in something quite special and interesting, and that I would therefore continue with it. This rethinking was used on multiple occasions.

Designing did not always work out however. Especially the façade design of the communal building was a struggle. This probably had to do with the layout- and mass of the building making it a difficult subject. Even in the final stages this part of the design is still not completely finished and a struggle.

A large part of the design was focussed towards circular- and local material use. As a cohousing community is a sustainable community regarding consumption, it only felt logical to therefore also develop a sustainable renovation regarding material use. First research was done for the present materials; which materials are there and what possibilities are there to re-use them? In order to decide for sustainable re-use options, a methodology had to be found to assess whether a material was suitable and what the effect would be. In order to assess this the methodology of 'shadow costs' was used. The shadow costs tells the environmental impact of a material and therefore which material is most sustainable regarding the environment. Through this methodology research directly influenced the design, and the design directly influenced the research. But not always the material with the least impact was chosen, sometimes another decision was made due to life expectancy, availability or another reason. All material decisions were documented so that in a later stage the reason to for deciding would still be clear.

Another practical example of how research influenced the design process was the decision for the façade elements and their pattern. Through research by development it was concluded that a recycled ceramic façade tile could be made in different tones of orange and red. After more research it was concluded that a limited amount of black tiles would also be possible to be made. The façade pattern had to be adapted due to this outcome.
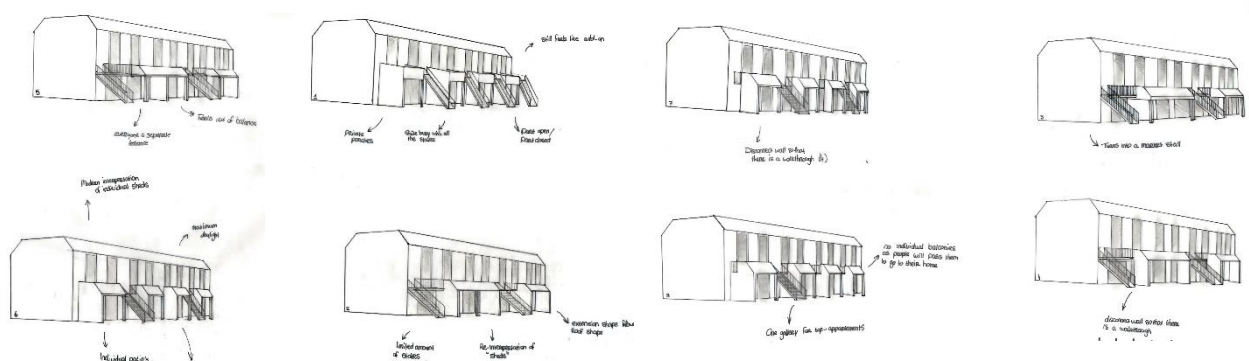

Figure 5: Different sketch drawings of the same situation of a design element.

At the end an interesting project arose in where not only the final community is sustainable, but also the renovation regarding energy and materials. The fact that it is possible to make a design suiting the values of the building complex, while still taking sustainability into account on multiple levels, is relevant for current architecture practice for the creation of true sustainable architecture.

ASPECT II & III | Relationship between graduation topic, studio topic, master track- and program and reflecting scientific relevance

Cohousing

Cohousing is a rather uncommon living situation that originated from free-spirited people in the seventies and eighties, looking for a deeper connection with others on a daily basis. Under the name of 'Centraal wonen' numerous projects were realised within the Netherlands. After the eighties interest in cohousing in the Netherlands faded away. Recently it is getting some attention due to housing shortage and solutions to solve them; for example in tiny-house communities. Common in all of the examples is that the architecture was designed specifically for the cohousing community.

Nowadays we have a large housing demand due to the growing population and changed family situations. Our current housing stock does not fulfil this demand as it is mostly one sided in typology. Furthermore about a third of the dwellings[3] date from the seventies and eighties, meaning that there lays a task for improving them and making them more sustainable.

While existing cohousing is present in current society and while changing typologies of one-family-homes is also not uncommon, adapting these neighbourhoods so that they fit a cohousing community however is. The research and final design shows that it is indeed possible. Further research could possibly investigate to what extension- and scale.

Materialisation

The world has changed so that nowadays we are more aware of the environment than ever before. Reducing (energy) consumption has never been so important, just as for realising a circular economy where there is no waste anymore. Here also lays a task for the building environment and specifically for architects.

The design project gives an example of how a 'circular' renovation-/transformation might look like. It shows that it is indeed possible to largely use existing- or local materials. The realisation of a recycled façade tile made from crushed brick- and mortar is an example of how we have to get creative with existing materials so to come up with new possibilities.

Figure 6: Example of a testing-tile that were made from crushed brick and clay to research its perfect composition, homogeneity, colour and texture.

Reusing constructions, materials and upholstery is something that was profoundly done in the past. Numerous canal houses are built by using far older building elements. This mentality of using what is there is something we need to implement again within the current field of architecture. The project shows that there are possibilities to do so.

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[3] Centraal Bureau voor de Statistiek, 'Voorraad Woningen'.

Positon

De fifties and the sixties is known as the reconstruction period in architecture history. The Netherlands set its name internationally for large residential expansions on a for that time unknown manner. Large residential areas were built due to the housing need, on an extremely large scale.

The architecture of the seventies and eighties was a reaction towards the reconstruction period. Designers were critical on the large scale and anonymous character of these neighbourhoods and the lack of human scale. Together with the drive to go forward it led to a period of introspection and a new vision for society; the small detail, the community and the human scale. Not the government deciding what to do, but the local resident participating in the creation of their community.

This new vision for society and the environment we live in can perfectly be seen within Almere Haven. As it is one of the fewer pure examples of a city district from this era it must be seen as valuable. This however does not mean that the visions from this time period led to great architecture. The overall built quality varies strongly just as the aesthetics and spatial quality.

Almost always the social visions did not work out as was intended, this can for example be seen within the courtyards of De Werven, which are not used socially and communal anymore. Reintroducing this vision on a different level, as cohousing, was a strategy to reposition this social value and to re-establish it. While the intention changed, the social vision was remained intact.

Re-using or transforming the presence is quite common in the field of heritage, as it is the way to maintain it for the future. Re-using materials to maintain its embodied energy is in the present architecture field however not common practice. Re-using present materials or using them as a basis for a transformation/renovation project could be a strategy to maintain the buildings energy and to reuse the building on a material level.

ASPECT IV | Elaboration on the relationship between graduation topic and the wider framework

Realisation of new heritage

Almere Haven is unique in its kind, as it embodies the seventies- and eighties zeitgeist on a scale and elaboration unknown in the Netherlands. The values connected to these objects might be different than we are currently used to from heritage, and the objects related to these values might not be as aesthetically pleasing as we are used to. It is however the type of heritage society is going to be faced with in the foreseeable future.

While the scale of development for Almere Haven is unique within the Netherlands, seventies and eighties architecture is not. Around one-third[4] of the total housing stock in the Netherlands dates from this periods, making the architecture itself rather common. Similar developments related to De Werven can be seen throughout the whole of the Netherlands in suburban areas.

All these suburban areas consist out of similar ground based dwellings with a variety of dwelling types. In a lot of situations the courtyard typology is recognizable and implemented in some sort of way. All these overall plans and typologies share similarities with De Werven. Therefore the given solutions for De Werven can also be implemented on a larger scale for similar residential neighbourhoods out of the same era.

But the subsurban arreas of the seventies and eighties not only share typologies and variety of dwellings, they also share a similar materialisation; quite often brickwork with wooden cladding. The use of brickwork is furthermore very common for past- and present architecture within the whole of the Netherlands. This project shows how existing and present materials can form the basis for a sustainable renovation- or transformation. As the material usage in other seventies- and eighties neighbourhoods – but also in most other residential neighbourhoods from other time periods – is the same or similar, the given material solutions can also be implemented on a larger scale.

Circularity

The project shows that a renovation-/ transformation can be largely carried out using existing- or local materials. This is something we can learn from, but not something that should be executed as was done in the project. Trying to re-use and recycle only the existing present materials is not feasible. On the one hand due to the limits of the type and amount of material, on the second hand because harvesting all these materials and making them suitable again for being reused, costs lots of time and labour.

This does however not mean that we should not think about circularity and material use, but that we should be smart in how to handle them. It might be more efficient to harvest materials in a project, to temporarily store them in a material bank or to send them to a factory to be recycled. These materials can then be reused for other projects. The project from which the materials were harvested uses materials from the data bank or factories from earlier harvested projects.

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[4] Centraal Bureau voor de Statistiek.

The social society

In the research different social problems were sketched that we are faced with today; such as loneliness, aging, changed family situations and our different view regarding sustainability. Furthermore our welfare-state has changed into a society in which self-sustainability and independency has become more dominant. These social problems- and changes have a large effect on the vulnerable and everyone else in our society.

Cohousing will not be the overall solution to the current social problems. It can however be part of the solution for people willing to live in a community. Smaller dwellings are compensated with communal facilities and large outdoor spaces. By doing so a community can be realised that looks after each other and that at the same time uses fewer resources.

The project itself is an example on how cohousing can be realised quite easily in a rather 'traditional' residential neighbourhood. Furthermore the design consists out of elements that can be separately integrated in the existing to improve social cohesion, quality of the dwellings or usability of spaces.

ASPECT V | Ethical issues and dilemmas

Seventies and eighties architecture

When talking about my project in Almere to non-architect relatives I found out the stigma that Almere is faced with. The vast majority of the people looked at me rather strange and even worried when I talked about heritage in Almere. Because – and this has been interpreted freely – how can such a boring 'new' city even have something related to heritage? And to be honest, for me and my colleagues this has also been a challenge. Typically we do not see seventies- and eighties architecture as valuable and definitely not as heritage. When we think about heritage we think about churches and castles, country houses and city halls.

Therefore I had to re-evaluate my definition of heritage during this project. Because what is heritage really? Now I can conclude that heritage is the story of my parents, my grandparents and many generations before. It is physical history which is still present and that needs to be kept present for me, my children and many generations after me. While it is physical in the form of stones and wood, it is not (mainly) about the materials, but it is about the overall story it tells us.

How I personally redefined heritage is also something that needs to done on a larger level within the field of architecture. As seventies and eighties architecture is getting in a critical time period where demolishment, but also renovation and redevelopment could occur, one must take into account with what they are dealing with, and therefore value it. More insight and appreciation on a larger scale is therefore crucial.

So while the seventies- and eighties architecture of Almere might not looks so impressive, their story however is. And therefore this story is something we need to cherish and retain for current generation, but also for all generations to come; a story about a group of people that together created a city out of water and mud.

Gewoon Almere Haven

Quite soon when I started studying at the faculty of Architecture I learned that tutors and teachers wanted to see 'major interventions' and 'statements'. The creation of ´statement architecture´ - or in Dutch 'plaatjes architectuur' – seems to be integrated within the whole mentality of the faculty, and it might even be integrated on a larger scale within the field of architects.

This mentality for creating statement architecture haunted me during the whole research- and design process of this design project. It asked for a change of mentality, but also for a revival of my true preferences. This was not easy of course as this mentality is so integrated within the overall mentality. Even during my P2 subject presentation when I explained my decision to choose for De Werven as my design project, advices were given to choose the office building as it would make 'more interesting architecture'.

During this project the question therefore rose for me; wat is architecture? And should architecture always be a master piece, similar to the fine art? I took me a while before I could answer this question and to go back to my core believes. Because we might have forgotten what architecture is about; creating places for people and not enlarging the ego of the architect.

This re interpretation of what architecture really is and how it should be is maybe something we should do within the whole field of architecture. Statement architecture can sometimes fit the context, but it is also fine if it is not. Therefor the 'experimental' architecture of the seventies and eighties can learn us how normal can still be interesting and special.

Living more social

The research shows that living more social could be a solution to numerous social problems our society is faced with today. The design show how 'more' social living can be achieved within the existing built environment.

Living more social could mean that loneliness reduces, people stay healthier at old age and that we reduce (energy) consumption. The design result envisions a very social – maybe even holistic - cohousing community. This type of cohousing is certainly not meant for everyone. Not everybody is pro-social and pro-community. We need to accept that we have different type of people in society for whom most do not fit in a cohousing community.

Totally abandoning the idea of a more social housing situation is however not the advice. Implementing cohousing elements in a regular neighbourhood could improve social cohesion, and therefore improve quality of life. Here lays an opportunity for architects and other designers, to create dwellings and neighbourhoods that not only fulfil the basic need for living, but also the need for socializing.

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FIGURE LIST

All figures not stated in this list are created by the author and therefore not mentioned.

Figure 1: Suyk, Koen. 'De Kerkgracht in Almere Haven in 1979 (Image)'. Batavia Land, 1979. https://www.flevolandsgeheugen.nl/page/564/urbi-et-polderi.