

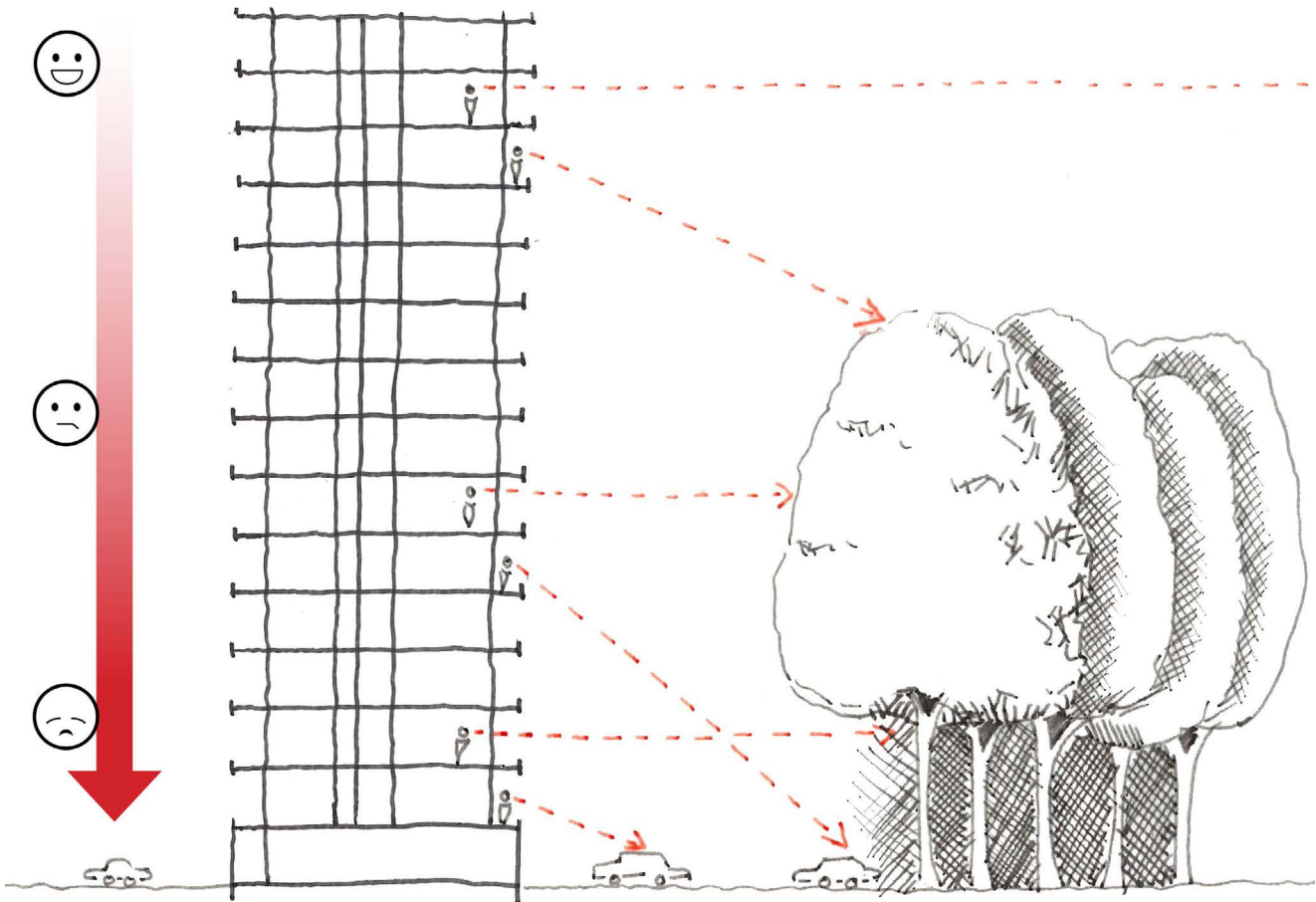
Framing the views



Reflection

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Degradation of views

Introduction

The transformation of buildings is one of the main emergent themes in contemporary architecture. This does not only count for monuments, but also for the existing housing stock. The topic of the studio "Re-Housing: Luxury, Energy, Economy" deals exactly with this topic, the transformation of post war mass housing in the Netherlands. Most of those buildings lack of programmatic, technical, and aesthetical qualities

This reflection on the project deals with one type of post war mass housing, constructed in the ERA- building system – a non-traditional construction system. This system was applied in the end of the 1960s till the beginning of the 1980s all over the Netherlands (Priemus & van Elk, 1971).

Problem Statement

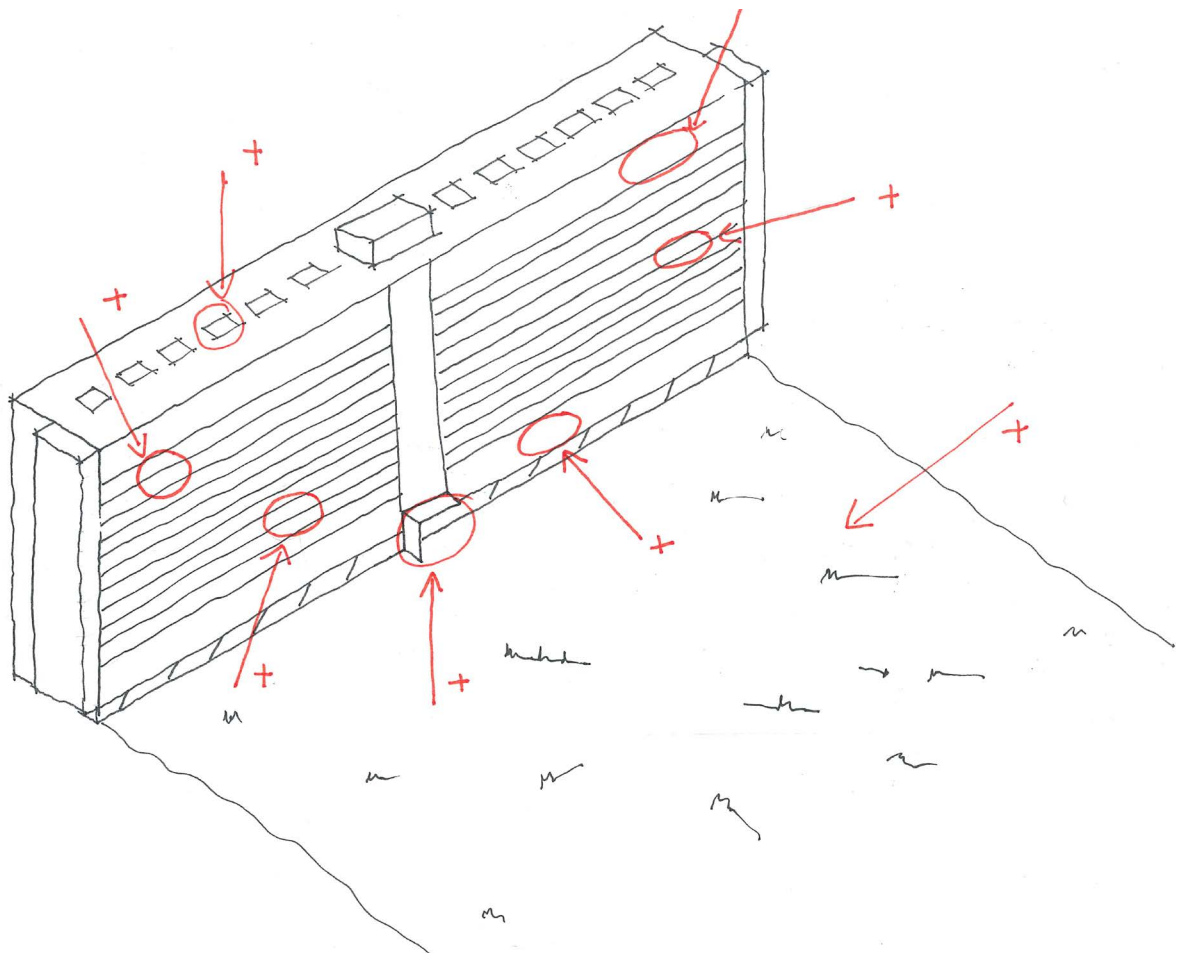
After analysing the ideal situation of ERA-buildings in their urban environment, in Ommoord, Rotterdam, I switched to the site Buitenhof-Noord in Delft.

In Buitenhof-Noord the urgency for a transformation and a change seems to be bigger, since many of the qualities which were found in Ommoord are not present at this location. The buildings are less maintained in Buitenhof-Noord and dominate the entire neighbourhood. They are arranged parallel to each other, which results in the fact that the views from one building are always directed towards the next building. While the highest floors enjoy pleasant views, the quality of views degrades vertically, simultaneously to the living quality.

Cultural Value

It is always important to assess the cultural value of buildings, when dealing with a transformation project to ensure that a building or parts of a building which are from cultural significance won't be destroyed. This ensures that the collective memory of a place stays untouched and historic structures remain as examples of the past.

After the analysis of the two sites Ommoord and Buitenhof-Noord, it seemed like there is no cultural value in the ERA-buildings in Buitenhof-Noord and



Adding value with local interventions

that the buildings are not worth to keep. Nevertheless, after deeper investigations on the neighbourhood, some values, were found.

The building system has historical value, since the construction system represents the efficiency, and rationality of the post-war reconstruction period. The same counts for the very weak urban design, which clearly shows the hurriedness of overcoming the housing shortage in the Netherlands.

The main values in Buitenhof-Noord are the use values. The use value of the buildings, and especially of the structure is from great importance, but also the use value of the skin, the space plan, the stuff and the services.

The local qualities and the very strong use value are the most important reason to keep and transform the buildings. The buildings provide almost 800 households with social housing. If the buildings would be demolished, this area would probably not be rebuilt in such a dense way. In the Randstad, there is already a shortage of living space and especially in the sector of social housing. It is therefore important to keep those buildings.

The transformation of buildings is, furthermore, almost always more energy efficient than the demolition and a new construction. "Moreover, it can take between 10 and 80 years for a new, energy-efficient

building to overcome, through more efficient operations, the negative climate change impacts that were created during the construction process." (Frey, et al., 2011). In that, the embodied energy of the building, but especially the structure has a very strong value.

Instead of demolition and a new construction, I transform the buildings mainly for ecological and social reasons, by making use of the use value of the structure and other parts of the buildings. Instead of preserving an existing value, value is added through small interventions in and around the buildings.

Concept and Design

The concept focusses on the improvement of the quality of living. Many different factors have an influence on the quality of living. Those factors are not of an equal value. Some strong factors can make up for other weak factors. As a response to the problem statement, the design project focusses on the improvement of views in the ERA-buildings in Buitenhof-Noord, which forms one factor of the quality of living.



Source: Alle Lieben die Gute Alte "DDR-Platte". (2012, 09 03). Handelsblatt.

In the project, the buildings are transformed by the application of small local interventions in and around the buildings. Since the use value is dominating in the cultural value assessment and since the embodied energy of the buildings is highly valued as well, the existing characteristics and materials of the buildings are reused in the transformation process. This decreases the negative impacts on the environment by keeping the added embodied energy low. Materials that need to be added to the construction are if possible reused old materials and new materials are selected carefully. They are renewable resources and use little energy for production. This protects the quality of the ecosystem. It might be surprising, that the buildings are not upgraded in a more energy efficient way, but the protection of the quality of the ecosystem is here prioritized over the efficiency of the building and even that way, there are direct carbon related savings.

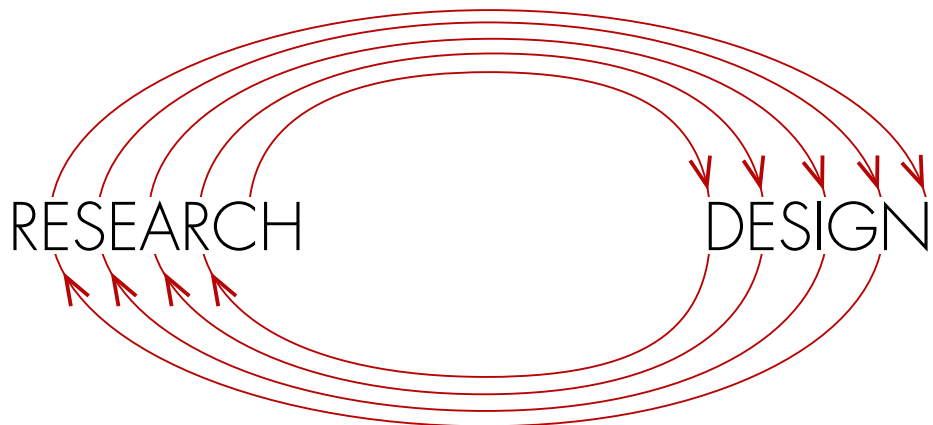
To sum it up, my concept focusses mainly on the improvement of views and the reuse of materials from the building and other old materials.

This forms also in terms of cultural value the strategy. I add value, by the improvement of the views and preserve the successful characteristics of the buildings by reusing them.

Relevance

In a wider social context, the project gains its relevance from the fact that transformation of the existing stock of industrialized, post-war mass housing is not only an emergent topic in the Netherlands. Examples can be found all over Europe. Those buildings have in common that they need transformation and improvement. Many of them are dealing with similar problems. The design project, can therefore serve as an example for the transformation of especially post war high-rise buildings.

Furthermore, the design topic of improving views is from great relevance when looking on newly build high-rise. All over the world trends show an increasing demand for dwellings, because of a growing population and an increasing living surface per person. To serve this demand the solution in cities is often to erect high-rise buildings, which results in many cities in a densely build "forest" of high-rise. The lower floors are often dealing with the same problems as found in Buitenhof-Noord. The part of the design which deals with the improvement of views can therefore be from great interest for newly build high-rise buildings.



Relationship between research and design

The part of the concept which is dealing with embodied energy, has furthermore relevance on its own and that not only in renovation projects, but also for the construction of new buildings.

It is important to keep in mind that, due to the initial embodied energy and direct carbon related savings, the reuse of a building is almost always more energy efficient than a new construction, and that even if the new construction performs more energy efficient.

It is furthermore important to pay attention to the material choice and the amount of material used. The wrong material choice in a renovation can reduce or even negate the benefits of the reuse of the building. Materials with low environmental impact are, therefore, preferable. Materials from renewable resources and materials that do not need a lot of energy for transport and production should be used.

The reuse of old materials, could have an even better effect on the environment, since those materials reached the end of their life cycle and get reused again, and they do not end up as scrap, so that toxics could get released. Instead they get a new purpose and direct carbon related savings can be achieved.

Even though the effect of a sustainable construction method might seem small on a building scale, the effect is big on a city scale, and could help to reach

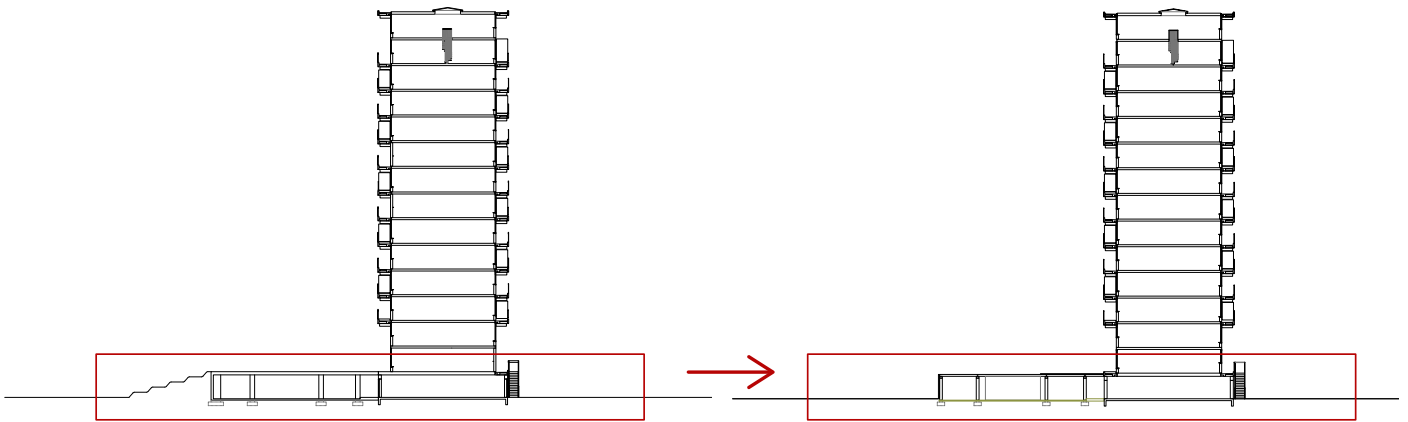
carbon saving goals.

Process

When reflecting on the design process, I realized that I did not follow my own graduation plan. I might be that it was a bit naive, that I expected a linear process between research and design. Instead, the process turned out to be more of a spiral, in which new research topics constantly arose on which the design had to be tested then.

This is also the case for the topic of reuse, which was integrated in the design already in a rather early stage, but developed further till the end. This development, made me rethink early design decision and it happened that I changed certain things till the end. I always had to judge if it is more important to improve a living quality or to keep the material input low and protect the quality of the ecosystem and the environment.

One example, where the environment was prioritized over the quality of living is about the parking. Right from the beginning of the project I was planning to hide the parking place under a hill. That hill was supposed to smoothly integrate in the green



Weighing between two design options: Parking

spaces between the buildings. But the research on embodied energy and the environmental effects of material input showed, that the amount of material, that would be needed in the construction, has a great impact on those topics. The design changed therefore just recently.

To change the composition of the building, the quality of living was prioritized over the topic of energy, and the materialization of the handrails at the top and the bottom of the building was therefore changed and concrete for the stairs of the lower maisonette apartments was added.

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