Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Mark Riepema
Student number	4604431

Studio		
Name / Theme	New Heritage (adapting twentieth century heritage)	
Main mentor	Nicholas Clarke	Heritage & Architecture (Design)
Second mentor	Lidwine Spoormans	Heritage & Architecture (Research)
Argumentation of choice of the studio	The combination of thinking about the values of post-65 heritage, which is an important theme within the heritage sector at the moment, and the ambition to find solutions for very urgent societal issues makes this studio relevant. I believe this combination addresses many of the issues that future architects and heritage professional like me will have to deal with in the near future. Also the integral and multidisciplinary approach does connect to my previous education.	

Graduation project	
Title of the graduation project	Adapting Goedewerf, an experiment with the reuse of ideas from nineteenseventies' experimental housing for the redesign of regular housing from the same period.
Goal	
Location:	Goedewerf Almere
The posed problem,	How can strategies for adaptability and appropriation as used in the experimental housing from the nineteen-seventies be reused in sustainable renovation and densification of neighborhoods from this period?
research questions and	**Research:** - What is adaptable architecture?

	- What was the program for experimental housing in the seventies? - Which strategies for adaptable architecture were applied in the projects that were part of the program? **Design:** - Why and how is densification and sustainable renovation of nineteen-seventies neighbourhoods required? - How can the found strategies for adaptable architecture contribute to this?
design assignment in which these result.	To keep good quality housing affordable in the Netherlands we are currently facing two main assignments: 1. Establishment of new homes. This problem is addressed within the TU Delft in the one million homes project. A relation with the theme of adaptability is laid by among others the Open Building network (Open Building Network, 2020). This group of architects, engineers and developers connected to the TU Delft calls for the reuse of the ideas of structuralist architect John Habraken (Habraken, 1985). 2. The renovation of existing houses to make them more sustainable. This is done in the so-called renovation wave that the European Union tries to achieve. Within the TU Delft this topic is addressed in the "renoveren met respect" project that investigates value based models for the renovation of housing built between 1965 and 1985. Within the New Heritage studio both issues are addressed together within the context of nineteen seventies an eighties residential areas. A large part of

	the Dutch housing stock consists of this type of neighbourhoods, they often have relatively much potential for densification and a their insulation and installations are currently often insufficient or outdated. In my project I want to use adaptability as a guiding theme to address these problems. This focus serves both a societal and a scientific purpose. Contemporary ideas about Open Building can be strengthened by reuse of the ideas of architects from the seventies of which the effect is already visible in their buildings. And on the other hand the adaptability of these existing building has to be strengthened to become more sustainable and house new groups of residents.

Process

Method description

The research and design methodology is subdivided in five steps, of which the first two form the research part and the following three the design. These steps are:

1. Identify different strategies
2. Investigate how they are applied

In these steps information about the cases is distracted from primary sources and secondary literature using literature study and plan analyses. This information is translated into diagrams that show the different strategies that are found and their application. The diagrams are based on the theoretical literature given below.

3. Evaluate effects on design location
4. Define a brief
5. Design an integrated plan

In the design part the outcomes of the research part are combined with the value assessment that was made using the Kamari model (see below) and the scenario study to come to a SWOT analysis. On the bases of this analysis a brief is defined based on different design scenarios. Hand sketches and physical models are used for both research purposes and as a presentation medium. Especially models are investigated as a way to present the design to residents and involve them in the design of their own houses and neighbourhood.

Literature and general practical preference

Theories and methodology on adaptability and appropriation in housing are selected from a range of authors on this subject from the last decades. The most important ones are:

Habraken, J. (1985). *De dragers en de mensen, het einde van de massawoningbouw.* Eindhoven: Stichting Architecten Research.

Van der Werf, F. (1993). *Open ontwerpen.* Rotterdam: Uitgeverij 010.

Brand, S. (1994). *How buildings learn, what happens after they're built.* London: Penguin Books.

Leupen, B. (2006). *Frame and generic space.* Rotterdam: 010 Publishers

Clarke, N. (2021). *How Heritage Learns, Dutch Public Housing Evolution in Ecosystemic Perspective.* Delft: TU Delft Open Access

The primary source for the research data were the publications about the experimental houses from the nineteen-seventies by the former ministry of "Volkshuisvesting en Ruimtelijke Ordening" in a series called Experimentele Woningbouwprojecten / Ontwerpen met Predicaat.
The following cases from these publications were selected:
1. Patiowoningen Eibergen
2. Bloemendaal-Oost Gouda
3. Molenvliet Papendrecht
4. Sterrenburg III Dordrecht
5. De Vier Vierkanten Alkmaar
6. Kuipershof Apeldoorn
7. Haesselderveld Geleen
8. Aanpasbaar wonen Nunspeet

This information is supplemented with some secondary literature about the involved architects and own experiences from site visits.

In the design and the group analysis based on a model proposed in the article of Kamari is an important base for the methodology. This model gives a holistic perspective on the valuation of renovation projects. Its functionality for heritage based projects is tested within the context of this studio. Drawings from the archive of the municipality of Almere and housing corporation Ymere as collected for the "renoveren met respect" project are another important source for this part of the project.

Reflection

With this project I hope to contribute to a number of societal issues. As explained earlier the most important ones are the current housing shortages and sustainability

issues. The project investigates if and how strengthening the adaptability of existing residential areas on the bases of strategies from the nineteen seventies could help to solve these problems.

This focus on aadaptability and appropriation of architecture relates to ideas on architectural design present within our faculty in the past and present. For example the ideas of the open building network, that tends to focus on new structures. But also themes and approaches that are typically addressed within the Heritage & Architecture section such as adaptive reuse and value based design. My project is an attempt to bridge the gap between those fields, which I believe fits very well within the New Heritage studio.

Of course my research is just a small step in this process, focusing on a very specific building type and potential solution. But the fact that the typology of the casestudy, a "bloemkoolwijk", is so widespread in the Netherlands makes it possible generate ideas that are also usable in similar neighbourhoods on other locations.