

Research by design as method for the regeneration of post-war modernist housing ensembles

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ABSTRACT

This paper is written in the light of a larger PhD research entitled BELGIAN MOMO HERITAGE ON THE RADAR – ‘Re-reading modernist housing estates: an inquiry into the value of threatened heritage sites and the possibilities of adaptive reuse as a method for re-evaluation’. Today, a considerable number of the urban settlements or high-rise estates, constructed according to Congrès Internationaux d'Architecture Moderne (CIAM) principles, are threatened with demolition following years of neglect and lack of maintenance. Notwithstanding the fact that they are all comprising discursive segments of the post-war time period, these estates are in poor (technical and social) condition. Additionally, none of them is protected, which means that the path for demolition is fully open. This research opens up some future visions by considering these ensembles as an opportunity to re-state and re-invest, instead of regarding them as an inescapable problem. The concept of research by design is used as a methodology to develop new insights. Within the framework of the PhD research architecture master students have tested the hypotheses of different regeneration scenarios on a larger scale of 13 case studies. The aim is to investigate the adaptive reuse potential of this modernist typology. This paper focuses on one of the case studies, specifically the Jan De Voslei housing complex designed by architect Jos Smolderen (Antwerp, BE). In the first part of the paper the general problem statement is introduced. In the second part, the objective of the exercise is explored, and an overview of the regeneration scenarios is explained. Subsequently, the students' results that focus on an activation of the landscape values and the so-called parasite-concept of the Jan De Voslei housing complex, are presented through drawings and isometries. In conclusion, these first outcomes of this exercise are discussed combined with a reflection and suggestion for further research.

Keywords: Middle-class Mass housing; Research by design; Modernist housing; Regeneration strategies.

INTRODUCTION

“Never demolishing, subtracting or replacing things, but always adding, transforming and utilising them.” (Druot, Lacaton, and Vassal 2004, 29).

This short paper is written in the light of a larger PhD research entitled BELGIAN MOMO HERITAGE ON THE RADAR – ‘Re-reading modernist housing estates: an inquiry into the value of threatened heritage sites and the possibilities of adaptive reuse as a method for re-evaluation’ (FWO 1116421N). The objective of this research project is to investigate the adaptive reuse potential of modernist housing ensembles and develop a theoretical framework that defines a set of strategies for intervention.

The initial ambitions of the post-war housing from the modern movement (MoMo) in Flanders, more specifically the urban settlements and high-rise estates constructed according to Congrès Internationaux d'Architecture Moderne (CIAM) principles, have undergone a critical shift in sense and meaning; moving from revolutionary constructions solving the post-war need for housing to districts where people no longer want to live. A considerable number of these sites have become fragile and vulnerable, with demolition seemingly the only path (Docomomo 2020). In my research, I aim to point out the value of these structures as discursive segments of post-war architecture (physical and cultural-historical) as well as the strategy for reusing the existing structures to give these modernist ensembles a second life and hence contributes to a sustainable approach to the built fabric.

Research by Design¹ is used as a method for both developing new strategies and testing existing ones in a variety of contexts. After an intensive inventory process², 13 case studies were chosen as representatives of the CIAM-typology in Flanders; of which two case studies (one focussing on the heritage aspect, another focussing on the ensemble and context values) are the foundation for the development of (new) regeneration scenarios by myself as a researcher.³ This paper focuses on the testing of (existing) regeneration scenarios using the example of the Jan De Voslei housing complex in Antwerp (BE). Students of the Master of Interior Architecture of Hasselt University (academic year 2020-2021) were involved in that process. The first chapter addresses the content of this exercise and the proposed regeneration scenarios. Secondly, the most refreshing and interesting design ideas of the student work are discussed. For this contribution, I focus on two of the proposed regeneration scenarios: the parasite-concept and the activation of the landscape values. In conclusion, the design results are further discussed. Additionally, a reflection on the conduct of the exercise is outlined and options for further research are suggested.

¹ The EAAE Charter for Architectural Research defines research by design as “Any kind of inquiry in which design is the substantial constituent of the research process is referred to as research by design. In research by design, the architectural design process forms the pathway through which new insights, knowledge, practices or products come into being. It generates critical inquiry through design work. Therefore research results are obtained by, and consistent with experience in practice.” The European Association for Architectural Education. 2012. “EAAE Charter on Architectural Research”. accessed 09/07/2021. <https://www.eaae.be/about/statutes-and-policypapers/eaae-charter-architectural-research/>. Further detailed information can be found in the following publication: van de Weijer, Marijn, Koenraad Van Cleempoel, and Hilde Heynen. “Positioning Research and Design in Academia and Practice: A Contribution to a Continuing Debate.” *Design Issues* 30 (2014): 17-29.

² This publication gives a detailed overview of the selection process for the 13 (and two) case studies including the defining of the selection criteria. MOORS, Marie (2020) Post-war social housing in Flanders: inventorying & research by design. In: Cafiero, G.; Flora, N.; Giardiello, P. (Ed.). *Costruire l'Abitare Contemporaneo - Nuovi temi e metodi del progetto*, p. 347 -351
. <https://documentserver.uhasselt.be/handle/1942/30450>

³ The following presentation gives an overview of the first personal results of the research by design method. MOORS, Marie (2021) ONDERHANDELEN OVER AUTHENTICITEIT: ‘ADAPTIVE REUSE’ VAN MODERNISTISCHE WOONENSEMBLES. In: Contactdag bouwkundig erfgoed, Online event, 24/02/2021.
<http://hdl.handle.net/1942/33354>

1. RESEARCH BY DESIGN AND SCENARIO TESTING - STUDENT EXERCISE

This exercise was for the first time organised in the fall semester of the academic year 2020-2021 as part of an optional, project-based research course. Each student was expected to work circa 80 hours on this assignment/project. Eight master students joined the course and worked in pairs on one chosen case-study. Guidance was organised digitally due to the covid-19 pandemic and took place every week and/or every two weeks for half an hour per group. The competences to be acquired focus on articulating a personal design language, carrying out relevant (design) research linked to a complex research question and being able to reflect in a personal and scientific way.

The project Jan De Voslei of architect Jos Smolderen in Antwerp (BE) was chosen, on the one hand because it is situated in a district that is diverse and layered in terms of typology of buildings (low, middle and high-rise) and on the other hand because of its 'context values', 'ensemble-values' and 'representativeness' of the CIAM principles. The objective of the exercise is to test pre-defined regeneration strategies (selected by the author) in order to revive the buildings and 'the space in between' the buildings. For each scenario good practices were shown and explained in a detailed way. The suggested 10 scenarios are the following: ruination, secondary/supporting volumes (parasite), reinterpretation/revising lay-out, activating landscape values, DIY (the vernacular as design motor), re-fronting, diversify/rescale/densify/reduce, the surgical intervention, reprogramming and restoration. The selection of these scenarios is based on the extensive literature review and case study analysis of the first work package of the PhD research. For the moment I only elaborate on the scenarios that are presented in the following chapter: the supporting structures (parasite) and the activation of the landscape, as those scenarios resulted in the most rich and interesting proposals. The first one is explained with the help of the project FRAC (Fonds régionaux d'art contemporain) Nord-Pas de Calais (FR) (2015) by architects Lacaton & Vassal. The basic idea of this scenario is to create a supportive (new) structure that can solve problems for the existing constructions or fulfil a beneficial role. Regarding the activation of the landscape values the two following projects were presented as good practices: Renovation Lormont (FR) (2015) by LAN ARCHITECTURE and Rosenhøj (DK) (2017) by EFFEKT, Arkitema Architects. With the activation of the landscape values, I argue for considering the non-built/in-between-space as opportunity to make connections between the built elements and its surroundings (nature/landscape, other buildings, etc.); it transcends the ground level.



Fig. 1 – Areal view of the Jan De Voslei in Antwerp. Source: Google Earth, edited by Marie Moors.

Firstly, the students visited the project-site, in order to collect photographic material and experience the place in a personal way. This visit was transcribed into detailed graphic SWOT analysis on two different scales: the building block and the district. This analysis formed the argument for their choice of the four most adequate regeneration scenarios. Simultaneously, they drew the plans of the existing situation, based on provided information such as archival drawings, photographs and isometric drawings made by students of the previous year. New design interventions were presented in alignment with the of *YellowRed*, a publication that applies clear presentation techniques in terms of transformation processes: existing situation is shown in black, demolished parts in yellow and the new design interventions in red (Boesch, Machado, and Lupini 2017).

2. REDEFINING COLLECTIVE SPACE - STUDENTS' RESULTS

This part presents a short summary of the students' results for the case study Jan De Voslei in Antwerp.⁴ This modernist residential district of circa 1200 units consists of large-scale residential blocks and three towers (currently undergoing a major renovation) as well as various collective facilities such as a municipal school and a kindergarten with the Christus Koning Church in between. Many commercial shops, a library, elderly complexes, playgrounds, sports facilities, communal centres etc. were planned but never built (due to the priority given to the urgent housing shortage). The district was constructed between 1952 and 1965, commissioned by the social housing company De Goede Woning (currently Woonhaven Antwerpen) and designed by architect Jos Smolderen (1889-1973) in collaboration with Hendrik Maes (1902-date unknown) (Van Herck and Verhelst 2016).

Based on their SWOT analysis, the students Caroline De Queker and Toke Vanhove raised the problem of the very busy traffic road A12 dividing the district without safe and easily accessible crossing possibilities. This problem will in the future be less prominent as the city of Antwerp is planning on lowering and covering the ring road of (including A12) Antwerp⁵. The A12 will be transformed into a connecting road with a new, southern tramline. Aboveground the park sites are re-connected through the green boulevard with space for leisure, sports and allotments (Segers et al. 2013, Antwerpen 2018). The students developed their interventions in line with the city plans using secondary/supporting structures as a strategy (Fig.1). Inspired by the unbuilt Golden Lane estate (1952) by Alison and Peter Smithson for post-war London, the concept of 'streets-in-the-sky' is introduced to openly question and test this modernist idea of separation of traffic routes in present time; e.g. how to deal with privacy, safety and accessibility? At the junction of the bridges collective resting points are located. This study wanted to encourage 'meeting' between the inhabitants' (and the environment), referring to the initial ambitions of collective facilities (that were never built) of architect Smolderen. In addition, the bridges also link the buildings to create (social) connection between the communities and to enlarge social control. By re-interpreting these modernist typologies of 'streets-in-the-sky' this approach touches upon the debates/critiques about modernist home life, social housing and urban structure.

These bridges lead to newly added 'green' balconies of the long block (Fig.2) (strategy: activation of landscape values), to respond to the need for enjoyable private outdoor spaces for the inhabitants. As this intervention is giving the building a more attractive and green character (responding to the green boulevard) it is also a wink at the initially planned green pergolas (never built). These balconies make connection with the surrounding landscape and end in collective open terraces on every other floor (at the ends of the buildings). This idea was also extrapolated to the other blocks as strategy and emphasizes how collective spaces can be integrated in a subtle and influencing way.

⁴ Full description and detailed history of the site: <https://inventaris.onroerenderfgoed.be/erfgoedobjecten/302578>

⁵ This project is entitled 'Over de ring', further detailed information can be found on <https://www.overdering.be/>.

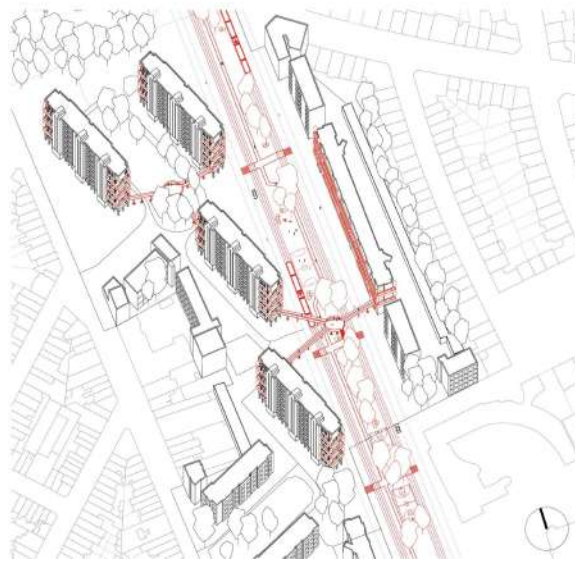


Fig. 2 - Activation-of-landscape-values-strategy: Creation of 'streets-in-the-sky' reconnects the mid-rise buildings('society) of the Jan De Voslei in Antwerp; isometric drawing. Source: Caroline De Queker and Toke Vanhove.

The students Selina Steegen and Kimberly Lievens worked on the north part of the Jan De Voslei district, focussing mainly on the high-rise buildings and implemented the same strategies: supportive parasites and activation of the landscape values (Fig.3). Their dream scenario consists of a combination of the two; more specifically, the addition of 'green' terraces in the 'armpits' of the Y-shaped towers. This intervention enables the continuation of the landscape into the building, just until the rooftop where Le Corbusier's modernist *toit jardins* are reviving. Thanks to the integration of those collective spaces throughout the tower interesting added values are discovered, such as: outdoor spaces (shared as well as private) with wide views, the enlarged connection with nature, the unexpected social interaction, more incidence of light, a new upgraded look of the building, etc.

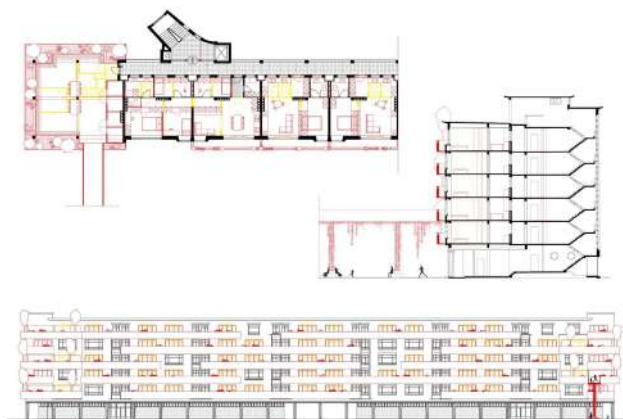


Fig. 3 - Parasite-strategy: addition of balconies creating collective open terraces on every other floor in the mid-rise buildings of the Jan De Voslei in Antwerp; floorplan, section and elevation. Source: Caroline De Queker and Toke Vanhove

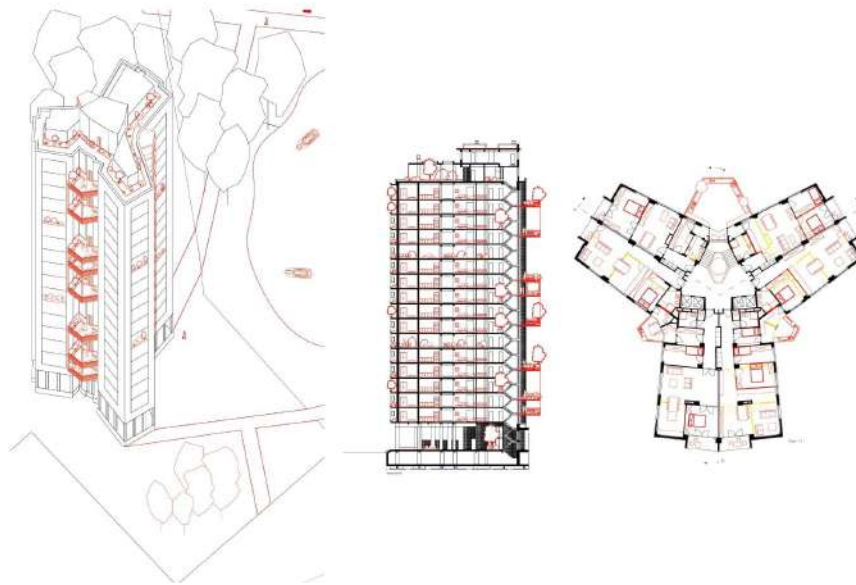


Fig. 4 - Parasite-strategy in combination with activation of nature: addition of trapezium shaped (green) balconies in the armpits of the towers of the Jan De Voslei in Antwerp; isometric drawing, section and floor plan. Source: Selina Steegen and Kimberly Lievens

3. CONCLUSION: THE SPACE IN BETWEEN FOR COLLECTIVE PURPOSE

Even though the students tested different scenarios and translated them in a personal way, there is an overall coherence when analysing the students' results: the (re)-creation of collective spaces. It is interesting to notice that they are somehow reinterpreting the initial ambition of these modernist estates which is in its essence 'living together'. How can we emphasize the word 'social' in 'social housing'? Conversely, it is also important to think about the negative consequences of the proposed designs, such as: more visibility into the adjoining (bed)rooms, noise coming from occupied balconies, those balconies shadowing the floors underneath, extra maintenance of those collective spaces, etc.

Besides, I want to openly question the role that the 'void'/negative space/'space-in-between' can play in the regeneration of modernist housing ensembles. As I am conducting research by design myself, I am strongly convinced of the potential that is hidden in the undefined green spaces around/in between modernist (high-rise) blocks on the one hand, and the addition of (private) outdoor spaces to these modernist buildings on the other hand. How can a good landscape design serve children's exuberance, invite young and old to have a walk, bring people together but also solve functional aspects (storage spaces, parking etc.) in an aesthetic subtle way?

When reflecting upon the content of the exercise itself I conclude that pre-defining the strategies in such a detailed way has negative and positive consequences. It can limit the creativity of some students, whereas for other students it was a very good incentive for their work. In every sense, an intensive follow-up and (personal) guidance was necessary to produce the qualitative drawings. A suggestion for further research would be to repeat this exercise as often as possible, in order to finetune the content of the exercise every time (e.g. rethinking the pre-defined scenarios), to enlarge the tackled case-studies (some of them described above) and to discover new possible strategies.

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