

WE LIVE ON

*Towards an Adaptable Reconfiguration
of a Social Housing*

Master Dissertation Reflection Paper
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Southside Pedestrians' View of the Moulin 41

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Abstract

A building, our architectural environment, is not limited to being a fixed, unchanging structure, it is dynamic and exists in a constant state of flux over time. The term *building* itself embodies both, the notion of an action and the result of that action.

As part of the *Real Life* master dissertation studio, which is based upon real life tenders regarding the future of existing social housing in Brussels, this project focuses on the transformation of the *Moulin 41* building. *Moulin 41* is a social housing located in Saint Josse on the corner of Rue Moulin and Rue Josaphat. Built in 1968, it is composed of 78 apartments on 13 floors. 85 per cent of the apartments are one and the same type, which still represents an outdated perspective on society and the idea that the nuclear family is considered the main social unit.

Since social housing has a significant impact on promoting social justice and equal opportunities in a society, it is all the more urgent to offer a range of diverse typologies that reflect

our different ways of living together. To achieve a lasting and sustainable transformation of the building, the set of housing typologies should be adaptable to meet the changing needs and requirements of the occupants over time.

In the context of the existing social housing the project focuses on the reconfiguration of the apartment typologies with reduced and simple interventions as the project tries to navigate between necessary refurbishment and interventions that enhance the identity and meaning of the building. In doing so, the project deals with the role of physical and socio-structural boundaries in social housing. Which boundaries are associated with negative restrictions and should be dissolved and which have the potential to become a positive threshold and should therefore be emphasized?



An Insight

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Introduction

*The heritage of many social housing in Brussels has reached a tipping point: the life cycle of various materials is coming to an end, the integration of housing in the urban fabric needs reviewing, the habitability and functionality of buildings deserve broader reflection, ...*¹

This studio is based upon real life tenders launched by the team of the Bouwmeester Maître Architecte (BMA) regarding the future of existing social housing buildings and sites, framing in a broader reflection about the future of “recent heritage” in the city, the should I stay or should I go debates and the contemporary topics of circularity and reuse. Social housing implies a series of additional topics, such as the possible continued presence of inhabitants, social and or programmatic diversity, public space and urbanity, analyzing and challenging the typologies, spatial and social interaction, etc.

The studies on these recent tenders are currently ongoing, which means that the studios can contribute to ongoing reflections and that interaction with real stakeholders are possible. Beyond the possibility of one-to-one contacts, this studio is an opportunity for debate and exchange. You will be invited to support and take part. During the semester, a couple of debate evening could be organized. After the studio, there may be the opportunity of a publication or exhibition.²

¹ bMa Brussels Master Architect, 2021

² blog-archkuleuven.be Studio introduction by Sophie Laenen and Harold Fallon



Historical Photograph of the *Moulin 41* (provided by CZVEK RIGBBY Architects)

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History and Context

Most of the social housing in Brussels was built during the 21st century. After World War II, the garden city as one of the first social housing typologies from the 1920s was gradually replaced by high-density, multi-apartment social housing, which became a tool for heavy, urban “mediocre” renovation of Brussels.³ Due to the increasing number of workers moving to the city and the economic burden on urban terrain, there was a demand for dense architecture with a small footprint, which led to a large number of high-rise projects.⁴ The social housing *Moulin 41*, a 13 storey high slightly curved disc, built in 1968 by Pierre Van Beginne, was placed in the existing perimeter development in Saint Josse, radically different from the surrounding tissue with three to four storey high single-family houses.

Until today, the social housing company Habitation à on marché (HBM) is running the building and with the exception of a few vacant apartments undergoing minor renovations, the majority of the apartments are consistently occupied. After 65 years, *Moulin 41* is in need of refurbishment as the building faces several problems. The main problems for the residents is the outdated performance of the façade, which leads to heat loss and humidity, and the outdated performance of

most of the technical equipment. By acknowledging and tackling those fundamental issues, it prompts a consideration of deeper engagement with the building at a socio-structural level. It implies a broader relevance and impact within the social context and the future of the existing social housing.

85 per cent of the 78 apartments in the *Moulin 41* building are one and the same type (two bedrooms), which still represents an outdated perspective on society and the idea that the nuclear family is considered the main social unit. A single model does not reflect the diversity in society. Instead, households vary a lot in sizes and configurations. Especially the need for larger dwellings is expected to increase in Brussels in coming years. The socio-demographic model of households therefore urgently requires an adaptation of housing typologies.⁵

In addition to renovating and replacing some technical elements, the tender calls for a rethinking of the building envelope, as the performance of the existing one is outdated. Furthermore, a reflection on the building's base and surroundings is required to address the very mineral surfaces and the disconnection from its environment.⁶

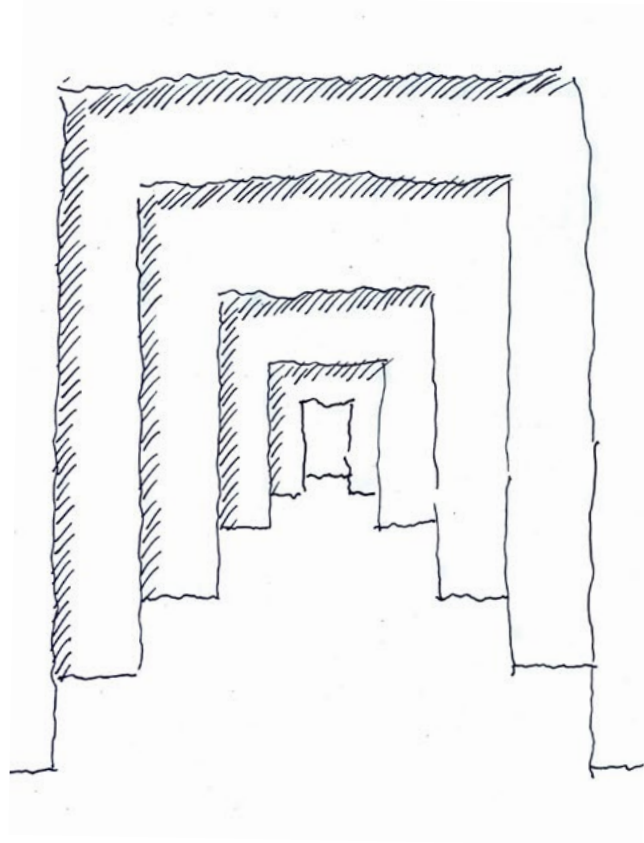
³ Vandermorten Christian, Jorissen Denis. *Le logement social à Bruxelles depuis 1919*, p. 143

⁴ Andrea Migotto. *Shaping Collective Life in Twentieth Century Belgian Social Housing*, Architecture and Culture, p. 590-591

⁵ Nawal Ben Hamou, *PLAN D'URGENCE LOGEMENT*, 2020-2024

⁶ bMa Brussels Master Architect, 2020

Theory and Conceptual Ideas



In a world where decisions regarding new buildings are linked to several issues that can have a dramatic impact on our environment, one of the main tasks for architects is to find solutions that embrace and preserve the existing qualities, rather than denying them as a base for new projects. To achieve this, it is important to recognize the value of the existing structures.

To meet these expectations and needs, existing buildings and structures must be prepared for transformation. This can be achieved through adaptable partitions or connectable rooms that allow for expansion or contraction of the unit.⁷

This approach involves implementing simple and minimal interventions with careful consideration for proportionality and balance in the transformation process of the existing. However, as architects, our role goes beyond spatial solutions; it also extends to finding social solutions.⁸

In response to social demands, the aim is to increase housing diversity by considering a wide range of housing typologies in addition to the

requirements outlined in the official tender for *Moulin 41*. This combines a pragmatic approach that addresses specific technical requirements and deals with the previously mapped boundaries.

Initiating a transformation process often requires a simple but decisive action and an architectural motif. In this project, the Enfilade serves as the central motif, embodying both connection and openness, effectively shifting the existing boundaries.

Changing the facade holds the potential to reconsider the relationship between the interior and exterior. Altering circulation patterns can provide opportunities to enhance existing qualities and meet technical needs. In this sense, the old structure serves as a model for new adjustments, while the new adjustments have the potential to serve as a model for future interventions.⁹

Consequently, it is crucial to construct the new interventions in a way that allows for potential deconstruction and adaptability, facilitating future transformations.

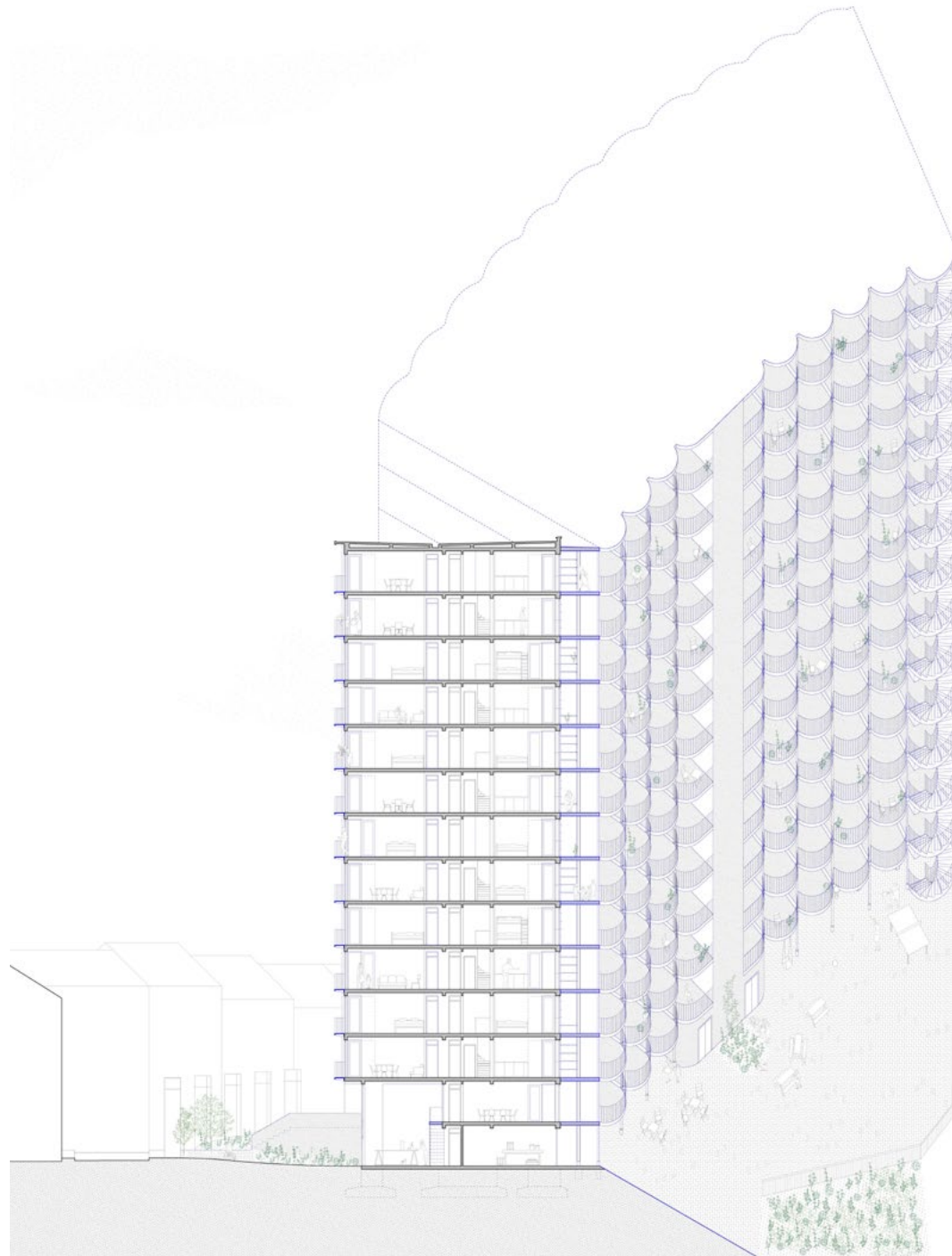
⁷ A. Friedman, *Fundamentals of Sustainable Dwellings*, DOI 10.5822/978-1-61091-211-2_3, © 2012 Avi Friedman

⁸ Floris Alkemade, Michiel van Iersel, Mark Minkjan, Jarrik Ouburg "Rewriting Architecture 10+1 Actions", p. 23.

⁹ Grafe, C. & Nordrhein-Westfalen, B. (2020).

Umbaukultur: The Architecture of Altering. Kettler Verlag Umbaukultur: The Architecture of Altering

Proposal



Section of the Proposal

As a first intervention, an additional layer was added to the back facade of the building. It allows free access to the apartments on every floor and not only on every second floor, as is the case in the existing situation. Additionally, for safety reasons and to distribute traffic evenly in front of the apartments, two new staircases and lifts are included at its respective.

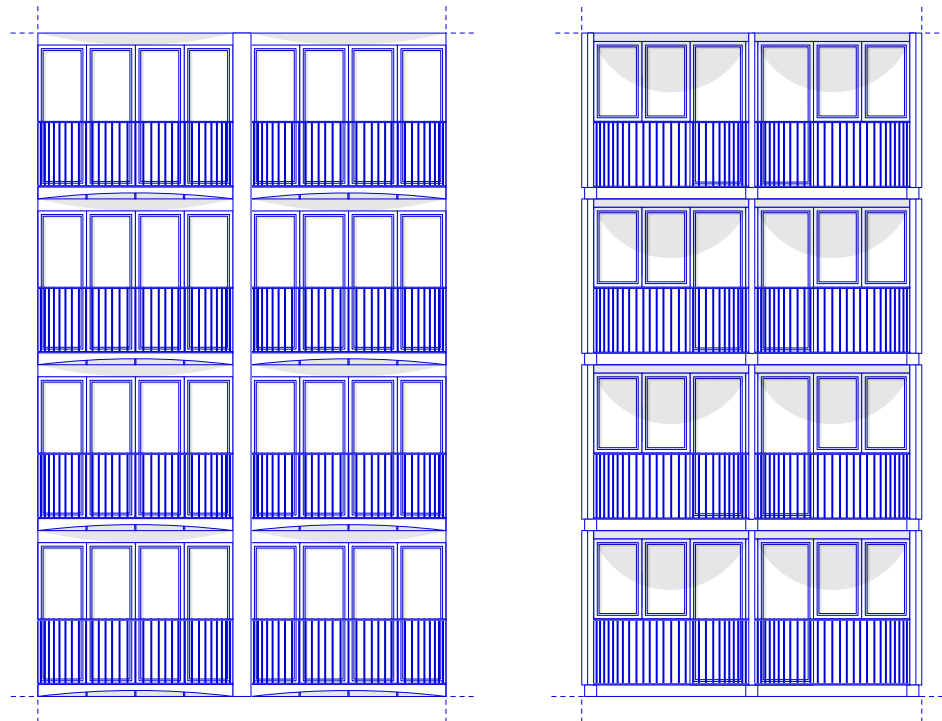
The layer comprises a public street in the middle, with balconies located in front and the private entrances adjacent to the façade. It can be described as an interconnecting element, that not only meets functional requirements but also creates a space for encounters and adds to the territorial depth of the building. Moreover, the entrances form a threshold space before entering the apartment which serve as a transition area that marks the boundary between the public and the private.

Positioned along the facade, the Enfilade not only acts as a connecting element, but also challenges the constraints of the narrow existing structure and allows more natural light to permeate the space. Consisting of two opaque glass doors between two housing units -one fireproof and one soundproof- it offers flexibility in terms of housing typologies and allows for easy adaptation in the future. It also removes the clear boundary between flats and raises the question

of whether we can live not only next to each other but also with each other. It is important to emphasise that the design does not impose the idea of openness and disregard privacy, but rather offers an opportunity and a possible shift in perspective.

Besides the enfilade as the main intervention within the apartment structure, further interventions were made. The initial question addressed how to handle existing stairs in areas where a vertical connection was not necessary because of introducing a different housing typology. A solution was found by using a drywall to divide the stairs, allocating the upper section to the apartment above and the lower section to the apartment below, usable as an additional storage space. This approach allows for the preservation of the staircase, maintaining the option for future vertical connections. If desired, the lightweight drywall can be dismantled at a later time to facilitate the reconnection.

The project also includes the renewal of the building's technical connections to improve the outdated infrastructure. This renovation aims not only to modernise the technical systems, but also to provide flexibility in the layout of the housing typology. By installing new installations for bathrooms and kitchens in all segments, the size and configuration of the apartments can be easily adapted in the future.



South - Front

North - Back

The existing bathrooms will be replaced by small bathrooms in each segment, which can also serve as storage spaces if an additional bathroom is not necessary. These storage spaces can help reduce the need for individual wardrobes and cupboards and free up living space in the apartments. Similar to the internal stairs, this intervention is designed to be adjustable in both directions.

Besides the additional insulation of the building envelope, new wooden window elements were installed. On the south facade, the old balconies in front of the bedrooms were removed to enlarge the space and create a unified appearance with the rest of the south facade. This eliminates the hierarchy of rooms behind. To accommodate floor-to-ceiling windows while meeting fire safety requirements, a small balcony was added in front of the windows, preventing fire spread. Furthermore, it allows for a shift in the relationship between the exterior and interior space and provides a small outdoor area.

To come back to the housing typologies, it is important to mention that in addition to social housing, at least 24 student housing units should also be included in the planning, which were not initially included in the studio brief but were introduced as a sudden change. This change aimed to demonstrate the flexibility and feasibility of the proposal, reflecting the dynamic nature of real-life processes.

Due to the new flexible concept of the plan, both small units for one or two students and larger shared flats can be accommodated within the framework of social housing. This integration of student housing becomes a natural part of the project without requiring additional funding. The funds that were initially allocated for student housing can therefore be used for common rooms on the ground floor and thus benefit all residents of the house equally.

These Common areas serve a dual purpose: they provide spaces for community gatherings and activities, while also offering an alternative and temporary retreat for individual residents.

Besides the common areas for the inhabitants with a terrace facing south, the project introduces two new entrances on both ends of the building. A new pathway is replacing the complex ramp in the middle and now leads through a green space that functions as a buffer zone towards the street, leading to the entrance in the center of the building.

The garages on the lower floor facing the street have been converted into a two-storey space with a ground floor above. This area will house studios and workshops that open up and thus integrate the building into the neighbourhood.



Embedded in the Urban Fabric

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Conclusion

Sometimes, a simple gesture is all it takes to pave the way for a brighter future.

Two doors can connect worlds, but they do not have to.

Starting from the investigation and mapping of different boundaries and their qualities around the *Moulin 41* this project aimed to transform and shift these boundaries with reduced and simple actions including one architectural motive, on the level of built matter, but also on the level of society as both are dependent on each other.

Based on the assumption that buildings should constantly adapt to changing external and internal circumstances, the proposal does not aim to create a fixed and final image. Instead, it provides food for thought and presents a design variant. This approach offers a potential glimpse into the future, prioritizing adaptability and flexibility. By embracing the transformation process, the proposal avoids striving for a rigid and unchangeable result.

The motive of the enfilade not only provides the new arrangement of the appartement types but also creates an

architectural quality that brightens up the narrow segments by dissolving the boundary. On the northern side the territorial depth and the qualities of the gallery hallway is used as a positive notion which is enhanced in the new circulation. The southern facade rewrites the relation between the inside and the outside of the appartements with the small balcony.

The openness that this approach entails creates spaces that provide opportunities for appropriation. Especially in the context of often overregulated social housing this provides a new perspective.

The proposal, in itself, may not be used as a general framework for social housing refurbishments since the interventions were developed very precisely based on the specific observations made and in dialogue with the existing structure. However, the approach can provide an impetus and be transferred to other refurbishment projects and setting the transformation process in motion.

I see it as an enrichment and a great opportunity to have worked on a real life project and to be part of a contemporary discourse, as the final project of my Master's degree.

Bibliography

Source 1:

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Source 2:

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Source 3:

Vandermotten Christian, Jorissen Denis. Le logement social à Bruxelles depuis 1919, p. 143

Source 4:

Andrea Migotto. Shaping Collective Life in Twentieth Century Belgian Social Housing, Architecture and Culture, p. 590-591

Source 5:

Nawal Ben Hamou, PLAN D'URGENCE LOGEMENT, 2020-2024

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Source 9:

Grafe, C. & Nordrhein-Westfalen, B. (2020). Umbaukultur: The Architecture of Altering. Kettler Verlag Umbaukultur: The Architecture of Altering.

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