

A MASTERPIECE THROUGH THE LENS OF CONTEMPORARY CHALLENGES

MORGANE BOS

~

Located in Laeken, in the northern part of the Brussels region, the *Cité Modèle* is one of the few examples of large-scale social housing projects listed in the regional heritage inventory today. Its history and qualities have been widely documented, highlighting both the exceptional conditions of its inception in the context of the 1958 World Expo and its unique urban and architectural design features.

For the past twenty years, a major renovation campaign of the social housing stock has been underway, as buildings designed during the *Trente Glorieuse*¹ period are progressively reaching the end of their first life cycle. This trend is particularly noticeable in Brussels, as in other European cities, where a wide range of intervention practices can be observed, from demolition/reconstruction to meticulous and respectful conservation of the original buildings.

In Brussels, the *Cité Modèle* is in the spotlight. This contribution examines the approach adopted on the *Core* and, more specifically, the three towers around the *Place Haute*. These buildings, emblematic of their location, typology and constructive features, are currently undergoing a complete replacement of their envelopes.

1. A SOCIALIST UTOPIA IN THE WINDOW OF THE WORLD

The long history of the *Cité Modèle* begins in 1954, within the context of preparations for the 1958 World Expo, whose theme - 'For a Better World' - reflects the optimistic spirit of the time. It took place on the Heysel Plateau, also known as the Centenaire, where the centennial of the *Flat Land*² had been celebrated two decades earlier.

1 The term refers to the thirty-year period from 1945 to 1975 in France, marked by rapid economic growth, rising living standards, and significant social transformation following World War II.

2 'The *flat land*' refers to a song by Jacques Brel, 'Le Plat Pays,' which poetically describes the landscapes of his native Belgium.



Fig. 1. Unknown photographer; The model of the Cité Modèle on display at Expo58; Fond Renaat Braem; Archives d'Architecture Moderne, photographer unknown, Brussels, Belgium.

At that time, post-war society was still dominated by traditional values and lifestyles. Still, Brussels embarked with conviction upon the era of modernity, particularly under the impetus of the renowned socialist deputy Fernand Brunfaut, who saw in the project of the *Cité Modèle* an opportunity to develop a model of affordable housing at Expo's expense, thus breaking with tradition where 'the emphasis is too often placed on sumptuous palaces, rich ephemeral pavilions, and spectacular buildings.'³

The exposition aimed to show visitors from all over the world Belgium's innovation in terms of housing and urban planning with the ambition of providing widespread access to modern comfort and promoting living in high-rise buildings located in the outskirts of cities, featuring large communal green spaces dedicated to recreational activities.

³ F. Brunfaut, *Letter to the socialist party*. 4 march 1955. Fond Brunfaut. Box n° 141. Institut Emile Vandervelde, Bruxelles 1955.

2. BRAEM AND THE COLLEGE OF ARCHITECTS

At the end of 1955, a commission appointed six architects selected for their previous achievements and their political and regional affiliations. These architects included two Flemish, Renaat Braem and Victor Coolens; two Walloons, the duo l'Equerre and René Panis; and two representatives of Brussels, the group Structure and Jean Van Doosselaere. The protagonists were guided by Renaat Braem, a leading figure of the modern movement and a former disciple of Le Corbusier, who, from the outset, saw in the project the perfect opportunity to experiment and apply his socialist ideology. Braem's big dream was to achieve total architecture in his projects, a complete organisation of the human environment. He perceived architecture as a powerful societal lever. He was convinced that the city, with its intimidating external monumentality and internal serenity, would

reorganise social relations⁴ and thus 'create a 'liberated' socialist society.'⁵

3. FROM THE 'IDEAL' CITY TO THE 'PROFITABLE' CITY

This utopia gave rise to the radical plan of the *Cité Modèle*. As originally planned, the project is exemplary in that the designers were able to 'maintain the purity and integrity of their intentions.'⁶

According to Bontridder, four key ideas are particularly important in the original design of the *Cité Modèle* and would have ensured its resolutely human character.⁷ The first is orthogonality: the architects indeed designed the city on a grid where the right angle reigns supreme, a way, according to him, to ensure that 'chance, the unexpected, and slackness never tarnish their work.' Secondly, the living barriers: in order to guarantee its integrity against 'urban anarchy,' the city was designed as a compact, self-contained organic unit, isolated from disorder by the alignment of long blocks. These blocks create permeable barriers, as they are punctuated by numerous access points. No cars penetrate the heart of the city, thus creating an 'oasis of calm and contemplation.' Thirdly, the architectural use of natural relief: the designers took advantage of the sloping terrain to organise the outdoor public spaces. While three large towers and commercial establishments border the *Place Haute*, *Place Basse* is intended as the culmination of the cultural axis, encompassing schools, a library, a church, and a social and civic centre. The entire area is unified by a large park equipped for play, sports, meditation, relaxation, and walking. Finally, there are distant

and close views: various housing types were planned for the site, including single-family homes and high-rise buildings. Each dwelling was designed to offer either short- or long-distance views of the vegetation and tree canopies of the park, with high-rise residents enjoying expansive panoramas of the Brussels region.

The project was only partially completed when the Expo began in 1958. After the initial enthusiasm for the exhibition, budget restrictions and housing demands significantly impacted the project. The architects were compelled to eliminate numerous collective infrastructures to prioritise a substantial increase in housing density. As a result, the qualities mentioned above were gradually eroded in the second part of the construction.

The plan remains characterised by the three vertical towers (blocks I, II, III) that define the *Place Haute*, three peripheral towers (blocks IV, V, and VIII) marking the three peaks of the park, and a barrier of two horizontal blocks (VI and VII) running along *Avenue des Citronniers*, establishing the boundary with the traditional 19th-century urbanism. All of these buildings were completed by the mid-1960s. On the other hand, the single-family homes initially planned as a *cordon à redans*⁸ in the north of the site were replaced by low-cost apartment buildings (blocks IX to XII) in the 1970s. As for the collective facilities, they were drastically reduced. Neither the two schools, the church, the sports hall, nor the library were built on the site, whereas the cultural axis envisioned by the designers also disappeared from the execution plans. Only the cultural centre was eventually built several years later.

Despite these disappointments, which leave a bitter taste in the *Cité Modèle*'s history, it stands today as a rare testament

4 A. Collet, M. G. H. C. D. B. (2014), *La Cité Modèle à Bruxelles. Vie(s) d'un grand projet (The Model City in Brussels: Life(s) of a Major Project)*.

5 René Braem: *Les aventures dialectiques d'un moderniste flamand*.

6 A. Bontridder, "La Cité-Parc du Heysel" (*The Heysel Park City*), in *Habiter: Review Published by the National Housing Institute*, Brussels, 1958, pp. 407-421.

7 Ibid., pp. 415-421.

8 In Le Corbusier's urban vocabulary, the term refers to a planning approach involving a boundary with staggered or indented building lines to optimise light, ventilation and spatial diversity.

'to the reasoned boldness of Belgian builders and the evolution of social and human architecture in our country.'⁹ In 2006, it comprised 12 buildings with a total of 1,026 occupied apartments, housing 2,206 residents, making it one of the largest social housing estates in the region.

4. MODERNITY ON EVERY SCALE

The *Cité Modèle* project stands out as a masterpiece where modernity is reflected in its typological design, construction features, materiality and the articulation of its facades, especially in the first phase of construction, the *Core*, which remains the truest to the original design.

4.1. TYPOLOGY

Dominating the site from their 16 floors at 60 metres high, Towers I, II, and III were built on pilotis to free up the ground and ensure a degree of permeability. A key element in the original urban planning concept is that the towers guarantee the connection between the landscape and the dense urban environment. The typical floor plan offers a certain variability in the types of apartments, allowing a mix and interaction of diverse family configurations.

At each level of the building, an open-air gallery runs along the length of the building, providing access to the apartments. This gallery is comfortable in terms of dimensions, allowing residents to meet each other and be appropriated as a shared outdoor space. Its design, 35 cm below the interior floor slab, prevents any risk of water infiltration and promotes the privacy of the apartments, all of which are traversable and, therefore, lit from the gallery side. The joineries on the open-air gallery side are made with white lacquered wooden frames, alternately incorporating voids and solids filled with thick panels of bakelite wood in a reddish tone.¹⁰ Furthermore, the position of these joineries,

minimally exposed to the elements and easy to maintain, encourages their good preservation over time.

The vertical circulation elements, including stairs and elevators, are contained within an adjacent structure, expressed on the facade by a more enclosed concrete volume. One of the facades is covered by a longitudinal asbestos cement claustra.

4.2. CONSTRUCTION

Although the architects had not necessarily planned to use prefabrication in their original design, it became obvious at the time of the tender for economic reasons. And it turned out that the project adapted perfectly to industrialisation methods.¹¹ The *Cité Modèle* thus represents the first large-scale prefabrication experiment in Belgium, utilising two types of processes: the Baretts and Cauvet processes. The Baretts process pertains to all structural elements of the building, including facade walls, partition walls, floors, and stairs. The elements are cast 'flat' in their exact dimensions directly on-site, in reinforced concrete moulds on the ground of the construction site. They are then lifted and positioned to dry for a few days. These elements incorporate as many technical and sanitary installations as possible and finishing elements, such as door frames, requiring extensive preliminary studies and meticulous execution. This process, used for the complete construction of Towers I, II, and III, was deemed slow and costly. It was subsequently replaced by the Cauvet process.

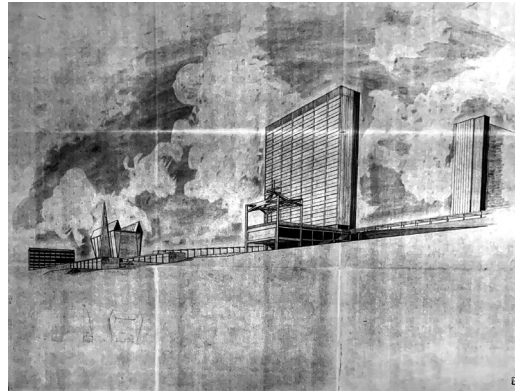
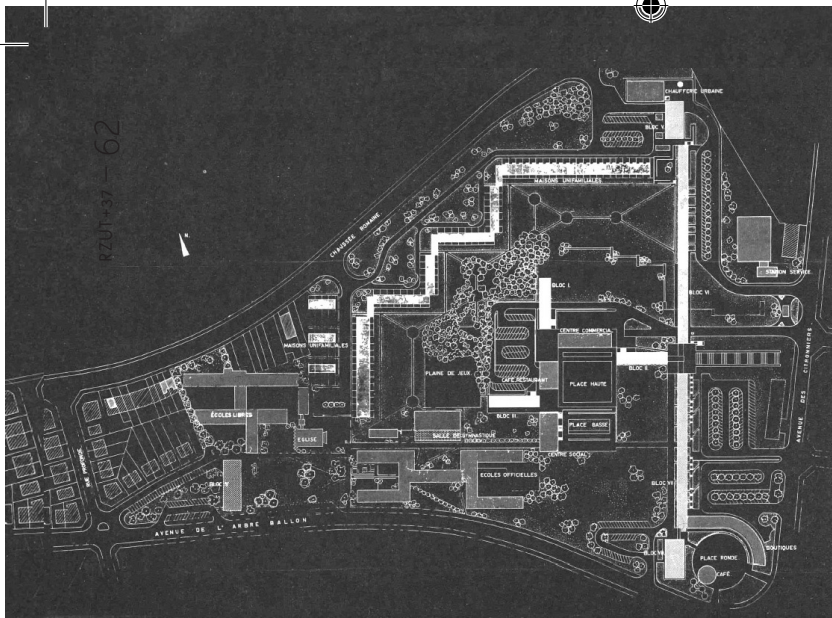
The structures of Towers I, II and III consist of 20 cm thick structural partition walls spaced 5.60 m apart. In addition to transmitting vertical loads to the reinforced concrete porticos cast on-site (pilotis), they also play a role in bracing the structure.¹² Furthermore, their design results in a logical internal organisation

⁹ A. Bontridder, op. cit., p. 407.

¹⁰ Impregnated with synthetic resin.

¹¹ Puttemans, p. 168.

¹² Novogrodsky, p. 272.



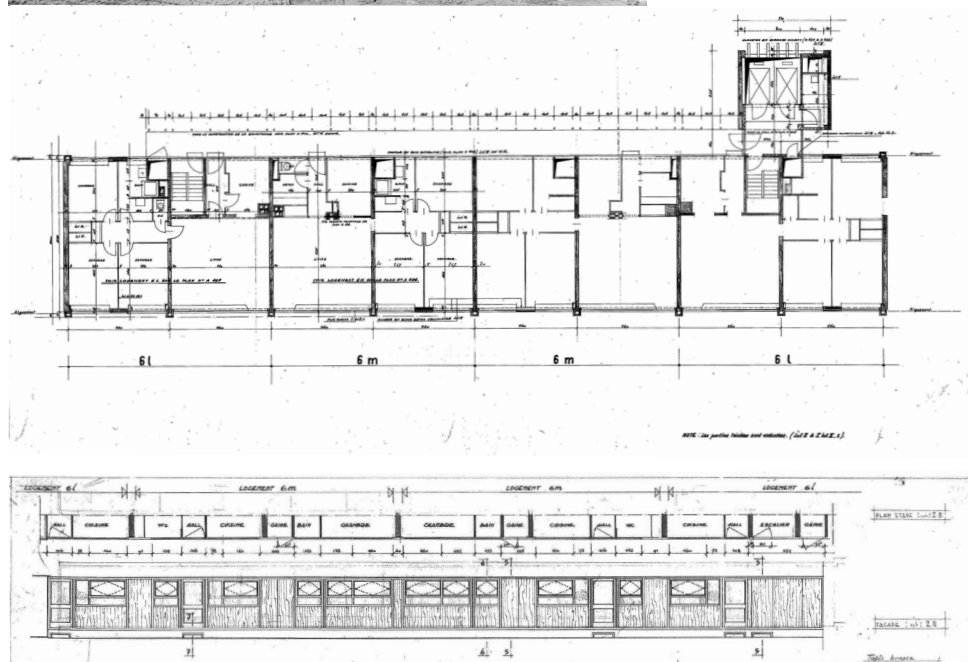


Fig. 2. The model of the Cité Modèle on display at Expo58; Fond Renaat Braem; Archives d'Architecture Moderne, Brussels, Belgium. Unknown photographer

Fig. 3. Original plan of the Cité Modèle; «La Cité-Parc du Heysel» by Albert Bontridder; Habiter, revue éditée par l'Institut national du logement, sept. 1958, p.414.

Fig. 4. Graphic researches for the integration of a sculpture in the Cité Modèle; Fond Renaat Braem; Archives d'Architecture Moderne, Brussels, Belgium. Renaat Braem

Fig. 5. Heysel Park Neighbourhood; Fond Renaat Braem; Archives d'Architecture Moderne, Brussels, Belgium. Unknown photographer

Fig. 6. The three towers (I, II, III) finally erected; Fond Renaat Braem; Archives d'Architecture Moderne, Brussels, Belgium. Unknown photographer

Fig. 7. Cité Modèle ' Tower I - Typical floor plan; 1958 ; Archives of Foyer Laekenois, Brussels, Belgium. Renaat Braem & al.

Fig. 8. Cité Modèle - Tower 1 ' Bakelite wood façade; 1958 ; Archives of Foyer Laekenois, Brussels, Belgium. Renaat Braem & al.

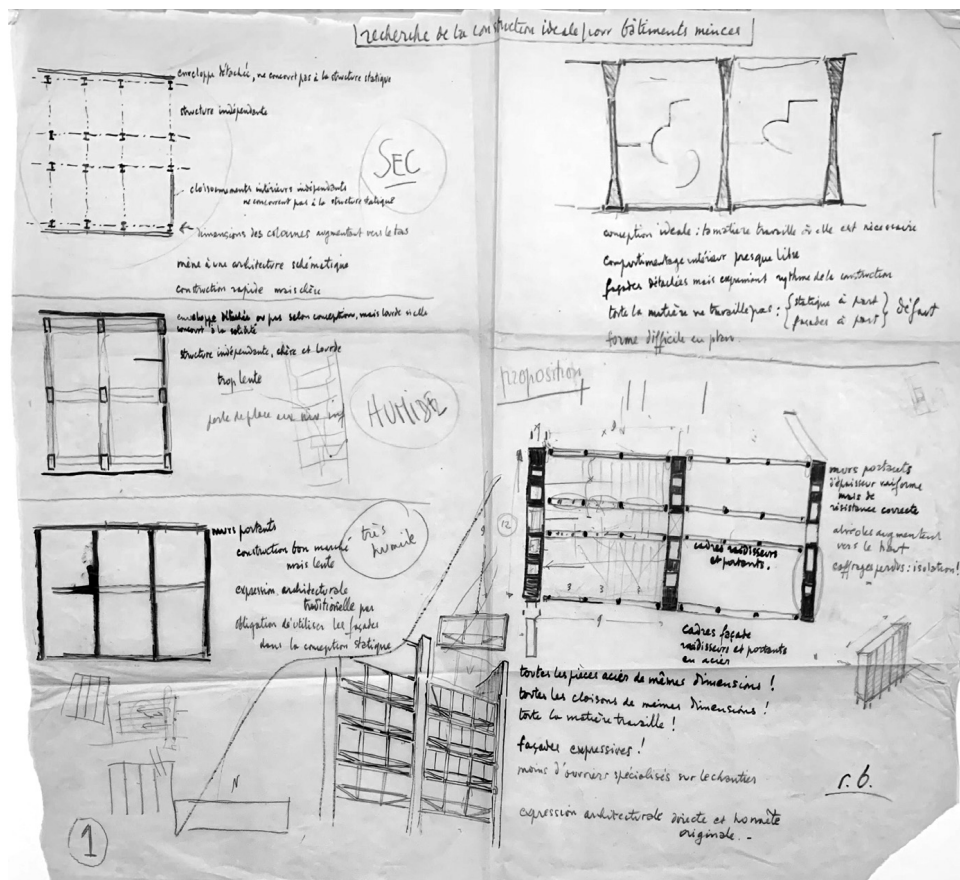


Fig. 9. Graphic researches for the constructive process; Fond Renaat Braem; Archives d'Architecture Moderne, Brussels, Belgium. Renaat Braem



Fig. 10. The Core of the Cité Modèle at the time of Tower's II construction; Archives of Foyer Laekenois, Brussels, Belgium. Unknown photographer

and well-proportioned apartments, contributing to acoustic insulation between the different units.

4.3. FACADE DESIGN

The design of the main facades, covered with curtain walls composed of an aluminium frame supporting synthetic panels and thermopane double glazing, is particularly remarkable. With a rhythm that harmoniously alternates solid and void sections in the same alignment, only the vertical concrete piers of the partition walls stand out, marking the boundary between different housing units.

On the other facade, the design of the balustrade covering the open-air gallery reproduces the rhythm of the curtain wall, with five spans of 104 cm alternating with a 40 cm span aligned with the partition walls.

The monumental flanking facades are also crucial to the building's expression. Designed as 'sculptural walls,' perched on pilotis and punctuated with a few rare openings, they generate a soaring effect and appear as a slender rock or natural monolith.¹³

In this resolutely modern composition, materials and techniques are distinctly expressed with perfect transparency.¹⁴ Both aluminium and concrete, in their various forms, are used in their raw state without the need for cladding or other artifice.

5. A MANIFESTO. VALUES AND RECOGNITION

By examining Aloïs Riegl's concept of the Monument and its intentional character, Steven Van den Bergh, who would later be involved in the renovation of the *Cité Modèle*, considers that 'that new architecture was the result of a critical consideration of the present one at that time.' He adds that 'we cannot say that the Modelwijk is just designed by people who were unconscious of the legacy that you make when one designs a building, as a statement of the culture of that time.'¹⁵ According

to him, it is more of a 'vision' than an intentional commemoration, and the project should be received as a manifesto.

Historical perspective allows us to appreciate the values of a monument through the lens of our contemporary perception. Today, it is evident that the *Cité Modèle* constitutes a rare documentary testimony. It is a significant example and one of Belgium's earliest large-scale collective housing experiments in modernist style. It is comparable to the Kiel district in Antwerp (designed by Braem, construction began in 1949) and the Droixhe district in Liège (designed by EGAU, 1955). Functionalism is valued as an advantage for the modernist city, contributing to urban diversity rather than promoting uniformity. Certain urban design elements, such as the central square surrounded by communal infrastructures, the distinction between pedestrian and automobile traffic, and the integration of water features and art into public spaces, are reminiscent of the urban plan of Chandigarh (Le Corbusier, 1950-1965).

Nevertheless, the *Cité Modèle* is now subject to a dual reception. On the one hand, architectural historians appreciate its exceptional character, recognising it as a utopia shaped by societal changes over the years, which adds to its documentary value. Consequently, it has been featured recently in numerous publications. On the other hand, it houses a very impoverished population - a result of an imposed social policy - and its introverted design is often criticised as a factor of exclusion for its residents. In addition, the removal of collective and cultural infrastructures contributed to the neighbourhood's exclusion and the isolation of its residents.

6. A MASTER PLAN FOR SHAPING THE FUTURE

In the early 2000s, as the buildings reached the end of their first life cycle, the Foyer Laekenois, the principal owner, decided to undertake a significant renovation of the Cité. Faced with technical, environmental and societal challenges, the stated

¹³ Van den Bergh, p. 65.

¹⁴ Ibid., 26.

¹⁵ Ibid., 62.

Fig. 11. Detailed view of the reinforced concrete porticos at the entrance to Tower III; « La « Cité modèle » du Heysel à Bruxelles » by L. Novgorodsky; La technique des travaux, septembre-octobre 1966, p. 264. Emile Sergysels and Pierre Dietens

Fig. 12. View of the Tower III open-air gallery façade took from the car park; « La « Cité modèle » du Heysel à Bruxelles » by L. Novgorodsky; La technique des travaux, septembre-octobre 1966, p. 258. Emile Sergysels and Pierre Dietens





Fig. 13. Tower I - Detail of the plinth with the pilotis supporting the building and freeing up the ground; « La « Cité modèle » du Heysel à Bruxelles » by L. Novgorodsky; *La technique des travaux*, septembre-octobre 1966, p. 263. Emile Sergysels and Pierre Dietens

Fig. 14. The façade of Tower II ' view from the future Place basse; Fond Renaat Braem; Archives d'Architecture Moderne, Brussels, Belgium. Unknown photographer

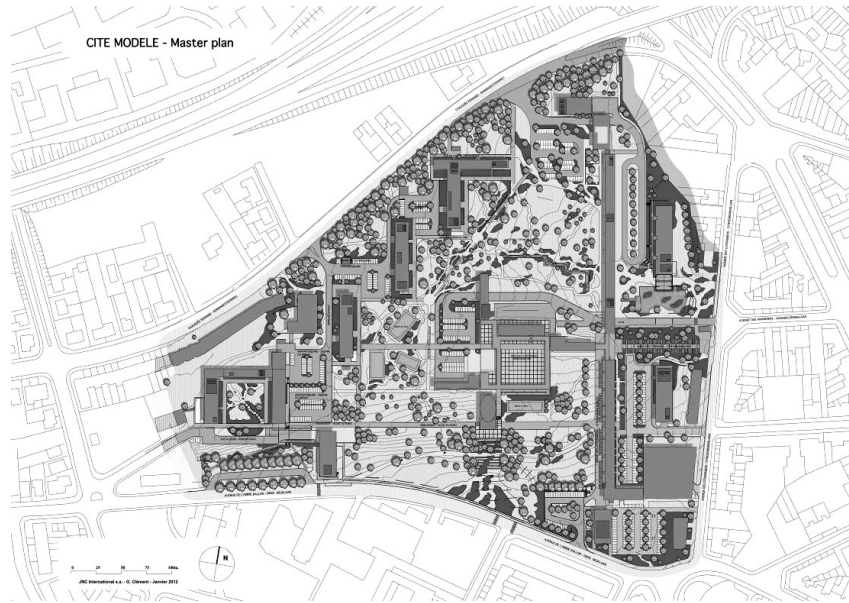


Fig. 15. Master plan of 2006; Archives of Foyer Laekenois, Brussels, Belgium. ARCHI+I & al.

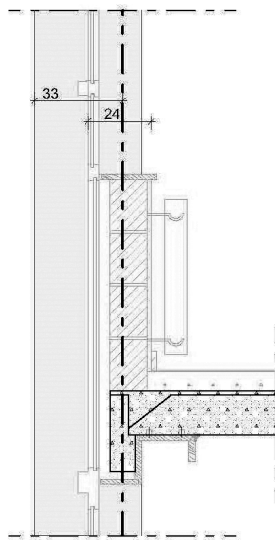


Fig 15A
Section through the main facade
(curtain wall) - Original design

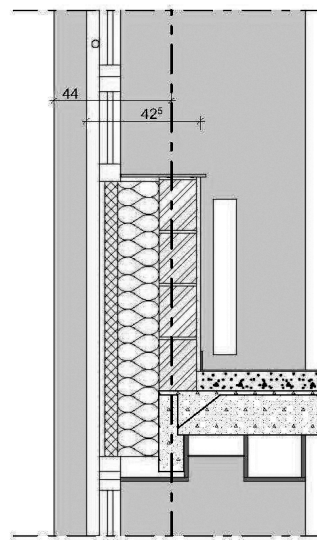


Fig 15B
Section through the main facade
(curtain wall) - Envelope replacement

Fig. 16. Sections in the facade of Tower II with demolished and new components
redrawings based on cross-referencing of various archive documents. Morgane Bos, 2024.



Fig. 17. View of the new joinery units on the open-air gallery of the newly renovated tower II; Alexandre Bossard 2023.



Fig. 18. South facade of the newly renovated Tower II; SLRB 2023.

aim of the refurbishment was to ‘preserve the expressiveness of the buildings while modernising them technically.’¹⁶ The goal was to maintain and strengthen the overall unity of the site, as originally planned, but without necessarily seeking uniformity.

A new college, composed of three renowned Belgian architects, was formed. Their first task was to develop a *master plan* ensuring a coherent long-term vision. The plan stands out for the rigour of its historical analysis, entrusted to the expertise of Wessel De Jonghe, which serves as the basis for decision-making. It is characterised by its flexibility and openness, even its dynamism over time, allowing it to adapt to evolving situations. The guidelines aim for a diversity of intervention methods depending on the different sectors and their state of conservation, as well as the fidelity of their realisation to the original concept. They structured the *Master Plan* around four distinct fields of action: the *Core*, the *Ring*, the *In-betweens* and the *Carpet*. (1) They considered that buildings of the *Core*, which refers to the heart of the Cité, as they are the oldest and the most exemplary, should have been carefully restored, respecting the original architectural concept. (2) Regarding buildings located in the *Ring*, they have been subject to a more straightforward intervention: stripping, extension, and new facades. (3) The *In-betweens* refer to the community facilities. While the original plan envisioned the development of a cultural axis in the southern part of the site, along Avenue de l’Arbre Ballon, the *Master Plan* primarily focuses on addressing the barrier created by buildings VI and VII by diversifying public amenities and shops along Avenue des Citronniers. Moreover, it aims to revitalise the squares by concentrating public amenities such as the library, a meeting centre, a medical centre, etc. (4) Regarding The *Carpet*, which means the landscape project, its aim

is to maintain and enhance the character of the park while ensuring continuity of the landscape between and beneath the buildings. Strengthening this continuity should make it possible to open up the pedestrian perspective and more subtly invite walkers from neighbouring districts to enter the heart of the Cité. In line with this concept, a large garden staircase was created by landscape architect Gilles Clément.

7. RECONSIDER THE CORE OF THE CITÉ

Since most of the *Core*’s apartment surfaces met contemporary housing requirements, the original typologies could be largely maintained. Only a few units were downsized in terms of capacity to comply with current standards.

The most important interventions concern the building envelope. Given the above-mentioned design qualities and the use of materials and techniques considered avant-garde, the *Master Plan* proposed intervening on materials and details ‘only where this would result in a significant improvement in quality and where such intervention can be carried out without seriously compromising the historic qualities.’¹⁷ Eighteen years later, Tower II is the first of the three towers to be completed, with interventions now considered very extensive.

On the one hand, the entire *mur écran*¹⁸ has been replaced with new aluminium profiles, which, following an identical composition to the original, alternate between thermal-insulating glazing and white enamelled panels instead of the original Chamebel panels.¹⁹ On the other hand, in 2016, architects embarked on a study to compare several intervention scenarios on the facade of the open-air galleries in

¹⁷ ARCHI+I & al, *The Cité Modèle Master Plan*, Brussels 2011, p. 82.

¹⁸ Term used in the 1950s to refer to curtain walls.

¹⁹ Chamebel was a Belgian company specialised in pioneering innovative designs and manufacturing methods for window frames and glass curtain walls, including the use of extruded aluminum sections and automated production processes.

¹⁶ S.c. Le Foyer Laekenois. *Appel d’offre général, Marché d’étude*. Archives of the Foyer Laekenois, Brussels

relation to several criteria (heritage, structure, functionality and accessibility, fire safety, sustainability, insulation, cost). Despite various options considered, the team highlighted the damage observed on the concrete slabs (carbonation, crumbling, cracking) as well as the issues with accessibility for people with reduced mobility (PRM) and insulation to justify a complete replacement of the walkways, whose height has been lowered to 15 cm below the interior ground level. These walkways will now be mechanically anchored to the facade beam, allowing continuous external insulation. Consequently, the entire balustrade has been completely replaced.

The study also focused on the wooden joinery units, recognised as an important aspect of the original design, as they demonstrated the architect's intention to create a contrast between the aluminium facades, which were seen as rather austere, and the walkway facades, which were envisioned to be warm and inviting. The decision was made to replace the existing wooden joinery units with an aluminum system, thus promoting long-term durability and, above all, minimal maintenance requirements.

CONCLUSION

The *Cité Modèle* is a rare example of the few social housing buildings embedded in the collective memory and whose heritage value is acknowledged. Research works, particularly those conducted by Steven Van Den Bergh and Wessel De Jonghe, have contributed to this recognition by highlighting the unique characteristics of that 'grand ensemble' in historical, urban, typological, and constructive terms, as well as its social value. Currently, the site is listed in the heritage inventory of the Brussels-Capital Region. Although this listing does not serve as a protective measure, it nevertheless draws the attention of public authorities when interventions are proposed and automatically requires that the urban planning permit application be

reviewed by the municipal consultation commission, which may refer to the Royal Commission for Monuments and Sites if necessary.

However, in practice, when normative interests come into play, the listing in the inventory does not protect the building's authenticity, which can be entirely compromised with a well-argued case from the design team. The *Master Plan* for the renovation of the *Cité Modèle* foresaw a series of intervention approaches, corresponding to the level of authenticity of each construction phase on the site, which can be likened to a juxtaposition of philosophical attitudes towards the existing structures. According to it, the project for the three towers of the *Core* was supposed to be the most modest and respectful of the building's identity. Nevertheless, Towers I, II and III were completely emptied of their residents and entirely refurbished. While the new facade composition closely resembles the original in form, it diverges significantly in the use of materials, a distinctive feature of the construction period.

The case of the *Cité Modèle* is yet another demonstration that political authorities struggle to fully appreciate the effectiveness of minimalist interventions that respect architectural particularities, even when these are publicly recognised. Numerous examples throughout the Brussels region illustrate that the normative requirements outlined in project specifications are so numerous that designers find it challenging to integrate all objectives into a coherent, balanced, and reasonable whole. In this ostensibly 'multi-criteria' approach, heritage considerations are often relegated to the background. More flexibility would, therefore, be welcome when addressing the crucial challenges of sustainable development. By valuing discreet interventions tailored to the local context, authorities could not only preserve architectural heritage but also promote more subtle and potentially more effective sustainable practices •