

TACKLING SUSTAINABILITY IN MODERN HOUSING NEIGHBOURHOODS

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ABSTRACT.

Recognised since 2007 as a UNESCO World Heritage Site owing to its exceptional 18th century urbanism and architecture, Bordeaux (France) also features emblematic districts representative of diverse modern trends. After World War II, and benefiting from the national stature of its mayor, the city underwent major transformations to ensure its place as one of France's major metropolitan centres.

Multifunctional slab neighbourhoods (Mériadeck) flourished on “tabula rasa” terrain, while smaller, dense row-housing projects (Pontet-Lamartine), reflecting a “reasoned modernity”, took root in the first ring of the emerging metropolis. Built on the cusp of the oil crises, these “all-automobile” neighbourhoods subsequently witnessed the growth and densification of the Bordeaux Metropolis and must now face the harsh judgment of sustainability that governs urban design. What place do these modern districts occupy in the contemporary metropolis, and how can they evolve with regard to their inhabitants' practices, and perceptions?

This contribution addresses these questions by sharing the results of a two-year joint research programme. We focus on two modern districts that, despite their contrasting dimensions, typologies and locations, share urban qualities and a strong potential for change. They also demonstrate their residents' commitment to accomplishing a physical and moral rehabilitation for this heritage, while meeting the challenges of sustainability on a metropolitan scale. The interviews and the architectural and environmental surveys carried out during our research are used to show how inhabitants' involvement both preserves and adapts their modern heritage to better anchor it as a component of the sustainable metropolis.

1. POST-WAR MODERN NEIGHBOURHOODS: A SECOND-CLASS' HERITAGE?

Recognised since 2007 as a UNESCO World Heritage Site owing to its exceptional 18th century urbanism and architecture, Bordeaux (France) also features emblematic districts representative of diverse modern movements. After World War II, and benefiting from the national stature of its mayor, Jacques Chaban-Delmas, the city underwent major transformations to ensure its place as one of France's major metropolitan centres and to foster its citizens' fulfilment in a modern world. This modern urban environment both embodied the progress and development of the “Trente Glorieuses”,¹ and complemented the outdated — but majestic — historic city centre in terms of functionality and mobility.

Thus, multifunctional slab neighbourhoods flourished on “tabula rasa” terrain, while smaller, dense row-housing projects, reflecting a “reasoned modernity”, took root in the first ring of the emerging metropolis. Built on the cusp of the oil crises, these “all-automobile” neighbourhoods subsequently witnessed the growth and densification of the Bordeaux Metropolis. They sometimes face the harsh judgment of sustainability, which governs the design of the “sustainable city” of the future. Indeed, Bordeaux recently regained its splendour during the mandate of the Mayor Alain Juppé (former French Prime Minister) with the return of the tramway, the landscaping of the Garonne riverbanks, and a

strong ambition to promote dense housing development and soft mobility solutions. As a result, the modern housing neighbourhoods are commonly described as “energy thieves”, hampered by their brutalist architecture. Today they represent a second-class heritage.

Though difficult to manage due to their large scale and architectural details, and expensive to renovate although they are recent, is this existing heritage obsolete? What place do these modern districts occupy in the metropolis and how can they evolve with regard to their inhabitants' practices and representations?

This contribution shares the results of a two-year joint research programme (2017–2019) conducted by the PAVE and GRECCAU Research Centres (ENSAPBx) and the University of Cincinnati (DAAP). It shows two modern neighbourhoods that, despite their contrasting dimensions, typologies, and locations, share urban qualities and a strong potential for change. Mériadeck (1951–1980), in the very centre of Bordeaux, is a deck-and-tower scheme with separate circulation systems and cross-shaped towers that overlook one of the first protected heritage areas in France. Pontet-Lamartine consists of 28 patio row-houses (1970–1971). The owner-residents are proactive in promoting their modernist heritage and in developing civic life, for example joining forces to safeguard amenities such as shops, services, shared public spaces, and a park open to a rapidly densifying surrounding neighbourhood.

This paper discusses the spatial and urban qualities of



Fig. 1. Meriadeck, J. Royer, J. Willerval and P. Lagarde architects, Bordeaux (France), 1951–1980. © A'Urba, 2007.

modern post-war neighbourhoods, as created by their designers, which can be described as sustainable today. Combining an objective and a subjective approach, our work reveals specific urban features in these districts that, rather than confirming their obsolescence, demonstrate their value in terms of uses quality. Finally, we highlight the inhabitants' commitment to achieving a physical as well as a moral rehabilitation for this heritage they appreciate, while meeting the challenges of sustainability on a metropolitan level.

2. TWO MODERN NEIGHBOURHOODS: COMMON STRENGTHS, DIFFERENT FATES

During the “Trente Glorieuses”, France engaged in a policy claiming housing as a right for all. This was a decisive change, as little importance had been given to housing since the creation of the HBM companies (Low-Cost Housing, 1889) and the Loucheur law (1928). To achieve this ambition, architects had at their disposal theoretical models developed by hygienists during the 19th century. The Culturalists, following on from Site and Howard, took as their reference the irregular composition of the medieval city and small-scale garden cities. The Progressists extended the scientific approach of Haussmann, Cerda, Garnier, with large urban blocks and their abstract composition influenced by Neoplasticism.

The CIAM IV led in 1933 to the Charter of Athens, which banned traditional architecture and town planning in favour of regularity and geometry, the separation of functions and flows, space, clean air, and sunlight. Few cities in France applied it strictly, except for Firminy Vert, where the mayor, Eugène Claudius-Petit, Minister of Reconstruction and Town Planning (1948–1953), praised Le Corbusier's ideas. The influence of the Charter of Athens, however, became a major

reference for architects and building owners, as testified by the Mériadeck district (Bordeaux). The mixed housing, tertiary and commercial areas, up on a high slab reserved for pedestrians, are detached from the historic city and the traffic. The master plan, divided into squares linked together by footbridges, is composed of cruciform buildings based on a functionalist approach and solar and thermal considerations. This clear break from the classical city reinforces the insular character of this new district, although both have been included in the UNESCO perimeter since 2007.

Beside this large urban and architectural complex, criticised for its extreme density and out-of-scale aesthetic, detached housing extends to the periphery and participates in the urban sprawl. Mixed housing settlements, with small collective and individual units, are seen as an alternative. The Pontet-Lamartine neighbourhood (Pessac, P. Calmon — AUA studio) addresses this concern for urban development on a human scale with small terraced residential buildings and row-houses with a patio gathered around green relaxation areas. It contributes to the experiments of this period by combining intimacy and density while assuming a modern architecture consisting of flat roofs and purist design.

These modern creations received more blame than praise when they were built, but the passage of time has revealed their uses quality and their heritage value. Mériadeck's central location is all the more remarkable today as Bordeaux has expanded. At the heart of an area of shops, services and cultural life, its tree-lined slab offers a world in itself: a unique urban promenade, with no streets, avenues or squares, it does indeed — in the traditional sense of the word — have the city at its feet. The typology of the towers with their vast balconies enables residents to be in touch with the green canopy of the park and to enjoy a splendid view over Bordeaux (Fig. 1).



Fig. 2. Pontet-Lamartine, P. Calmon architect, Pessac (France), 1970. © Google, 2017.

Although overtaken by urbanisation over time, Pontet-Lamartine continues to enjoy its preserved outdoor collective spaces thanks to its *non aedificandi* buffer zones. Less generous in recent developments, these unbuilt and intimate spaces contribute to the social interactions of the inhabitants, and the spacious halls and patios provide transitions between public and private life that can be personalised (Fig. 2).

The urban composition pattern, using an assembly and offset arrangement (checkerboard pattern), ensures that homes are not overlooked, while bringing light, sunshine and openness to the landscape, in line with the architects' persistent hygienic concerns. On the basis of a few typical housing units, repetition becomes a pretext to create diversity into uniformity.

The abundant housing typologies proposed by the Modern Movement appeal to different profiles (families with young children, disabled or elderly people, students). This represents a first step towards social diversity and inclusion when other typologies and locations unintentionally exclude these profiles. Moreover, these neighbourhoods' capacity to change — from housing to activity and vice versa — and evolve to welcome new uses and users adds to their qualities of sustainability.

3. A SUSTAINABLE LIVING ENVIRONMENT FOR ITS INHABITANTS

This conceptualized modernity is confronted with the inhabitants' daily activities, not only with their life as neighbours and citizens, but also with issues that could not have been imagined at that time, such as energy transition, the era of soft mobility or urban densification. Nevertheless, the living environment in these two disparate neighbourhoods still demonstrates qualities in terms of mobility, amenities, and atmosphere.

In Mériadeck, property prices have long remained lower than in the historic centre, because of its architecture considered brutal and dated in its design. However, benefiting

from larger flats, very accessible with numerous amenities, living in modern architecture is felt to be a real opportunity. With its covered car parks, convenient pedestrian access and multiple public transportation options in the congested city, the inhabitants experience the city without the usual cares of city life. In fact, the "all-automobile" slab and the urban planning in general still truly complement the historic centre. For Pontet-Lamartine, the inhabitants' satisfaction is related to the amenities and numerous transportation options more than the location itself: the metropolitan ring road, the tram system cyclable lanes contribute to its sustainability. Modern post-war districts now manage parking differently, without eliminating it entirely. In Mériadeck, underground car parks are used by local residents, shoppers and local companies who need a vehicle for their business. Pontet-Lamartine provides garage and street parking, easing the city traffic and complementing families' new lifestyles.

Vast built spaces and highly structured unbuilt surroundings are typical of the Modern Movement. They complement each other as a counterpoint to the fully built-up older districts or the contemporary neighbourhoods, offering commercial or sports facilities that enhance the residents' and neighbours' quality of life. These "voids" also favour the emergence of interesting uses: green island cores, slab ends, and planted alleyways create transitions between private and public spaces, conducive to meetings and individual uses.

Coming from a farming background [...] we like to stay in a green setting, to be at home while having close neighbours (Pontet-Lamartine).

There is everything you need: car parks, much larger apartments than you wanted, a caretaker, elevators, a garden... the most extraordinary effect here is that you enter via a garden (Mériadeck).

The amenities, the spatial flexibility to adjust to today's needs, the quality of the urban atmosphere sustain local life

and proved themselves highly efficient during the confinement. Far from the “usual” drawbacks of urban living such as noise or heat, their location near or in the very heart of the city centre makes them a resource in an otherwise very mineral environment. Dense buildings combined with the strong presence of vegetation limit the heat island effect, which was not identified at the time these Modern districts were first conceived. Mériadeck and Pontet-Lamartine’s summer comfort is particularly conducive to the practice of outdoor activities, even in periods of high heat. Their central cores are also very quiet sound environments, protected from one of the main sources of noise in the urban environment, i.e. traffic. “The slab urbanism concept in relation to the street is very clear: no cars, no noise, that’s for sure, it’s a real comfort” (Mériadeck).

Bordeaux is composed of disparate parts — the charming stone city, the ecological contemporary settlements — where the architectural and urban land reserve of the Modern districts contributes fully to the city’s sustainability, fluidity, and functionality. Up to the architectural scale, the patio-house typology, the gardens, the free-plan and modular design guarantee a potential for expansion that is greatly appreciated when, for instance, the concrete skeleton and slab of a tower in Mériadeck is recycled in order to develop new office space or flats. Mériadeck and Pontet-Lamartine are secretly popular for these types of urban and architectural use, a bulwark against the obsolescence of modern districts which is quite rare in today’s constructions and not often known by the urban services. Nevertheless, residents are generally very careful to preserve the urban and architectural homogeneity and details. Renovations are carried out for the most part in accordance with the original design, which is perceived as truly qualitative. The way in which this post-war heritage is viewed and understood is essential to the potential sustainability of the modern legacy.

4. THE INHABITANTS, GUARDIANS OF THE SUSTAINABLE MODERN HERITAGE

For its spaces, but also for its cultural and social value, modern town planning is now mobilising its inhabitants. Our research shows that people discover the qualities of modern urban planning by practising it for themselves. The inhabitants therefore maintain and adapt it by both respecting and optimising the existing architecture and urban plan. First, as they “awaken to architecture” by living in their modern district, they try to maintain and optimise the amenities, keeping the idea of the original design and concept expressed in this modern urban piece. In addition, they enliven these neighbourhoods, sometimes confronting experts or city professionals to draw attention to the necessary (moral and physical) rehabilitation of the modern districts in order to better anchor them in the metropolis. In addition to the maintenance of the neighbourhoods, the purpose behind mobilising the residents is to set up collective projects

for heritage or sustainable development (social or environmental projects) directly related to the modern conception of space. These cultural or ecological projects are led by the most committed inhabitants of the modern districts, such as representatives of the district co-owners, experts in the urban history of Bordeaux. Some projects are initiated by the residents’ association “Safeguarding Mériadeck”, which promotes modern heritage as an example and inspiration for building the attractive city of tomorrow. Notably, its founder created the **docomomo** files for Mériadeck and is a member of Bordeaux’s UNESCO council. Other projects try to optimise the sustainability assets of modern heritage in an “evolutionist” way, even if it means incorporating contemporary technologies or practices that exploit modern potential: the 5th façade for renewable energies; planted areas on the slab to develop shared vegetable gardens, and activities for the surroundings. Defenders of modern urban planning highlight the original collective dimension of energy management (geothermal energy, waste collection) and the generosity of the modern project, which is still operating today although undermined by a strict regulatory framework and what is felt as a disinvestment by the public authority with regard to this urban planning: “When they made Mériadeck, they thought of a collective management of energy, waste, traffic, and parking. That’s what’s interesting: today what’s left of that?” (Mériadeck).

Indeed, in a context where city actors are often perceived as reluctant to make greater use of modern urban planning, our research demonstrates the driving role of the inhabitants in the recognition of such complexes. They are essential levers for leading these areas — and the city — towards greater sustainability, through their detailed knowledge of the specific features that make modern districts interesting, but also through their commitment to act in and around these neighbourhoods. Raising awareness and supporting these inhabitants in the management of their modern heritage seems essential if they are to effectively lead it towards a brighter future. Although bearing the value of this heritage themselves, they are nonetheless helpless when it comes to carrying out a large-scale project with a cultural vocation (applying for the Remarkable Contemporary Architecture label), or energy-related (building insulation or renovation), or a social issue (mediation or neighbourhood development project). This results in the decision to close down these districts — closure of the “esplanades” in Mériadeck — or in the fragmentation of responsibilities for maintaining common spaces, as it is quite difficult to determine which is the leading authority. When lacking a consensus on which aspects must be preserved or on the methodology to follow in such operations, post-war modern housing neighbourhoods and their owners find themselves under threat despite their labelling or their commitment as inhabitants. As this quotation shows, raising awareness without ensuring that all the stakeholders can discuss together may be vain.

“This is the third year that we are fighting, [that] we are working with the associations so that this basin can be restored. And there’s no question of turning it into a grassy area again!” (Mériadecq)

5. SUSTAINABILITY, THE KEY TO POST-WAR MODERN NEIGHBOURHOODS REHABILITATION?

The modern project certainly did not materialise as originally imagined. The contemporary city, with its densification and environmental preservation issues, has caught up with these modern districts which must now prove their worth and their qualities in order to resist and exist in the urban fabric.

The values of modernity continue to convince its main stakeholders: the inhabitants and users. These post-war neighbourhoods are synonymous with a quality of life and a specific sustainability that require, on the one hand, a rethinking of the quantitative and normative criteria used to renovate the existing modern housing stock with a view to optimising it, and on the other hand, better integration of the inhabitants’ work and expertise in order to take advantage of the legacy of modernity in the city of tomorrow. In this sense, the modern project continues outside the avant-garde context, as a starting point for appropriations that can bring its spirit back to life, thereby updating the quest for progress from a more environmental but equally holistic perspective.

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NOTES

- 1 The Mériadecq and Pontet-Lamartine settlements were developed in the context of the “Trente Glorieuses”, a term devised by the economist Jean Fourastier to describe the period during which France sought to deal with the shortage of housing and amenities due to the war and the human consequences of decolonization and globalization.

