

# Lassagne

Renovation, extension, and maintenance of three former buildings of the Lassagne middle school, with the aim of accommodating a school group, the Caluire Jeunes leisure center, and the AMC2 music school.

CLIENT

City of Caluire-et-Cuire (Project Owner)  
SPL OSER (Delegated Project Owner)

TEAM

Patriarche (Architecture, All-trades Engineering – TCE)  
Autumn | Patriarche (General Contractor)  
Partners  
Engie Solutions (HVAC maintenance and works)  
Mobius (Reuse)  
EODD Ingénieurs Conseils (Energy and environmental engineering)  
Euclid Ingénierie (Restoration)  
ABC Décibel (Acoustics)  
The Good Factory paysage & co (Landscape)  
3D visuals : © Virtual Buidling

KEYPOINTS

Preservation of existing structures (buildings and landscape)  
Low-carbon construction (reuse, timber framing, bio-based materials, etc.)  
Bioclimatic design and consideration of summer comfort

The project strikes a balance between reusing former school buildings and extending them, in order to completely rethink the site. This approach helps reduce the carbon footprint while also creating an 'oasis courtyard' at the heart of the project.

A key feature of the design, this courtyard brings together the two schoolyards, giving pride of place to nature and coolness. It forms part of the ecological corridors that run east to west through Caluire-et-Cuire, weaving connections between the lush vegetation of the Balmes de la Saône and the private parks and gardens of the Caluire urban fabric. A clear address on the public space and the landscaped alleyway give the project a legible organization and anchor it in its residential context.

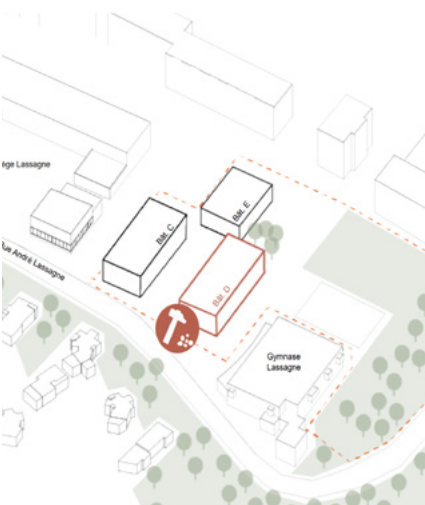
A place of learning, transmission, rest, and calm, the school is also a lively, vibrant, and inspiring environment. The spaces are designed to foster both concentration and play, offering recreational and stimulating experiences: their spatial qualities contribute to awakening the sensory perceptions of young children. To meet the diverse uses and activities that take place in a school, the project allows for great adaptability of the spaces.

Typology	Construction cost	Status
Education	15 M€	Ongoing
GFA	Location	Type of contract
5 112 m²	Caluire-et-Cuire, France	GPP (Global Performance Contract)





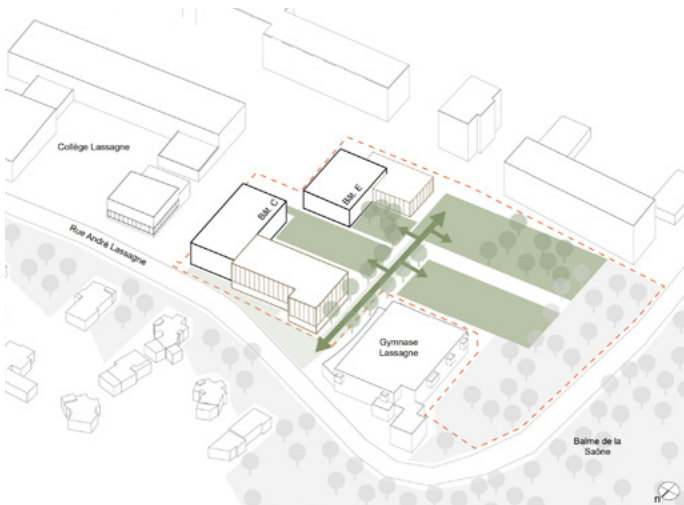
# A renovation adapted to new uses



In this project, it is the voids—such as the schoolyards and entrance sequences—that have structured the layout of the site.

Building C has been extended. In direct connection with the public space, it houses the AMC2 music school and the Caluire Jeunes association. It thus helps create a new, structured and legible built frontage. The school group, meanwhile, is located at the heart of the site, within buildings C, E, and the extension of the latter. This positioning protects it from urban noise and activity. It is accessed via a landscaped, pedestrian-only, and secure alleyway.

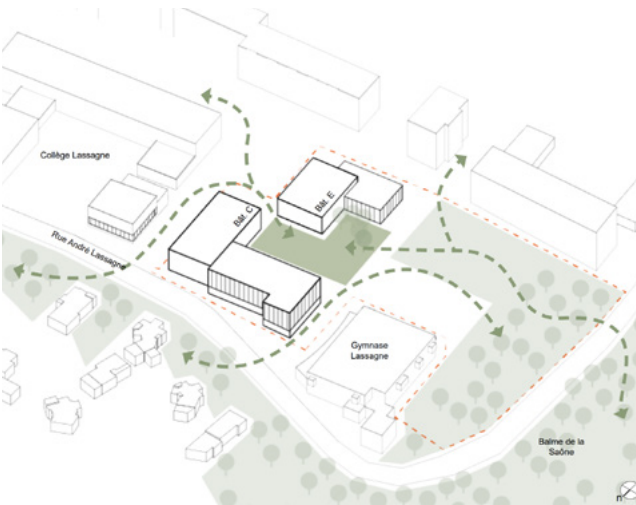
This organizational choice and functional distribution across the site led to the demolition of one of the original buildings, opening the project to the west and to the landscaped open space.



The renovated sections adopt an architectural language similar to that of the extensions, creating a coherent, welcoming, and attractive architectural landscape.

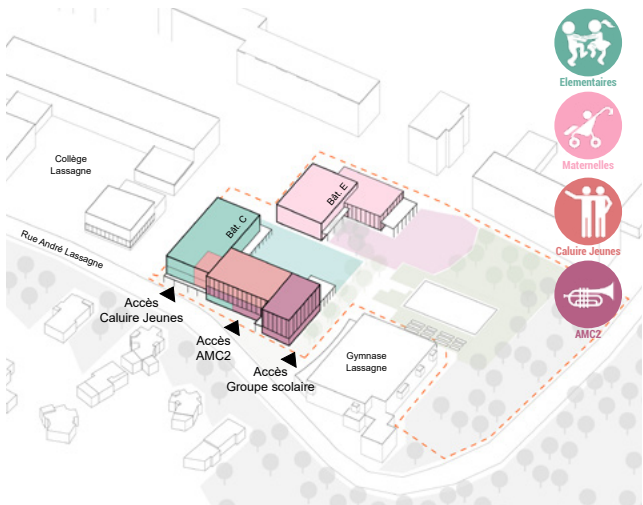
The project establishes a harmonious dialogue between the refurbished parts and the new extensions, embracing a design approach rooted in restraint—highly relevant today: reusing as much of the existing structure as possible, building only when necessary, and doing so in the most sustainable way. In the end, 60% of the existing floor area is preserved and rehabilitated. To align this sustainable approach with user needs, each building and each courtyard has been designed to correspond to a specific functional unit.

Acting as a green spine, the landscaped alleyway structures the site, guiding movement and organizing functions in depth, all while preserving the calm and clarity of the main forecourt.



## Oasis schoolyards" to preserve nature

The two schoolyards naturally find their place within the overall site layout, at the heart of the project. Special care has been taken to preserve all remarkable existing trees—especially the pines—which are maintained and enhanced with new plantings. In these Oasis courtyards, nature and coolness take center stage: permeable surfaces, vegetable gardens, play areas and equipment integrated into the landscape, rain gardens, and dense vegetation...



## The project separates spaces dedicated to pre-school and elementary students

This clear separation of student flows—between the “little ones” and the “older ones”—as well as the differentiation of entrances and schoolyards, is considered essential for the comfort and safety of young users. A secure access and a shared “school path” (the landscaped alleyway) preserve the site's iconic pine trees.



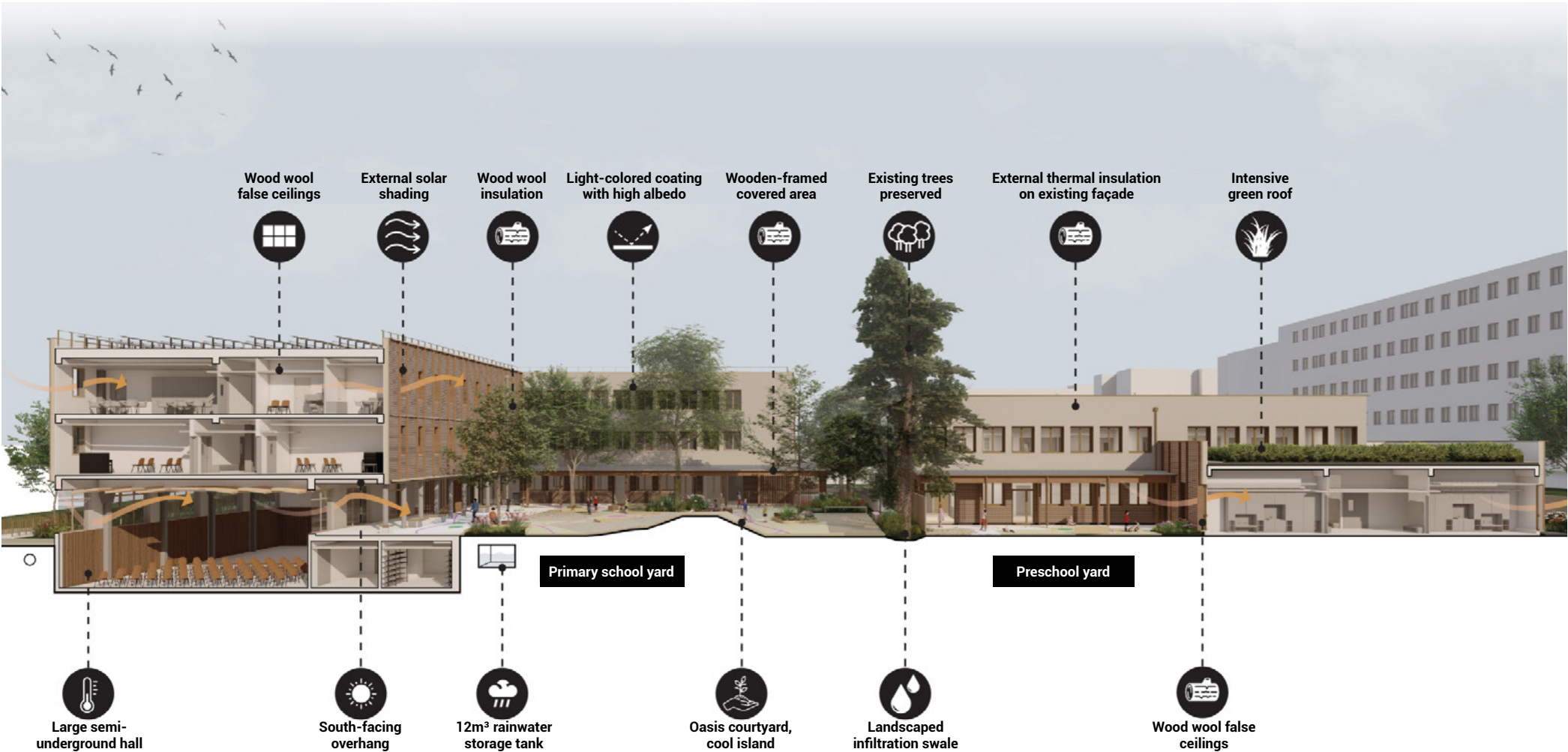
# A low-carbon construction

The first step toward a low-carbon project was to preserve two of the three existing buildings.

All interventions were designed with a focus on user comfort (natural light, functionality, acoustics, thermal comfort) and a strong environmental ambition. To achieve high energy performance with a reduced carbon footprint, several strategic choices were made: a strong landscape vision with a strategy to reinforce existing ecological corridors, preservation of existing trees, creation of "oasis courtyards" acting as permeable cool islands, and rainwater harvesting for irrigation.

## Extensive use of wood

Timber-framed façades, wood cladding, wood-fiber acoustic ceilings, interior finishes, and joinery... The use of wood creates warm atmospheres and reflects a strong environmental commitment, both in new construction and in renovation.



## A bioclimatic approach

The bioclimatic design focuses on reducing energy needs through solar protection, potential natural ventilation, and insulation. In parallel, the project uses "clean energy" sources, such as a rooftop photovoltaic plant and connection to the district heating network. One of the buildings also features an intensive green roof (40 cm of fertile substrate), integrated into the overall landscape strategy.

## Special attention to summer comfort

With adiabatic cooling modules on air handling units, night-time free cooling, and the addition of ceiling fans.

Overall, the project's reuse strategy resulted in a waste reduction of 24,000 tons and a carbon savings of nearly 100 tons.





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