

LyonTech-la Doua campus

Refurbishment and extension of 22 buildings on the LyonTech university campus.

CLIENT

Lyon University

TEAM

Patriarche (Architecture)
Associated architects: RR&A, HTVS
Partners :
WSP, Berim, Arcora, Cyprium, Inddigo, Dekra,
Eiffage Construction

KEYPOINTS

Multisites.
Modernized premises.
Preserved architectural identity.
Work on occupied site.
L1,L2,L3 laboratories.

SUSTAINABILITY

Certivéa HQE tertiary rehabilitation certification.
Green worksite charter.
Energy-efficient rehabilitation.

By rebuilding on itself, the LyonTech-la Doua campus brings together prestigious institutions such as Université Claude Bernard Lyon 1 and INSA de Lyon.

These buildings, with their strong heritage, were originally designed by architect Jacques Perrin Fayolle, engineer Jean Prouvé and visual artist Denis Morog in the 1950s. The campus needed to be rehabilitated to meet today’s requirements in terms of environmental quality, safety and functionality.

We have broadened the scope of our thinking and ambitions to include the entire campus, so as to create a genuine environmental, social and technological dynamic and coherence for the campus of tomorrow.



Typology Rehabilitation, Equipment, Education, Laboratory	Construction cost 120 M€	Status Delivery 2022
GFA 136 188 m²	Location Villeurbanne, France	Project delivery Design and production

Comprehensive refurbishment on an occupied site

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Construction choices

Construction choices were guided by simplicity of installation, energy performance and the durability and reliability of the chosen technique. The metal extensions and external walkways ensure easy separation and recycling of products at the end of their life. In the same vein, the external insulation of the facades and roof consists of unglued insulation.

Controlled construction

The project’s environmental quality is also reflected in the measures taken during construction to limit the nuisance and pollution generated and ensure site cleanliness.

The objectives of this approach were to guarantee a clean worksite, minimise inconvenience caused by the movement of worksite vehicles, minimise noise pollution from the worksite, limit pollution for local residents, workers and ecosystems and, lastly, ensure the selective management and collection of waste, with the aim of recovering at least 50% of the total mass of waste generated by the worksite.

Equally, the aim was to maintain the activity of the laboratories, without impacting on the work of the researchers.

Integrating technology

The project’s main focus features plug-type extensions. These simple, monolithic structures are built against the gables of the buildings (photo right) and house the vertical circulation systems and certain storage areas for hazardous products. This arrangement limits the impact of the worksite on the operation of the site and facilitates the redevelopment of the interior spaces, making it possible to integrate the fluid networks needed to provide high-performance laboratories. Some teaching and laboratory floors have been completely refurbished.

The flat roofs have been redesigned and planted over an area of around 8,000m2. The technical equipment on the walkways and roofs is clad in metal screens.



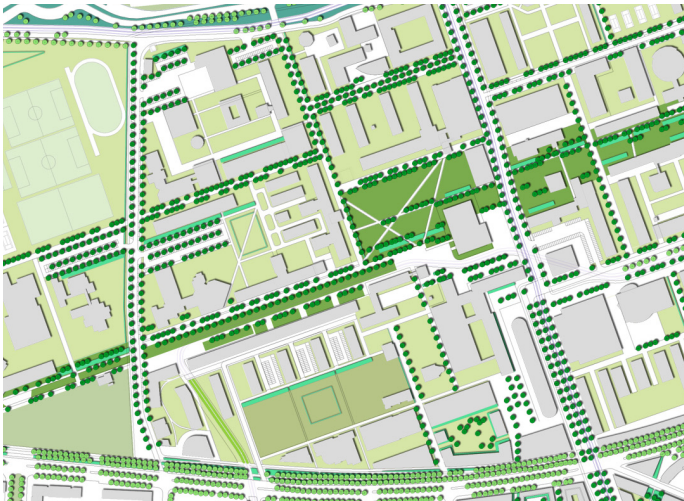
Preserving and enhancing the existing fabric



The majority of the work involved refurbishing the façades and external areas.

Works inside the refurbished buildings have been kept to a strict minimum: renovation of sanitary facilities, installation of mechanical double-flow ventilation and fume cupboard compensation, restoration of false ceilings in corridors and insulation of certain gables from the inside. Work has also been carried out to comply with safety and accessibility standards at various levels (staircases, fire detectors, ramps and signage, handrails and handrails).

This complete overhaul has reduced energy consumption by 40%.



Landscape

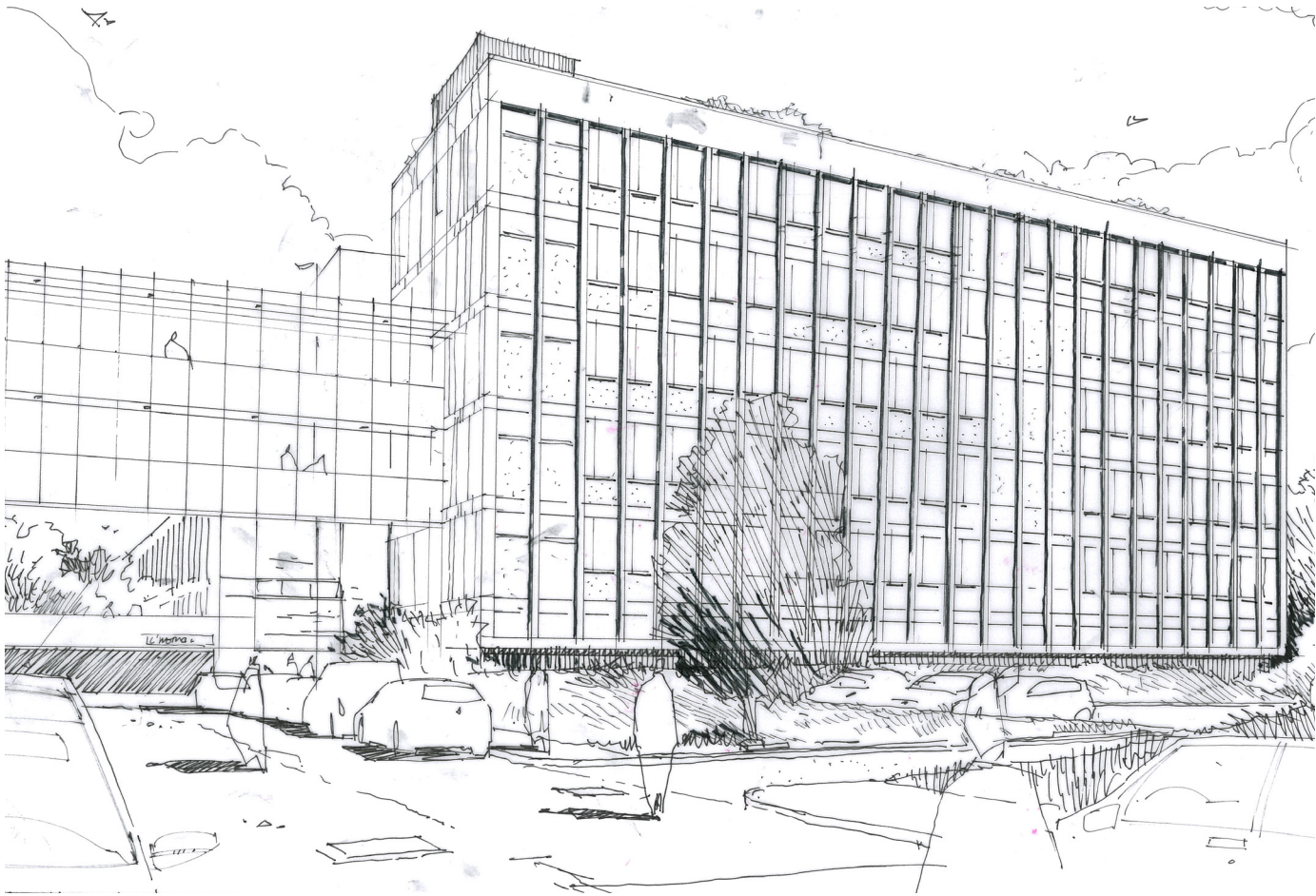
We carried out an analysis of the site, identifying naturally created footpaths in order to propose smooth paths and preserve the existing vegetation. The team worked on the landscaping to provide students and researchers with pleasant spaces to meet and talk. This redevelopment creates a cool island to cool the campus in summer.

Particular attention has been paid to proposing integrated rainwater management systems with a view to a ‘zero network’ policy, thanks to a strategy of management at source and alternative techniques based on infiltration (retention/infiltration basins have been installed).

Reinterpreting the original façades

The UCBL’s concrete facades have been reinterpreted using modular elements and a striated cement fibre mineral cladding (echoing the matt-finish concrete). Adjustable brise-soleil and thermal insulation have been incorporated to provide optimum levels of comfort for users.

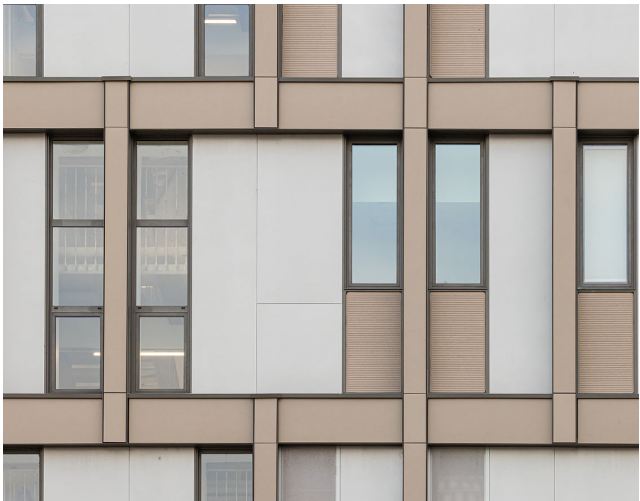
A metal walkway accommodates the gas bottles and networks while expanded metal panels are used to conceal the area, retaining the light, and acting as a screen. The staggered arrangement of these panels creates a random and dynamic effect on the façade. This adds a contemporary image to the building, while maintaining the historic façade.



Textured concrete

Textured concrete is one of the flagship materials of the original campus. Areas featuring the works of visual artist Denis Morog have been preserved, with interior insulation favoured in these cases.

Echoing this material, a noble, robust and functional baselayer in textured concrete brings unity to the whole site.



The grid by Jacques Perrin Fayolle

Jacques Perrin Fayolle created a façade grid with subtle modenatures that create vertical and horizontal effects depending on the angle of view.

So as not to lose this interplay of full and hollow, we have recreated this grid on all new façades.

Project centre

The project centre (Maison du Projet) was set up in the heart of the campus ahead of the refurbishment project, as a means of communication and support. It welcomes all users and provides them with a wealth of useful information about the site.

A real showcase, the house served as a prototype for the different materials used in the renovation: light structure, smooth metal cladding, composite roof and green roof.

Enhanced by a vast outdoor canopy, this space is intended to be a friendly, open place to meet and talk.

Building on its success, it has been converted into a campus reception centre.



The Project Centre, which has been specially designed to get users involved in the campus regeneration project, is above all a living space that will evolve over time according to users' expectations and suggestions.





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