

evr-architecten + BC architects & studies + Callebaut architecten

Usquare Feder



ARCHITECTS

evr-architecten + BC architects & studies
+ Callebaut architecten

OFFICIAL PROJECT NAME

Usquare Feder

PROGRAM

Educational

PROCEDURE

Public tender – two phase competition

CLIENT NAME

VUB ULB SAU / MSI

COMPLETION DATE

06/2024

TOTAL FLOOR AREA

9035 m²

BUDGET

16.700.000 € (VAT excl.)

PROJECT ADDRESS

Avenue de la Couronne 227
Ixelles, 1050, Belgium

Usquare Feder is the first phase of the transformation of the former Ixelles gendarmerie barracks into a vibrant, multifunctional district, prioritizing circularity and material reuse. The renovation of six buildings and the central manege establishes a model for future phases, integrating heritage preservation with sustainable innovation. At the heart of the project is an ambitious strategy of urban sourcing, maximizing the recovery and reuse of existing materials. The dismantling of adjacent buildings provided valuable resources (bricks, natural stone, glazing, and sanitary equipment) significantly reducing waste and minimizing the need for new materials. Before reuse, bricks were rigorously tested for frost-thaw resistance, pressure resistance, and water absorption, ensuring their durability. New bio-based materials complement these reclaimed elements, further lowering the project's carbon footprint. Hempcrete walls contribute to acoustic comfort while maintaining material circularity. Wooden partitions were designed with a dismantlable clip system, allowing for future reuse without damage. The project's approach turns Usquare into a "local mine," where every existing component is carefully assessed, revalued, and reintegrated into the built environment. This methodology not only reduces CO₂ emissions but also preserves the embodied energy of the historic structures. By demonstrating how large-scale renovations can be achieved through circular practices, Usquare Feder sets a benchmark for sustainable urban development—proving that the future of construction lies in intelligently reusing the past.

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The existing structure of the old building was exposed and a new timber porch structure was woven into the interior. This includes a new raised roof volume, which allows light to enter centrally into the new entrance hall.

The new entrances are marked by a brick volume which, on the one hand, contains the chimney of the technical rooms and, on the other hand, provides the link between the street and the lower courtyard.

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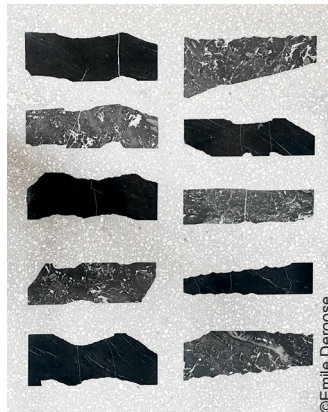


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The new wooden internal partitions of the apartments and offices were constructed using a modular system, reusing the recovered double glazing (approximately 120 panes of glass).

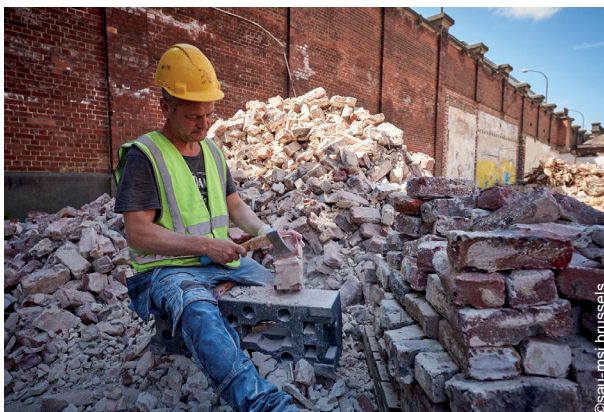


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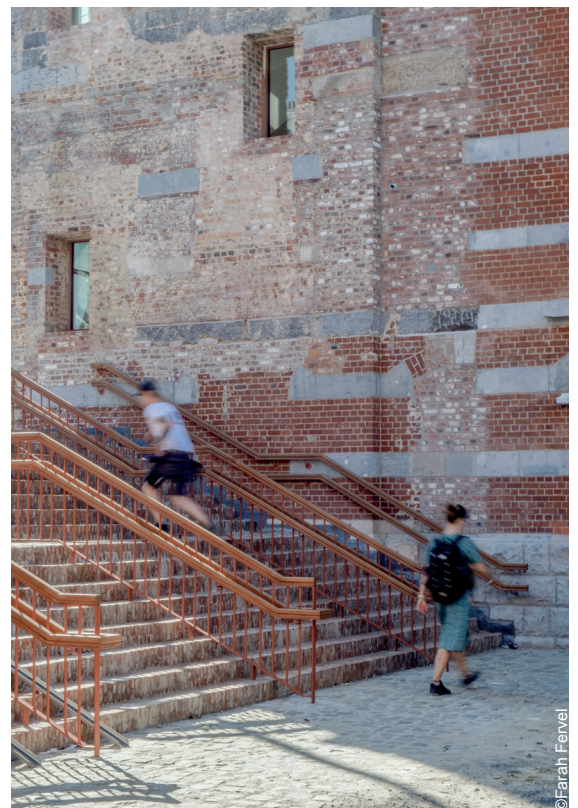


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Some 120 broken marble windowsills were reused as fragments in the central hall's mezzanine terrazzo floor.



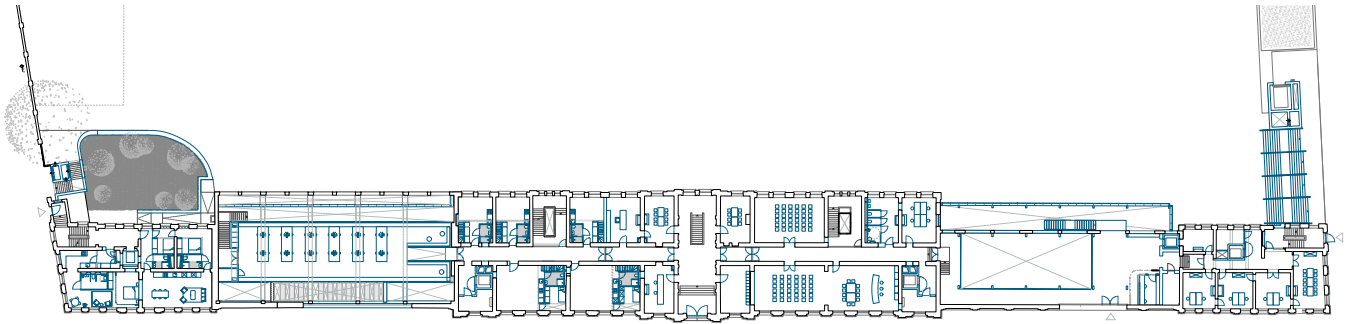
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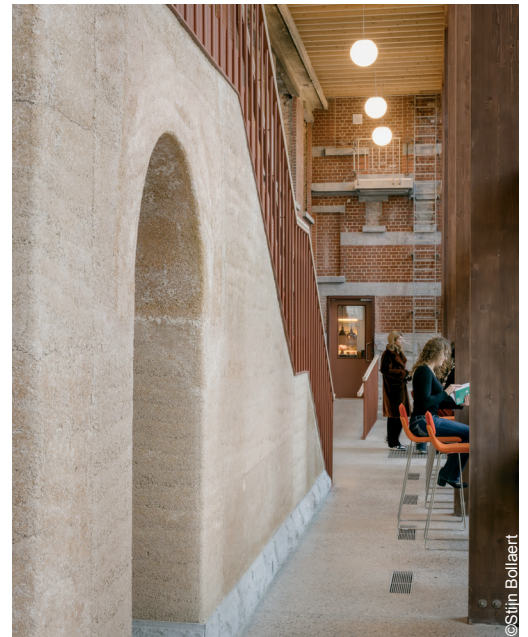
The reuse of bricks, both on-site and off-site, is the most significant reuse operation, with a total of 130 m³ - or 98,000 bricks - reused on the project.

Major intervention - evr-architecten + BC architects & studies + Callebaut architecten - Usquare Feder



Ground floor plan

The stone plinths from the demolished building were reused as plinths for the hempcrete walls.



A circular and acoustic clay plaster based on Brussels soil was developed and applied to the offices and the entrance hall, covering some 3800 m².