House B76

by Justine REVERCHON / 2021-02-01 21:39:23 / France / 3888 / FR

Extension + refurbishment

Primary energy need :
50 kWh/m².an
(Calculation method : RT existant)

ENERGY CONSUMPTION

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Building</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>&lt; 50</td>
</tr>
<tr>
<td>B</td>
<td>51 à 90</td>
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<tr>
<td>C</td>
<td>91 à 150</td>
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<tr>
<td>D</td>
<td>151 à 250</td>
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<tr>
<td>E</td>
<td>251 à 350</td>
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<tr>
<td>F</td>
<td>351 à 450</td>
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<tr>
<td>G</td>
<td>&gt; 450</td>
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</tbody>
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Building: Economical building

Building Type : Isolated or semi-detached house
Construction Year : 1900
Delivery year : 2019
Address 1 - street : 76 passage birly 33800 BORDEAUX, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 91 m²
Construction/refurbishment cost : 220 000 €
Number of Dwelling : 1 Dwelling
Cost/m² : 2417.58 €/m²

General information

The house B76 is the result of a partial demolition with extension / heightening of a very small house made of "odds and ends" located in the heart of Bordeaux Nansouty, in a protected area of the city of stone. It is at the end of a very small impasse.

The objective was to insert this extension, and to create an elevation, while adapting the traditional templates and the materials usually found in this sector.

The client wanted to expand his house, while modernizing it. The only constraint: he wanted wood!
But how to integrate wood, in a city called "of stone"?

Template
The height of the facade on the street aligns with the adjoining protected stall. Its ridge is offset to keep the same roof slope, while creating an additional 1/2 level to the house.

Materials
The house is made of a wooden frame, with distributed insulation and additional lining for thermal and acoustic comfort and airtightness.
The standing seam zinc, present on the roof and facade, is chosen to mark the integration into the street, as a reminder of the zinc work found on the stalls. The wood cladding puts the extension on one side, and softens the appearance of zinc. The west-facing facade is well insulated, and louvers in steel frame and wood infill protect the glazing for summer comfort, and protect people from across the street. The south facade is protected by an overhang of the roof and walls for the same reasons.
A glazed rail opens the entrance, plays with the vertical joinery of the surrounding stalls, while giving the building a modern aspect.

Sustainable development approach of the project owner

The owner wanted a wooden project, but comfortable! He was very afraid of the risk of overheating with his orientation due west.
This is the first project with wood material from the agency, challenge!

Architectural description

A project all in length, of which the risk of feeling "corridor" had to be avoided. Small surfaces but thorough optimization.

Principles structuring the project:
- Timber frame, but over-insulated from the inside.
- Inertia thanks to the concrete slab.
- South orientation with cap for sun protection.
- West orientation with large windows full height, but adjustable wooden shutters!

Building users opinion

"My house is partly made of wood, as I wanted it to be, and the zinc modernizes its appearance. Despite all the surrounding construction, I have no vis-à-vis, which is perfect!"

If you had to do it again?

A bio-based insulation of course!

See more details about this project

https://www.justinereverchonarchitecte.archi/page17.html

Photo credit

Jean-Maurice CHACUN photographer

Stakeholders

Contractor

Name : Particulier

Construction Manager

Name : JRA
Contact : Justine Reverchon - 0611423792 - jra[a]architectes.org
https://www.justinereverchonarchitecte.archi

Stakeholders

Function : Other consultancy agency
ALIOS
Mme Abrachy +33 6 12 05 26 56
Soil studies office

Function : Company
DIAS LUIS
Mr DIAS 06 16 12 07 33
Structural work company
Contracting method
Separate batches

Type of market
Global performance contract

Energy

Energy consumption
Primary energy need : 50,00 kWh/m².an
Primary energy need for standard building : 150,00 kWh/m².an
Calculation method : RT existant
CEEB : 0.0005
Initial consumption : 400,00 kWh/m².an

Renewables & systems

Systems
Heating system :
- Wood boiler
Hot water system :
- Individual electric boiler
Cooling system :
- No cooling system
Ventilation system :
- Humidity sensitive Air Handling Unit (Hygro B)
Renewable systems :
- Wood boiler

Environment

Urban environment
The project is located in a street sequence of the city of stone in Bordeaux, a micro dead end, very dense.

Products
**Product**

Removable louvers on the west facade

CMG (Charpente menuiserie des graves)

06 88 31 03 97

**Product category:** Finishing work / Exterior joinery - Doors and Windows

The shutters are systems with removable blades on stainless steel frames. They provide light, and a view of the west-facing garden without unwanted direct sunlight! The upper part is fixed, set for the winter sun. The lower part is manually removable.

The CMG company assembled the removable part of the removable blade supplier with the fixed frames made by a locksmith, and added its wooden blades.

The set had a cost of 10,000 euros excluding tax.

We are now reproducing this solution with the CMG company on other projects.

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**Costs**

**Construction and exploitation costs**

- **Cost of studies:** 30 000 €
- **Total cost of the building:** 250 000 €
- **Subsidies:** 10 000 €

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**Contest**

**Reasons for participating in the competition(s)**

La maison B76 est la preuve qu’il est possible de rénover, et même d’agrandir une maison ancienne avec les normes de la construction neuve actuelles !

La maison B76 vient s’intégrer en un milieu très contraint, tout en valorisant le patrimoine.

Confort d’été optimisé!

Qualité d’isolation : la maison en ossature bois est sur-isolée par l’intérieur. La dalle béton du RDC permet de garder de l’inertie. Les persiennes réglables permettent d’ouvrir sur le jardin, plein ouest ! Sans pour autant y perdre l’été en surchauffe.

Confort pour les habitants : le plan tout en longueur est optimisé, et les espaces sont très chaleureux !

**Building candidate in the category**

[Santé & Confort](#)