


## House B76

by Justine REVERCHON / © 2021-02-01 21:39:23 / France / © 3717 / FR



Extension + refurbishment

Primary energy need :

### 50 kWhep/m<sup>2</sup>.an

(Calculation method : RT existant )

**ENERGY CONSUMPTION**

*Economical building* *Building*

< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

*Energy-intensive 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 m<sup>2</sup> SHON  
**Construction/refurbishment cost** : 220 000 €  
**Cost/m2** : 2417.58 €/m<sup>2</sup>

### 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

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Function : Company

DIAS LUIS

Mr DIAS 06 16 12 07 33

Structural work company

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Function : Company

CMG

Mr Martial STASSEN 06 88 31 03 97

Carpenter

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Function : Company

HOUDUSSE PICARD

Mr HOUDUSSE 06 88 83 43 68

<https://www.zinguerie-toiture.com/entreprise/houdusse-picard-ets-2/>

Zinc worker

## Type of market

Global performance contract

## Energy

### Energy consumption

Primary energy need : 50,00 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 150,00 kWhep/m<sup>2</sup>.an

Calculation method : RT existant

CEEB : 0.0005

Initial consumption : 400,00 kWhep/m<sup>2</sup>.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 :** Second œuvre / Menuiseries extérieures

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.



## Costs

### Construction and exploitation costs

**Cost of studies :** 30 000 €

**Total cost of the building :** 250 000 €

**Subsidies :** 10 000 €

## Contest

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

The B76 house is proof that it is possible to renovate, and even extend an old house with current new construction standards!

**The B76 house is integrated into a very constrained environment, while enhancing the heritage .**

Renovation and extension for a project now **all wood and zinc**.

**Optimized summer comfort!**

Insulation quality: the wooden frame house is **over-insulated** from the inside. The **concrete slab** on the ground floor allows **inertia** to be maintained. The **adjustable shutters** allow opening onto the garden, facing west! Without wasting the overheating summer.

Comfort for residents: the long plan is optimized, and the spaces are very warm!

### Building candidate in the category



Santé & Confort

