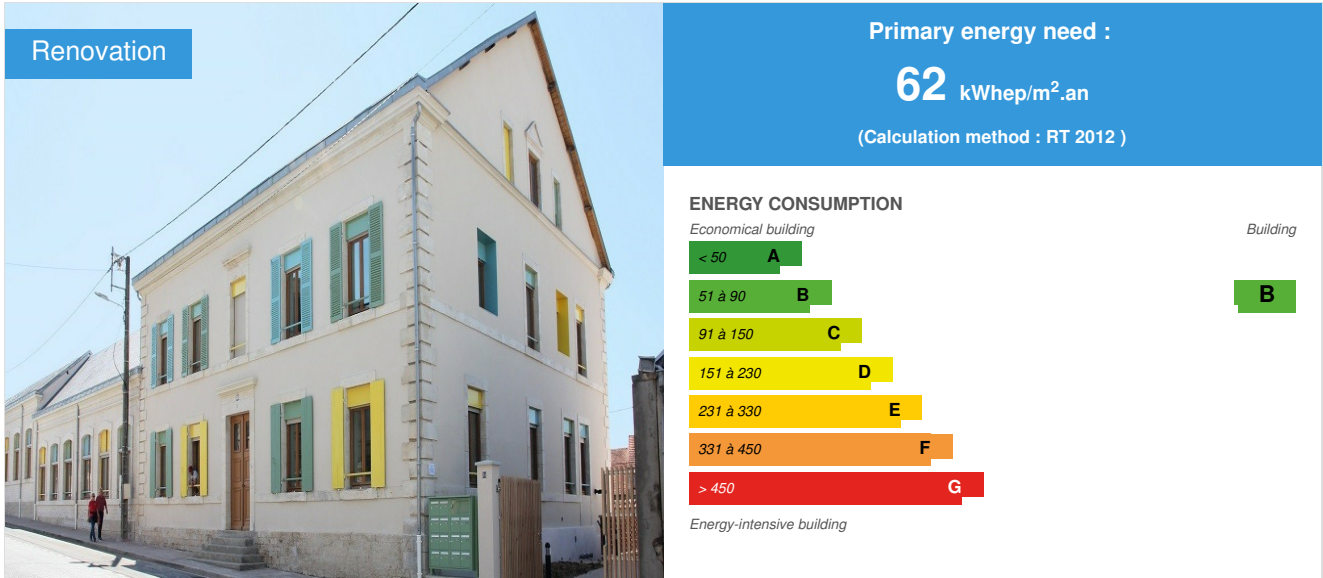


Former Lapaire School of Sancoins

by Emmanuel d'Envirobot Centre / 2022-12-06 00:00:00 / France / 455 / FR



Building Type : Collective housing > 50m
Construction Year :
Delivery year : 2021
Address 1 - street : place de la libération 18600 SANCOINS, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 793 m² Autre type de surface nette
Construction/refurbishment cost : 2 100 000 €
Cost/m2 : 2648.17 €/m²

Proposed by :



General information

Origin and description of the project

The Mayor of the town wonders about the destruction of the old school, disused for 10 years in the center of the town, but he wishes to see this building upgraded, the benches and courtyard of which many inhabitants have known. How to restore a public character while developing a private program of 13 social housing?

Foncière Chênelet will offer a program with high added value with a common room intended for the inhabitants of the site and having several functionalities. The entire plot is open, with no gate or control device. A careful deconstruction of certain elements allows the reuse on site of stones, slates and bricks. All the companies selected are from the territory, and of relatively modest size, making it possible to specify on site the desire to reuse materials in situ.

Long closed, the site is an opportunity to open to the public and restore access to the courtyard. The construction site was the subject of a photo exhibition.

Global approach

The materials are biosourced:

- Uprights of wooden linings and partitions
- Wood wool or cellulose wadding insulation
- Fermacell in coating
- The floor screeds are dry, made of wood fibre, Fermacell balls and Fermacell plates
- Wooden joinery with triple glazing is implemented, they are equipped with external blinds

In consultation with the Architect des Bâtiments de France and in accordance with the close environment and the original building, the materials of the different facades are distinguished: scratched coating on the street, stones seen on the courtyard, joinery details taking up the principle in existing cross.

The airtightness is neat, with a performance superior to that of a new building, a double flow ventilation minimizes losses.

Insulation and plastering were the subject of recruitment of workers in integration, for a total of approximately 6,500 hours.

Constructive methods

Vertical walls:

- Exterior lining: wooden frame separated from the existing wall (stone about 40 cm) + 16 cm wood fiber + vapor barrier + Fermacell 13 mm
- New partitions: wooden frame except in the case of sliding doors
- Wood wool insulation, blown-in cellulose wadding

Intermediate floor:

- Acoustic suspended ceiling on the underside: Fermacell 2x10 mm fire resistant + wood wool 40 mm minimum + plenum 40 cm minimum
- Dry screed: Fermacell balls + wood fiber for occasional recovery of large thicknesses + 10 mm wood fiber in all cases + Fermacell plate

Low floor:

- Polystyrene 11 cm + concrete screed + floor covering

Roof:

- Attic insulation. The roof is entirely covered in natural slates (+ under-roof screen + battens) but not insulated. The attic serves as a technical room.

See more details about this project

<https://www.envirobatcentre.com/fiche-projet/ancienne-ecole-lapaire-de-sancoins>

Photo credit

Albert Hassan

Stakeholders

Contractor

Name : Foncière Chênelet

Construction Manager

Name : PALABRES Architectes

Stakeholders

Function : Environmental consultancy

ECOTEC (03)

Economist

Function : Company

BOISIA HABITAT (18)

Carpentry – Joinery – Plasterwork.

Energy

Energy consumption

Primary energy need : 62,00 kWh/m².an

More information

The operation was not audited prior to the works.

Renewables & systems

Systems

Heating system :

- Wood boiler

Hot water system :

- Wood boiler

Cooling system :

- No cooling system

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- No renewable energy systems

Other information on HVAC :

A wood-fired boiler room ensures the production of heat for the heating and domestic hot water of the entire site, an all-air heating system ensures the distribution of the heating at the same time as the fresh air, ideal for premises with low inertia.

The ventilation is double flow and innovative: category C4, it avoids fire dampers in the ventilation networks and as much maintenance.

Products

Product

Fibreboard

BOISIA Habitat

<https://boisia-habitat.fr/>

Product category :

Wood fiber panels are made from by-products of the wood industry, mainly softwood waste.

After thermomechanical defibration of the shavings, the "wood wool" is transformed into paste by adding water.

This is then cast and rolled, and after heat treatment, a mixture is obtained which naturally agglomerates to obtain panels of various densities, profiles and thicknesses.

Beyond its ecological properties, these panels demonstrate excellent sound absorption.

Costs

Construction and exploitation costs

Total cost of the building : 2 100 000 €

Circular Economy

Reuse : same function or different function

Batches concerned by reuse :

- Structural works
- Landscaping

For each batch : Reused Materials / Products / Equipments :

A careful deconstruction of certain elements allows the reuse on site of stones, slates and bricks. All the companies selected are from the territory, and of relatively modest size, making it possible to specify on site the desire to reuse materials in situ.

Social economy

Social economy and professional integration :

Insulation and plastering were the subject of recruitment of integration workers, for a total of approximately 6,500 hours.

Contest

Reasons for participating in the competition(s)

- Implementation of biosourced and local materials
- A wood-fired boiler room produces heat for heating and domestic hot water for the entire site.
- Rehabilitation of an old disused school and transformation into social housing
- Mobilization of local SMEs
- Reuse of site materials

