Boisia Habitat's Workshop and offices

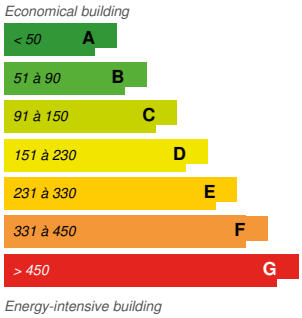
by Emmanuel d'Envirobat Centre / 2019-06-10 14:21:30 / France / 4311 / FR

Primary energy need :

84 kWhep/m².an

(Calculation method : Other)

ENERGY CONSUMPTION



Building Type : Other commercial buildings
Construction Year : 2016
Delivery year : 2016
Address 1 - street : Rue Pierre Boucher 18150 LA GUERCHE SUR L'AUBOIS, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 450 m²
Construction/refurbishment cost : 170 000 €
Number of Visitor : 5 Visitor
Cost/m2 : 377.78 €/m²

Proposed by :

General information

The project involves the construction of a building for Boisia Habitat. It hosts the manufacturing workshop, offices, a warehouse and a showroom. The land is located in the town of Guerche sur l'Aubois (18) in an area reserved for professional activities, at the end of a dead end along the Berry Canal.
It is a building both ecological and visually integrated in the green landscape of the impasse in which it is located, which leads to the banks of the Berry Canal. To this first issue is added a problem of image for the company. This is available both visually and also in the large proportion of biobased materials used.

Significant work has been done to reduce the environmental impact with recycled or biobased materials from local sectors. Due to the presence of a manufacturing workshop in the walls, the acoustic comfort was neat.

Sustainable development approach of the project owner

It is a building that we wanted both ecological and visually integrated into the green landscape of this impasse. It had to be representative of the image that wants to convey BOISIA HABITAT. Wood frame building. made of Jura spruce with a Canadian frame. Choice of ecological and energy saving materials:

- OSB4 without formaldehyde -> for air quality
- Cellulose wadding -> recycled materials
- Wood fiber panels -> bio-based materials
- Clay plaster -> for its aesthetic character and moisture regulator
- French spruce from Jura -> to promote the national wood
- Acoustic and acoustic glazing -> for the well being with respect to noise

With regard to the exteriors, it was important to preserve the current landscaped area. That is 4000m2 of grassy land where the Berry canal passes. The planting of fruit trees on the ground is planned.

Architectural description

This building of 450 m2 in floor area revolves around a large hall for the manufacture of wood elements of buildings designed by the company. It is phonically isolated and heated by a wood stove with hot air blower. The offices and the showroom, make up the "inhabited" part, with the ambition to welcome employees and customers in a comfortable and healthy space. They are welcomed in a small structure adjoining the workshop and with its own two-sided roof. The heating is done by a specific pellet stove.

See more details about this project

http://www.envirobatcentre.com/envirotheque/observatoire-des-realisations/fiches-envirobat/biosource/atelier-fabrication-bureaux-277.html?article=1757

Photo credit

Boisia Habitat

Stakeholders

Contractor

Name : SCI Gazeau
Contact : 09 67 57 29 20

Construction Manager

Name : Boisia Habitat - Philippe Léchevin architecte
https://boisia-habitat.fr

Stakeholders

Function : Thermal consultancy agency

Thermibat

06 85 51 70 84

Energy

Energy consumption

Primary energy need : 84,00 kWhep/m^2.an

Primary energy need for standard building : 84,00 kWhep/m^2.an

Calculation method : Other

Envelope performance

More information :
Workshop - Peripheral walls: 5.79 m2K / W
Workshop / Offices - Partition walls: 9.29 m2K / W
Offices - Low floor: 2,63 m2K / W
Offices - Peripheral walls: 6.52 m2K / W
Roofing: 7.69 m2K / W
Joinery: 1.1 W / M2K

More information

The heating requirements are broken down into: - 450 kg of granules per year for offices - 20 m3 of scrap wood for the workshop

Renewables & systems

Systems

Heating system :
- Wood boiler

Hot water system :
- Individual electric boiler

Cooling system :
- No cooling system

Ventilation system :
- Single flow

Renewable systems :
- No renewable energy systems

Other information on HVAC :
The heating requirements are broken down into:
- 450 kg of granules per year for offices (pellet stove)
- 20 m3 of wood waste for the workshop (wood stove with hot air blower)

Environment

Urban environment

Land plot area : 4 000,00 m^2

The land is located in the town of La Guerche sur l'Aubois (18) in an area reserved for professional activities, at the end of a dead end along the Berry Canal. Regarding exteriors, it was important to keep the current landscaped area. That is 4000m2 of grassy land where the Berry canal passes. The planting of fruit trees on the ground is planned.

Products

Product

Steico cell

Steico

https://www.steico.com/fr/produits/insufflation/steicozell/apercu/

Product category : Second œuvre / Cloisons, isolation

Insulation blown at around 35-45 kg / m3

-

Steico protect

Steico

https://www.steico.com/fr/produits/isolants-fibre-de-bois/steicoprotect/apercu/

Product category : Second œuvre / Cloisons, isolation

Coated panel

Costs

Construction and exploitation costs

Total cost of the building : 170 000 €

Additional information on costs :

The cost of 170 000 € HT is without land and out of study

Health and comfort

Comfort

Health & comfort :

On the workshop side, the machines and ventilation correspond to the standards in force and the choice of a simple cement slab facilitates maintenance. The materials used are respectful for the environment and health: - spruce wood frame structure - cellulose wadding insulation and wood wool - interior coating made of clay - exterior cladding wood cladding total of bio-sourced materials implemented is 78 kg / m2 (46 kg / m2 excluding woodwork and landscaping)

Acoustic comfort :

Because of the juxtaposition of the workshop and the offices, a particular attention was brought to the wall separating these two spaces. A choice was made to build a 320 mm thick wall with wood fiber insulation. On the side of the office, the finish is made of coated wood panels (Steico brand). The latter is clay with localized incorporation of straw. On the workshop side, the raw panels are in OSB4. Carpentry side, these are triple glazed windows that provides excellent thermal and acoustic comfort.

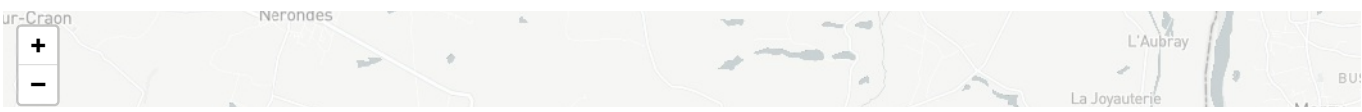
Contest

Building candidate in the category

Bas Carbone

Prix du public

Prix des Etudiants



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