


## The Ardennes

by Romain Crepel / 2016-08-08 19:37:13 / Francia / 14223 / FR



Primary energy need :

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

(Calculation method : RT 2012 )

**ENERGY CONSUMPTION**

Consumption Range (kWhep/m <sup>2</sup> .an)	Grade	Category
< 50	A	Economical building
51 à 90	B	Economical building
91 à 150	C	Economical building
151 à 230	D	Economical building
231 à 330	E	Economical building
331 à 450	F	Energy-intensive building
> 450	G	Energy-intensive building

The building's energy consumption of 63.4 kWhep/m<sup>2</sup>.an falls into grade **B**.

**Building Type** : Collective housing < 50m  
**Construction Year** : 2016  
**Delivery year** : 2016  
**Address 1 - street** : 8 ter rue des Ardennes 75019 PARIS, France  
**Climate zone** : [Csb] Coastal Mediterranean - Mild with cool, dry summer.

**Net Floor Area** : 941 m<sup>2</sup>  
**Construction/refurbishment cost** : 2 620 000 €  
**Number of Dwelling** : 15 Dwelling  
**Cost/m2** : 2784.27 €/m<sup>2</sup>

**Certifications :**



### General information

Ardennes is a solid wood program, built in heart of the island Ardennes street. This 15 unit building with cellar, from one-bedroom to three-bedroom and funded Social Rental Loans (PLS), was designed by the architectural firm Design SF. It finds its place in the urban fabric of the neighborhood coming to set up to three other existing buildings. The residence is located on a former parking lot, surrounded by three buildings of different heights. This special geographical situation led architects to imagine a way to optimize sunlight facades and therefore the comfort of occupants of each unit. To do this, the building consists of two wings wooden structure and a metal connection region and glass: it is this connection which takes natural light to the entire site, creating both a place circulation, relaxation and meetings fostering the creation of social ties.

### Sustainable development approach of the project owner

## PROPERTY

For few years, the organism OGIF seeks alternatives for housing in the Paris region. Thus, the realization of new buildings on land owned by it is becoming more common and proposed to elect.

Thus, the opportunity to build 15 social housing units was natural. Despite the difficulties of access to land, the OGIF truly wants to renew its land and proposed housing solutions tailored to the current demands.

## PROGRAM

The building has the ambition of a good share of respect and value what is already there, and secondly to find the right relationship between social life and privacy in the privacy of the apartment, offering more shades of intimacy in volume, its vulnerability and its apartments.

To maximize the quality and comfort of accommodation, the morphology of the building while maintaining the compactness required for the project sustainable economy can create space flats, light and flexible.

## MATERIALS

The wood is used for cladding facades and folding shutters.

It is intoxicated by accelerated aging to be closer to the delivery of its final natural color.

Metal, galvanized (light grey) dresses levels and passageways that come overhanging façades. Concrete or masonry dresses the DRC local technical side

The translucent glass

- separates the staircase leading to the ground floor to the level of R + 3.

The glass covers the flaw. T

he external windows are aluminum, anthracite grey color.

The railings are stainless steel

- Vertical uprights, flat;

- Sleepers horizontal, cylindrical tubes;

- Fillings, perforated metal.

Flat roofs are vegetated

## Architectural description

The calm and protected from the street court is surrounded by several residential buildings of R + 4 to R + 10, with a characteristic atmosphere of Parisian islands volume to insert a simple building, readable and balanced, just slip quietly. For its implementation, the project sought to focus maximum sunshine facades to take advantage of solar gain and natural light. The new building consists of two wings habitable wooden structure and metal structure connecting area and glass, including stairs and landing.

- Upon entering the court, the new building is visible at the back of the court. The entrance of the building is clear and generous, one passes through the transparent grid with a digital lock, and entered the hall to ask open easily bike or stroller in the room to the right. We arrive in the fault with the raised garden to the right and a metal covered space is occasionally independent walls plaster / stucco clear hue. The atmosphere is light, bright and sparkling.
  - The flaw: essential, installed to the building of the center, is a space to bring natural light into this volume through to design apartments and create another social world in the building. This is where the traffic is carried, relaxation, meetings spaces, quality of atmosphere. This area allows the occupants to be protected by the noise and rain, a naturally lit space and sheltered
  - The 4-storey building accessible and 5-storey (attic) duplex hosts 15 apartments and service rooms; local garbage, local bikes and strollers, boiler room and cellar floor.
- The composition of levels: Ground floor: entrance, 3 technical PMR and local housing, 1st to 2nd floor: 8 housing, R + 3 and attic: 4 housing duplex

## Stakeholders

### Stakeholders

Function : Construction Manager

SF Design

<https://www.fokkema-partners.nl/projects/chronological/interior>

agent architect

Function : Construction Manager

ATELIERS AUDEBEAU

Aimeric Audebeau

Architect

Function :

Brezillon

<http://www.brezillon.fr/>

General

Function :

Les Charpentiers de l'Atlantique

<http://www.l-c-a.fr/>

wood Construction

Function : Environmental consultancy

Acor Etudes

SPS coordinator

Function : Environmental consultancy

Bureau Veritas

Control office

## Energy

### Energy consumption

Primary energy need : 63,40 kWh<sub>ep</sub>/m<sup>2</sup>.an

Primary energy need for standard building : 71,70 kWh<sub>ep</sub>/m<sup>2</sup>.an

Calculation method : RT 2012

### Envelope performance

Envelope U-Value : 67,30 W.m<sup>-2</sup>.K<sup>-1</sup>

More information :

Bbio: 67.3

from 1st floor: Complex Wood CLT (Cross Laminated Timber) (wall and floor).

wood construction from the 1st floor.

the ground floor to 1st floor: In masonry to ensure the Fire Cup between the parking and accommodation.

Parking: Existing made of concrete DAT: 1980

Balcony: Structure reported ensuring continuity of insulation. Very strong prefabrication of materials consistent with access by the porch of the 10/12 rue des Ardennes.

## Renewables & systems

### Systems

Heating system :

- Solar thermal

Hot water system :

- Solar Thermal

Cooling system :

- No cooling system

Ventilation system :

- Humidity sensitive Air Handling Unit (Hygro B)

Renewable systems :

- Solar Thermal

Solutions enhancing nature free gains :

La faille : installée au centre du bâtiment permet d'apporter de la lumière naturelle. Le projet a recherché à privilégier au maximum l'ensoleillement des façades afin de bénéficier des apports solaires et de la lumière naturelle

## Environment

### Urban environment

Land occupied by 3 independent residential buildings. Operation surrounded by several buildings 4 to 10 storey high housing, with a characteristic atmosphere of Parisian islands, alternating mineral and gardens surrounded by buildings linked by pathways and gardens.

## Product

Solid wood panels

Stora Enso for Woodeum

Stora Enso France – 83 avenue Charles de Gaulle 92 200 Neuilly sur Seine

<http://www.storaenso.com/>

**Product category :** Table 'c21\_spain.innov\_category' doesn't exist SELECT one.innov\_category AS current,two.innov\_category AS parentFROM innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '6'

solid wood panels for exterior walls, partition walls and floors, connected by metal connector on their periphery. Made from sustainably managed forests (PEFC), from Austria and Eastern Europe (Czech Republic, Slovenia).

This solution is especially imposed by its timeliness, its adaptation to logistical constraints (access to the site difficult), a process that generates little waste on site, its good acoustic properties and structural, that it helps to store materials carbon.



## Costs

### Construction and exploitation costs

**Total cost of the building :** 3 435 495 €

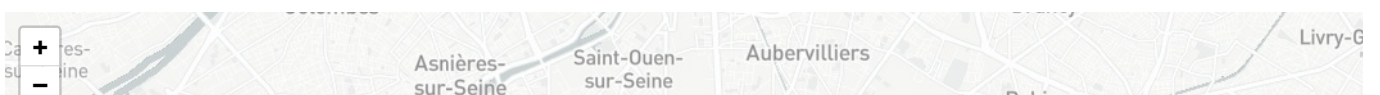
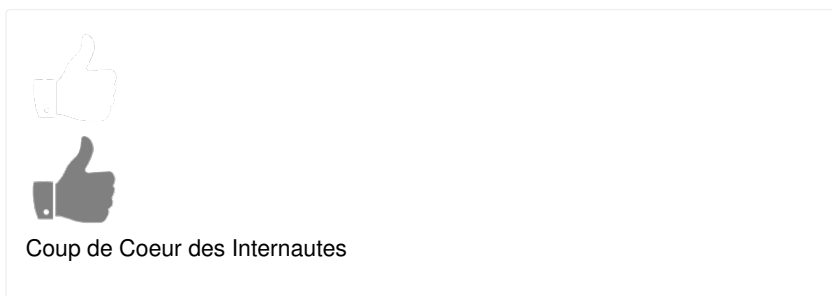
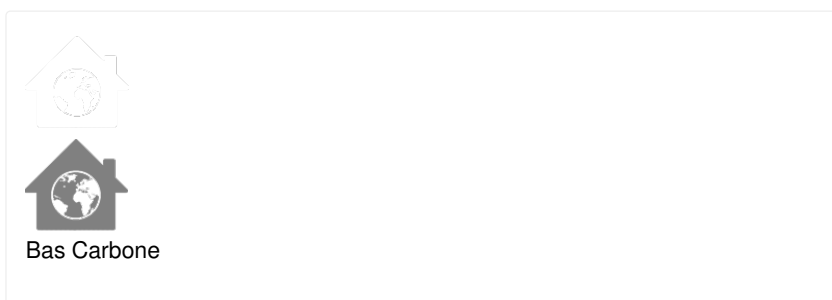
**Subsidies :** 650 000 €

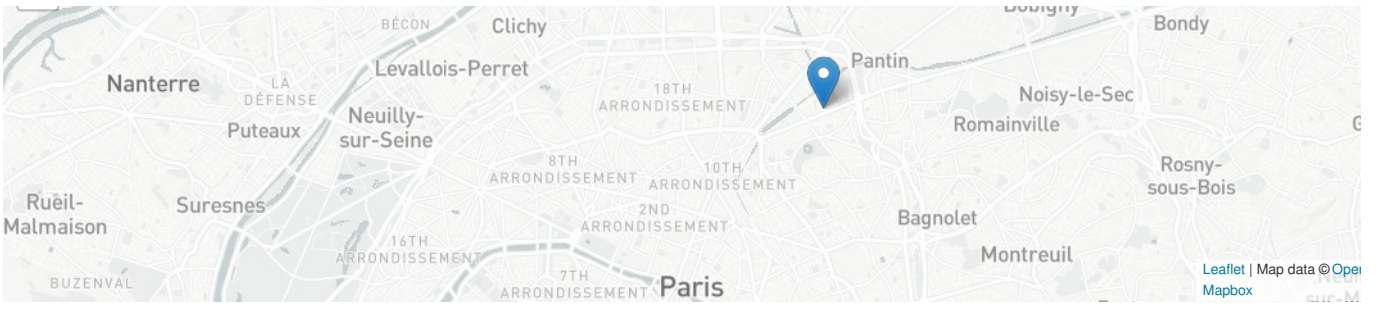
## Contest

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

The operation has been labeled Low Carbon Building for its reduced environmental impact, taking into account a slight wooden structure, which traps carbon, which comes from French and European forests. In addition, the site is the result of an intensification of existing buildings (built over a parking slab): the land is a scarce resource and not renewable. Finally, the contribution of renewable energy (solar panels) allows to come up for the production of hot water so "green".

### Building candidate in the category





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