


# Social Reintegration and Hospitality Center Les Marronniers

by Patrick Thomas / 2018-04-30 11:47:26 / France / 7147 / FR



Extension + refurbishment

Primary energy need :

68 kWhep/m<sup>2</sup>.an

(Calculation method : RT 2012 )

**ENERGY CONSUMPTION**

Consumption Range (kWh/m <sup>2</sup> .an)	Grade	Building Grade
< 50	A	A
51 à 90	B	
91 à 150	C	
151 à 230	D	
231 à 330	E	
331 à 450	F	
> 450	G	

*Economical building* (Grades A-C) / *Energy-intensive building* (Grades D-G)

**Building Type** : Collective housing < 50m  
**Construction Year** : 2017  
**Delivery year** : 2017  
**Address 1 - street** : 02400 ESSOMES SUR MARNE, France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

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**Net Floor Area** : 907 m<sup>2</sup> Autre type de surface nette  
**Construction/refurbishment cost** : 1 490 000 €  
**Cost/m2** : 1642.78 €/m<sup>2</sup>

## General information

The Essomes-sur-Marne center for social reintegration and emergency reception is rehabilitated and expanded following a social, urban and environmental approach.

The aim of the rehabilitation and extension project is to improve the reception and comfort conditions of the dwellings.

The presence of the CHRS in the heart of the borough is an asset for the residents and for the host organization which can thus associate a heritage revaluation project with a social reintegration program.

The organization of the plan project reflects the life of the center with the preponderance of common spaces and the articulation of private spaces to collective services.

The Foyer was the winner of a regional call for projects for the use of regional wood species.

Rehabilitation and construction in poplar and oak / recycled cotton wadding insulation / regional pine joinery / mixed solar-gas / dual flow VMC heating

## Sustainable development approach of the project owner

"Coallia already has a social responsibility and today we have the ambition to go further to be fully involved in societal issues and to be recognized as a responsible company concerned by the major issues that concern both the society and its evolution as the future of the planet. Because our mission leads us every day to meet the needs of the poorest and weakest, thus contributing to the achievement of the objectives of a society based on the principles of solidarity, we

We are naturally invited to deepen the question of our commitment and our social responsibility. "..."> The eco-responsible commitment of everyone An eco-responsible commitment of Coallia employees can also influence a collective awareness of residents for the improvement of the living environment, and the building The policy of maintenance of the housing stock must be optimized, in adequacy with the expected use, to maintain a high level of service, at reasonable cost, in a sustainable development approach and as part of a multi-year plan for the maintenance of heritage that allows a reading in the medium and long term. The professionalization of the teams and their involvement in a "Green Quality" approach play a key role in the development of the association, sustainable and united, which is in line with its values. In this perspective, the management of contracts with the different providers and suppliers are required to subscribe to a contractualized and planned approach, for a reasoned selection of suppliers. As part of a homogenization of the interventions on the different sites, framework agreements are set up, for a better follow-up of the good execution of the contracts, the maintenance and the duration of life of the equipments, in agreement with the quality approach pursued by Coallia. The association is already engaged in a sustainable development approach, particularly in the context of certified H & E (habitat and environment) operations aimed at the production of low-energy buildings (BBC). One more example of our social responsibility in action. "

## If you had to do it again?

The Client realizes in the end that the prime contractor was right to propose a double-flow ventilation in all spaces, including in the existing building and would surely have fought the company more actively!

## See more details about this project

<http://vivarchi.com/spip.php?article159>

<https://www.bois-et-vous.fr/actualites/252-foyer-d-accueil-coallia-du-bois-de-notre-region-pour-la-rehabilitation-d-un-batiment-existant-et-la-construction-d-un-batiment-neuf>

## Stakeholders

### Contractor

Name : COALLIA

Contact : HELOISE CARRE - Heloise.CARRE@coallia.org

<http://www.coallia.org/>

### Construction Manager

Name : VIVARCHI

Contact : Yannick CHAMPAIN ou Patrick THOMAS - contact@vivarchi.com

<http://www.vivarchi.fr>

### Stakeholders

Function : Company

SOGEA Picardie

Yves.FRIADT@vinci-construction.fr

<http://www.sogea-picardie.fr/france/sogea-picardie.nsf/web/index.htm>

General Enterprise

### Type of market

Realization

## Energy

### Energy consumption

Primary energy need : 68,00 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 118,00 kWhep/m<sup>2</sup>.an

Calculation method : RT 2012

Breakdown for energy consumption : heating 15%, DHW Gas 38%, solar DHW 30% Lighting 7% Auxiliary 10%

Initial consumption : 404,00 kWhep/m<sup>2</sup>.an

### Real final energy consumption

Final Energy : 49,30 kWhep/m<sup>2</sup>.an

## Envelope performance

Envelope U-Value : 0,65 W.m<sup>-2</sup>.K<sup>-1</sup>

### More information :

On the new part, the vertical walls are composed of exterior to interior: (coating, either oak cladding or mineral plaster, 60mm of dense wood fiber, in the poplar frame, 145mm of cotton wadding (Métis), a sealing membrane or vapor barrier with variable SD (intello +) and then a "vacuum" technical (rail + gypsum board) which also includes 40mm of cotton wadding (Métis) ...

Building Compactness Coefficient : 0,50

Indicator : I4

Air Tightness Value : 0,60

### Users' control system opinion :

Heating systems are centrally managed for better control of uses and consumption. Comfort is provided in each accommodation and at the same time comfort temperatures are limited to avoid overconsumption. The technical sleeves of the individual bathrooms are accessible from the common traffic, which facilitates the maintenance. Users are satisfied with this operation.

## Renewables & systems

### Systems

#### Heating system :

- Condensing gas boiler
- Solar thermal

#### Hot water system :

- Solar Thermal

#### Cooling system :

- No cooling system

#### Ventilation system :

- Humidity sensitive Air Handling Unit (Hygro B)
- Double flow heat exchanger

#### Renewable systems :

- Solar Thermal

Renewable energy production : 30,00 %

#### Other information on HVAC :

Solar thermal: solar collectors total surfaces 15 m<sup>2</sup> Dietrisol.

The flat solar collectors are positioned on the south-facing roof-railling sheltered from view, a necessary discretion in historic monument sector.

## Environment

### Urban environment

Land plot area : 6 327,00 m<sup>2</sup>

Built-up area : 8,00 %

Green space : 5 000,00

The site is in the heart of town, 2 steps from bus stops to go to Chateau-Thierry (5 minutes).

It is thus served in services (town hall, the post office etc ...) and local shops without having recourse to displacements other than on foot or by bus. The site is in the heart of the area of protection of the inheritance and in immediate vicinity of the abbey of Essômes-sur-Marne, historical monument. It is also concerned by two flood risk prevention plans for mudslide and overflow of ru. The site is dense with semi-detached. The extension was carried out in joint ownership. The patrimonial character of the site induced the restoration of the main body in the respect of the style and the traditional techniques as well as the realization of a facade on street with traditional techniques to allow the insertion of the project in this historical context.

## Products

## Product

Metisse

Le Relais

Stéphane BAILLY Technico-commercial Métisse® EBS Le Relais Métisse Z.I Artois Flandres - 422 boulevard de l'Est - 62138 Billy Berclau Tél: 03 21 69 40 77 / 06 71 84 30 42/ Fax : 03 21 74 23 88

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

Product category : Second œuvre / Cloisons, isolation

Métisse® is a range of thermal & acoustic insulation in recycled cotton for the building industry. It insulates against cold and heat, but also noise. It has exceptional acoustic properties thanks to the cotton that composes it.

Everyone, especially those who had to install it were enthusiastic ...  
The number of "eh, but it does not scratch like glass wool" that we heard ...



Wood of regional essences

scieries des Hauts de France

0320913249

<https://www.bois-et-vous.fr>

Product category : Gros œuvre / Charpente, couverture, étanchéité

wood products of regional essence for structure, cladding, decking, flooring, joinery, cabinet making. Available species, non-exhaustive list: poplar, oak, alder, ash, douglas, beech.

The products come from regional forests, transformed into the Hauts de France region and implemented by local companies. The FIBOIS interprofession covers all professions related to wood and forest from forest management to the 2nd transformation.



## Costs

### Construction and exploitation costs

Renewable energy systems cost : 35 000,00 €

Cost of studies : 150 000 €

Total cost of the building : 1 800 000 €

## Health and comfort

### Water management

Rainwater is directed to an existing pond in the property's garden to allow watering of landscaping.

### Indoor Air quality

The comfort of indoor air for users is ensured by various devices: double and single flow ventilation (vmc dual high performance flux with filters), the quality of facing materials (paints and coatings), the perspiration of the walls participating in hygrometric equilibrium with a low moisture content, the distribution of rooms from common central circulation spaces or in the open air.

## Comfort

Health & comfort :

The dwellings were studied for the comfort of the users: importance of the natural light, proximity with the outside (park on the property), acoustic insulation between the houses and between floors (multilayer alternating different densities and absorbing materials such as the wadding of cotton and wood wool), thermal insulation without thermal bridges, excellent airtightness, quality of facing materials and furniture. The emergency housing units all have individual bathrooms, some of which are accessible to people with reduced mobility. The bathrooms are prefabricated models allowing easy maintenance and maintenance from common areas.

In terms of natural light and proximity to the outdoors, the bays of the rehabilitated building are designed with large splayings and seating in front of the windows. This allows both the diffusion of natural light in the room and also a direct view on the outside. The rooms located on the roof and having fewer areas of outer bays

are also lit by tubular skylights.

Calculated thermal comfort : cf onget thermique

Acoustic comfort :

Acoustic insulation between houses and between floors: double walls between dwellings (wood frame and gypsum board of different thicknesses with insulation in recycled cotton wadding) / multi-layer floor floors (insulation in the thickness of the joist, resilient surface wool, drywall made of gypsum boards, linoleum floors, suspended ceilings made of drywall).

## Carbon

### GHG emissions

GHG in use : 9,00 KgCO<sub>2</sub>/m<sup>2</sup>/an

Methodology used :  
u48win calculation

GHG before use : 83,00 KgCO<sub>2</sub> /m<sup>2</sup>

, ie xx in use years : 9.22

### Life Cycle Analysis

Eco-design material :



The rehabilitation and extension of the social residence were made with ecological and healthy materials from a local economy and solidarity. The insulation is made of recycled cotton wadding, Métisse product, regional manufacture. It is completed by wood wool panels in thermal and acoustic. The structural woods are of regional species. Exterior wooden cladding is not treated. The walls are designed to allow hydric balance (perspiration) with vapor barrier membranes on the inside. See the typical details chart for wall compositions (VIVARCHI details).

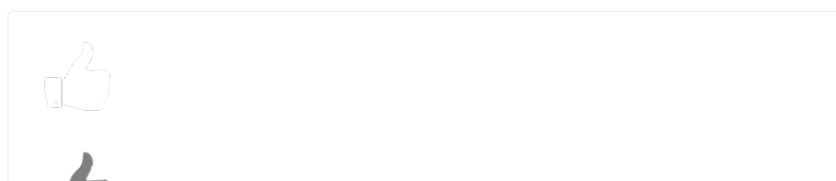
## Contest

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

The existing building and its extension both made of local wood species (frames, floors, frames and cladding) achieves a high level of energy performance, while reducing the carbon footprint of the whole because the materials used come from either local production (wood) or recycling (insulation in recycled cotton wadding) .The choice of these materials was also motivated by their low impact on the health of those who carried out the work, as well as that of the workers. occupants places.We go through this book, comfort (thermal, acoustic, lighting etc ...) and the good health of users and the environment.

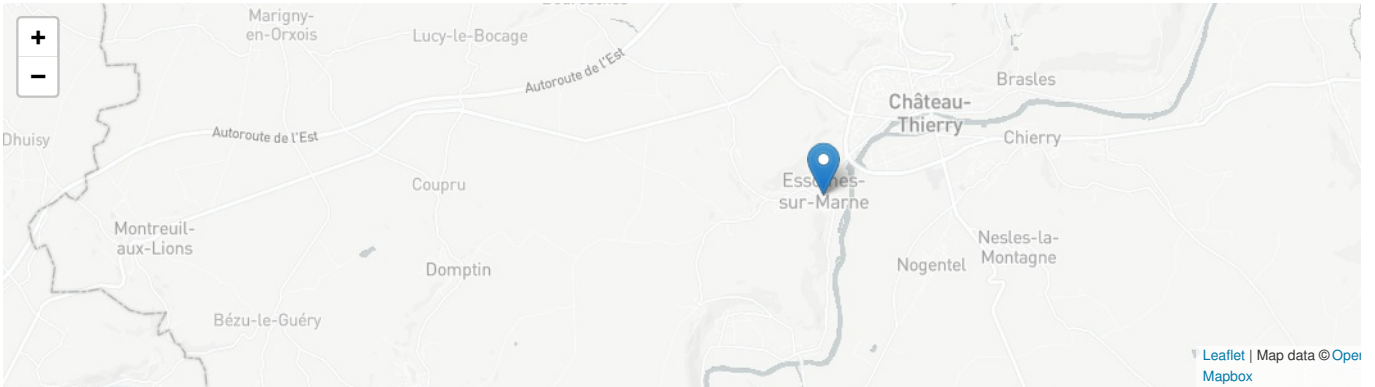
### Building candidate in the category

  
  
**Santé & Confort**





Prix des Etudiants



Date Export : 20230324024239