


Transition-Centre in Châteaubernard

by Anne-Laure Grivot / © 2014-09-02 10:24:10 / France / 3603 / FR

New Construction



Primary energy need :
36.07 kWh_{ep}/m².an
(Calculation method : RT 2005)

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 : Nursing home or Retirement home
Construction Year : 2013
Delivery year : 2013
Address 1 - street : 16100 CHATEAUBERNARD, France
Climate zone : [Csb] Coastal Mediterranean - Mild with cool, dry summer.

Net Floor Area : 707 m²
Construction/refurbishment cost : 1 170 098 €
Number of Bed : 20 Bed
Cost/m² : 1655.02 €/m²

Certifications :



General information

- BBC Effinergie label

The Transition-Centre must allow the social reintegration through housing. This operation consists of 20 one-room apartments, two of which are changeable in two-room apartments and also include common area (kitchen, living room, workshop, etc...) and offices. It will be managed by UDAF Charente and supervised by social workers. The contractor of the operation is the Public Housing Office of Angoumois (OPH de l'Angoumois)

The deadline and energy efficiency goals led to choosing a design/execution solution for the construction and the Cluster Eco-Habitat advised the contractor on a cross-curricular methodology. The goal was to minimize the energy consumption but also to meet the specific uses of a transition-centre where tenants are both people who are in the process of social reintegration and social workers (housing/offices)

Therefore, the choice was to build housings that communicate with one another and with the office area, while preserving spaces for privacy.

Sustainable development approach of the project owner

- BBC Effinergie label

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Architectural description

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Adaptable housings

Most of the insertion housing concern single people, however UDAF wants to have the opportunity to accommodate others typologies. Two units have been created on the one-room apartment basis with the ability to expand into a two-room apartment by using a common area.

Easy Therm blocks:

The selected constructive system is a concrete block in Easy Therm compensated slate. This type of construction process belongs to the category of distributed insulation, which reduces thermal bridges and optimizes the thickness of opaque walls.

See more details about this project

<http://www.cluster-ecohabitat.fr/blog/wp-content/uploads/2013/02/Fiche-restitution-Maison-relais-Chateaubernard.pdf>

Stakeholders

Stakeholders

Function : Contractor

OPH de l'Angoumois (bailleur social)

<http://www.angouleme-habitat.fr/l-oph-de-l-angoumois/presentation.html>

Function : Designer

J&LM, Maryline JOURDANAS

Function : Other consultancy agency

TDL Ingénierie

<http://www.tdl-ingenierie.fr/>

Function :

BET Entreprise Bernard Moreau

Function : Company

Bernard Moreau

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

Function : Company

Eiffage

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

Function : Company

DME

Function : Company

Foluelso

<http://www.foluelso.soflux.fr/>

Function : Company

DL Thermique

Function : Company

Nicoleau

Contracting method

Separate batches

Type of market

Global performance contract

Energy

Energy consumption

Primary energy need : 36,07 kWh/m².an

Primary energy need for standard building : 50,00 kWh/m².an

Calculation method : RT 2005

Breakdown for energy consumption : Distribution of the primary energy consumption (project) without photovoltaic production/

- Heating (excluding auxiliaries): 13%
- Hot water: 65%
- Lighting: 10%
- Ventilation: 8%
- Auxiliary: 4%

Envelope performance

Envelope U-Value : 0,24 W.m⁻².K⁻¹

More information :

Structure / insulation:

- Blocks easy therm (R = 1.27) + 140 mm internal insulation (R = 4.35) 'GR 32 140mm

Floor:

- concrete slab + 100 insulation (R = 4.65) 'TMS + screed

Roof:

- 360 mm glass wool on the underside (R = 9.00)

PVC doors and windows:

- Windows, french windows with thermal transmittance value of Uw Uw = 1.33 = 1.24 + for joinery and rolling shutters

Indicator : I4

Renewables & systems

Systems

Heating system :

- Wood boiler

Hot water system :

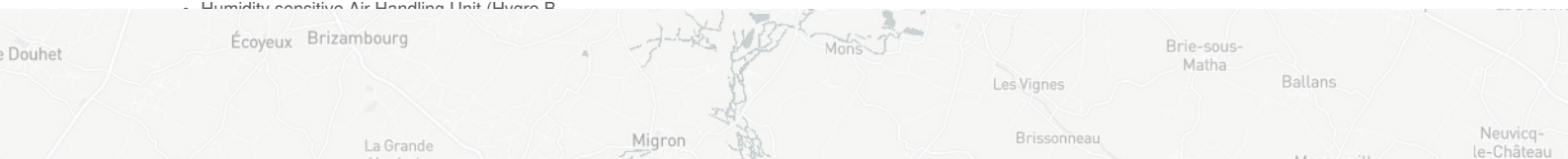
- Solar Thermal
- Other hot water system

Cooling system :

- No cooling system

Ventilation system :

- Single flow
- Humidity sensitive Air Handling Unit (Hygro P



- Solar Thermal

Other information on HVAC :

Heating: collective wood/pellet boiler

Ventilation: Single flow Hygro B in housing and low consumption simple flow ventilation in common area

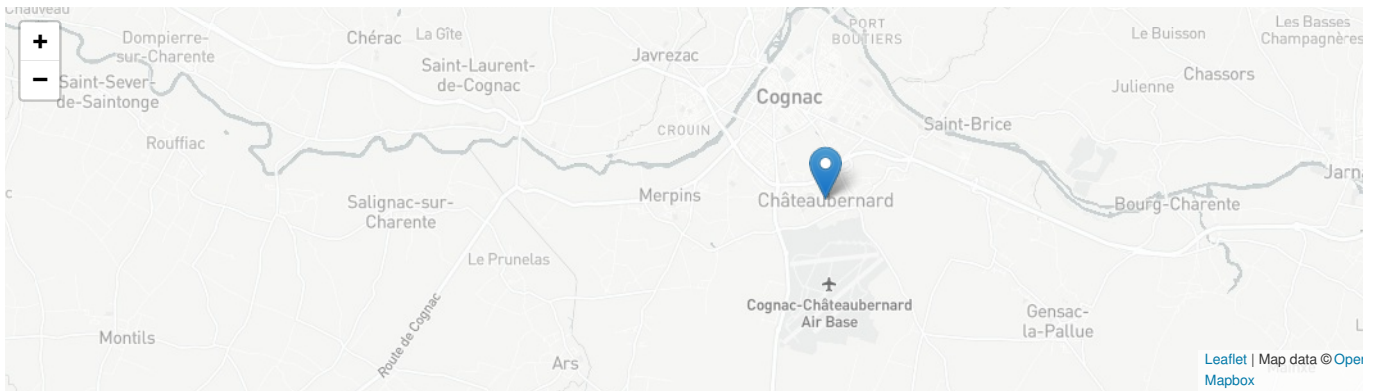
Hot water production with 9.3 m² of solar sensors and solar cylinder with dual exchanger

Costs

Construction and exploitation costs

Total cost of the building : 1 170 098 €

Subsidies : 300 400 €



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