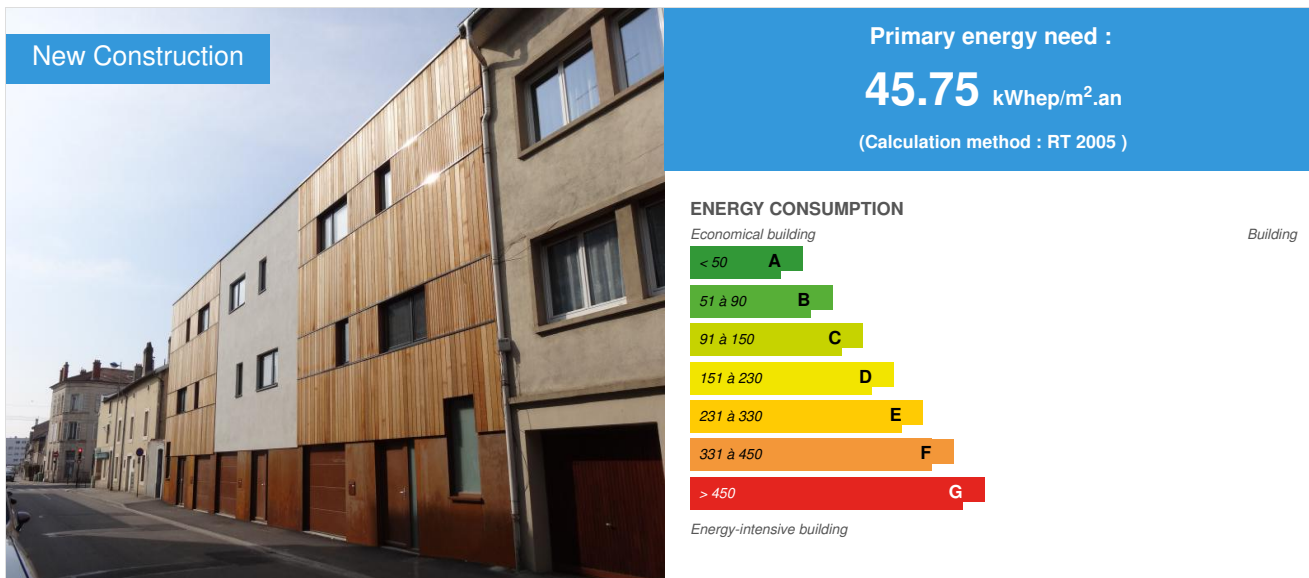


## 3 contiguous detached houses in Saint Max (54)

by Marie-Laure Aubriot / 2014-06-20 00:00:00 / France / 6457 / FR



**Building Type** : Isolated or semi-detached house  
**Construction Year** : 2012  
**Delivery year** : 2012  
**Address 1 - street** : 5 rue du maréchal Foch. 54130 ST MAX., France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

**Net Floor Area** : 585 m<sup>2</sup> Other  
**Construction/refurbishment cost** : 966 000 €  
**Number of Dwelling** : 3 Dwelling  
**Cost/m2** : 1651.28 €/m<sup>2</sup>

**Certifications :**



**Proposed by :**



### General information

- Certified BBC Effinergie 2005
- LQE 2013 prize winner

This project replaced a fallow land (former car garage) located in the city center of Saint-Max. The objective was to create three individual units for rental under a law operation "Scellier green". The accommodations received the BBC (Low Energy Building) RT 2005 label and are accessible for disabled people. The desire was to highlight the wood construction in a project of atypical houses while densifying the plot. The use of recycled products was favored by the fact that contractors were also entrepreneur who made the structure.

### Sustainable development approach of the project owner

LQE 2013 prizewinner

The desire was to highlight the wood construction in a project of atypical houses while densifying the plot. The use of recycled products was favored by the fact that contractors were also entrepreneur who made the structure.

#### Hygrothermal confort

- Search for inertia (slab + screed, high density insulating)
- Efficient airtightness, elimination of thermal bridges
- Perspirates walls
- Blind integrated to double glazing
- No felling of cold walls
- Overventilation by opening the windows
- Double flow CMV with enthalpy regulator

#### Acoustic confort

- Separation of structures between the houses
- Reinforced insulation between party wall

#### Visual confort

- Terraces opening on the inside gardens
- Indirect lighting

## Architectural description

This project replaced a fallow land (former car garage) located in the city center of Saint-Max. The objective was to create three individual units for rental under a law operation "Scellier green". The accommodations received the BBC (Low Energy Building) RT 2005 label and are accessible for disabled people.

Orientation: north/east - south/west

## See more details about this project

<http://www.lqe.fr/home/upload/fiches/Fiches3MaisonsIndividuellesSaintMax.pdf>

## Stakeholders

### Stakeholders

Function : Contractor

SCI 5 rue maréchal Foch

Function : Other consultancy agency

ABM Energie Conseil

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

Function : Thermal consultancy agency

NRJ DIAGS

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

Function : Company

Maddalon Frères

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

Function : Company

Boonen

<http://www.boonen-sas.com/>

Function : Company

Idéal Plafond

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

Function : Company

Menuilor

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

---

Function : Designer  
Atelier MPA Maddalon Piquemil Architecture

<http://www.atelier-mpa.com/>

---

Function : Company  
Sarl Frédéric Villemet

---

Function : Company  
ECDA

## Contracting method

Separate batches

## Type of market

Global performance contract

## Energy

### Energy consumption

Primary energy need : 45,75 kWh/m<sup>2</sup>.an

Primary energy need for standard building : 104,00 kWh/m<sup>2</sup>.an

Calculation method : RT 2005

CEEB : 0.0001

### Envelope performance

More information :

- Insulation:

Lower floors: polystyrene (slab UP 0.19) and polyurethane (3 cm heating floor).

Intermediate floors: glass wool (20 cm) and polyurethane (3 cm heating floor).

Walls: Wood wool (8 + 15 cm).

Interior walls: glass wool (12 + 12) and mineral wool (4 cm).

Roofing: polyurethane (10 cm) and glass wool (20 cm).

- Glazing: Low emissivity argon-filled double glazing. Integrated blinds.

Indicator : EN 13829 - q50 » (en m<sup>3</sup>/h.m<sup>3</sup>)

Air Tightness Value : 0,18

### More information

Needs of primary energy calculated from the average of the 3 Houses' primary energy consumption:

House 1: 11 Kg.eqCO<sub>2</sub> sqm/year

House 2: 7.49 Kg.eqCO<sub>2</sub> sqm/year

House 3: 7.49 Kg.eqCO<sub>2</sub> sqm/year

## Renewables & systems

### Systems

Heating system :

- Condensing gas boiler
- Water radiator
- Low temperature floor heating

Hot water system :

- Condensing gas boiler
- Solar Thermal

Cooling system :

- No cooling system

#### Ventilation system :

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

#### Renewable systems :

- Solar Thermal

#### Other information on HVAC :

##### MAINTENANCE

- Technical equipment grouped in laundries
- Easy access to equipment

## Environment

### Urban environment

Land plot area : 585,00 m<sup>2</sup>

- City center, close to public transportation
- On the site of a former garage
- Dense urban environment

## Costs

### Construction and exploitation costs

Cost of studies : 96 000 €

Total cost of the building : 966 000 €

## Health and comfort

### Water management

#### WATER MANAGEMENT

- Roofs.
- Equipment hydro-economies.

### Indoor Air quality

#### Air quality

- Double flow CMV
- Healthy finishing materials (Ecolabel): water paint, solid oiled oak parquet, water-based varnish, stoneware
- Filters F7 for double flow CMV
- Entry of fresh air on the garden side

## Carbon





Date Export : 20230520172753