


## Detached house in Alcobendas

by Santiago Bouzada Biurrun / 2019-06-18 12:12:33 / Spagna / 7332 / ES

**New Construction**



Primary energy need :

# 15.87 kWhpe/m<sup>2</sup>.year

(Calculation method : RD: 47/2007 )

**ENERGY CONSUMPTION**

*Economical building*

< 50	<b>A</b>
51 à 90	<b>B</b>
91 à 150	<b>C</b>
151 à 230	<b>D</b>
231 à 330	<b>E</b>
331 à 450	<b>F</b>
> 450	<b>G</b>

*Energy-intensive building*

*Building*

**A**

**Building Type** : Isolated or semi-detached house  
**Construction Year** : 2019  
**Delivery year** : 2019  
**Address 1 - street** : Travesía de Mesoncillos 3 28109 ALCOBENDAS, España  
**Climate zone** : [Csa] Interior Mediterranean - Mild with dry, hot summer.

**Net Floor Area** : 410 m<sup>2</sup>  
**Construction/refurbishment cost** : 1 552 460 €  
**Number of Dwelling** : 1 Dwelling  
**Cost/m<sup>2</sup>** : 3786.49 €/m<sup>2</sup>

### General information

It is a single-family home in which we have opted for the integration of passive energy-saving, low emission active and control measures to have a balance between comfort and consumption. Natural cross ventilation and mechanical ventilation with heat recovery and free-cooling, active yards, geothermal energy, solar control and natural lighting, artificial lighting based on LEDs, large insulation and durable and local materials, make this home an example of implementation of the sustainability in architecture without giving up design.

### Data reliability

Self-declared

### Stakeholders

### Contractor

Name : MOLIOR CONSTRUCCIONES Y URBANISMO S.L.  
Contact : Manuel González Weil. c/ Alcalá 119, 4 izq. 28009 - Madrid. 918 057 200  
<http://www.molior.es>

## Construction Manager

Name : MOLIOR CONSTRUCCIONES Y URBANISMO S.L.  
Contact : Manuel González Weil. c/ Alcalá 119, 4 izq. 28009 - Madrid. 918 057 200  
<http://www.molior.es>

## Stakeholders

Function : Designer  
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Project Author Architect

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Collaborating architect

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Function : Others  
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Collaborating architect

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Function : Others  
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Collaborating Architect

## Contracting method

Separate batches

## Owner approach of sustainability

The developer has always had the advice of the architecture team, experts in environmental philosophy, and has always been open to incorporate any systems and improvements that could make the building more sustainable without affecting the design, its best selling tool.

## Architectural description

It is a U-shaped building developed mainly in a living plant at the ground floor-access level, plus a basement where, in addition to the space for vehicles, a garden-level patio is incorporated that reaches the deck and is the heart of the house. The patio divides the most social spaces from the most private ones. There is always a communication between rooms that, combined with the large windows, makes the borders between interior and exterior dissipate and the garden "enters" into the house.

The living room incorporates more natural light by breaking the roof to open even more into the garden, but the cover is extended as a visor to prevent direct entry of the sun in the central hours of the day. The interior patio regulates the temperature and ventilation in the housing since, as a chimney, it can be opened at the top to create drafts that pass through the vegetation and renew the air.

## Energy

### Energy consumption

Primary energy need : 15,87 kWhpe/m<sup>2</sup>.year

Primary energy need for standard building : 54,20 kWhpe/m<sup>2</sup>.year

Calculation method : RD: 47/2007

## Renewables & systems

### Systems

Heating system :

- Geothermal heat pump

Hot water system :

- Other hot water system

Cooling system :

- Geothermal heat pump

Ventilation system :

- Natural ventilation
- Nocturnal ventilation
- Double flow heat exchanger

Renewable systems :

- Heat pump (geothermal)

## Environment

### GHG emissions

GHG in use : 2,90 KgCO<sub>2</sub>/m<sup>2</sup>/year

Methodology used :

HU CTE-HE and CEE Version 1.0.1564.1124

## Costs

### Urban environment

Single-family housing in a residential area with excellent road connection and all services. Even garbage separation. With the bus stop less than 100m, connecting the neighbourhood with the urban centre of Alcobendas in less than 20 minutes.

### Land plot area

Land plot area : 2 500,00 m<sup>2</sup>

### Built-up area

Built-up area : 15,00 %

### Green space

Green space : 2 100,00

### Parking spaces

Semi-underground parking for 4 vehicles covered but open with provision for RVE

## Building Environmental Quality

- indoor air quality and health
- biodiversity
- acoustics
- energy efficiency
- renewable energies
- integration in the land

## Contest

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

Building with low consumption and low emissions thanks to the use of renewable energy, efficient low-temperature systems, ventilation with heat recovery and great thermal insulation.

Great interior-exterior interaction and routes that combine shaded and landscaped outdoor areas with attached interior spaces. A landscaped inner yard that tempers the indoor climate thanks to evapotranspiration and controlled ventilation. A large amount of natural light controlled with direct sunlight protection systems. Integrated home automation lighting, heating and climate control system. Low consumption LED Artificial lighting.

### Building candidate in the category



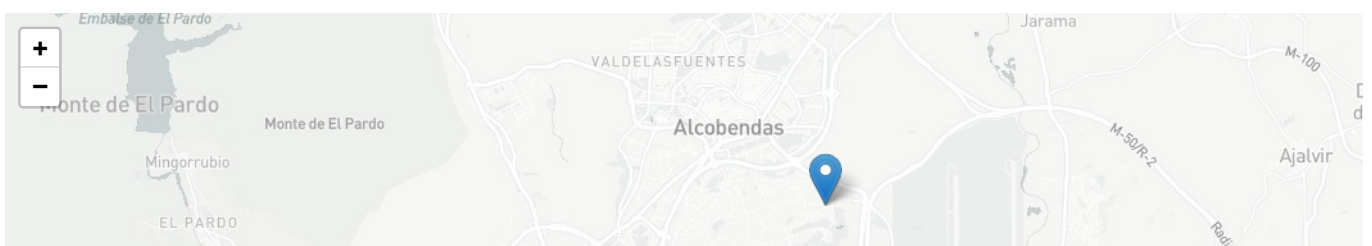
Energía & Climas Temperados



Salud & Comodidad



Premio de los Usuarios





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