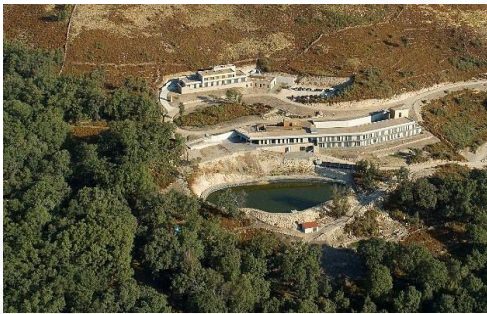


## Tourist centre and other facilities in Acebo, Finca Revolcobo (Cáceres)

Ferrovial Agroman has built the initial facilities for the PHI Campus in Acebo (western Spain). The first two buildings will form part of a complex which will house the PHI Foundation: a non-profit organization whose main objective is "to create a global eco-sustainable system to research and optimise increasingly efficient, integrated and intelligent management models."

Initially, the project comprises five buildings - the first two of which have been completed in this primary phase. One will become the Foundation's 1,081 m<sup>2</sup> headquarters housing offices and accommodation while the other will be a 2,548 m<sup>2</sup> hotel.



The buildings, which are located in the natural environment of the Sierra de Gata, are noted for the way they **blend into the landscape** and will be used as both holiday lodgings and as the Foundation's headquarters. Various advanced **energy efficient** systems have been incorporated into the buildings, both in passive insulation components as well as in the following:

- optimised use of the sun's **orientation**.
- thermal protection and integrated landscaping of buildings using **plants and vegetation** as cover for roofs and walls.
- intelligent use of **ecological insulation**.
- full use of **natural air currents**.
- improvements in interior **natural lighting**.
- **limiting the building's energy losses** through correct orientation and best design of the building's form as well as by organising its interior spaces.
- **Optimal use of solar, lighting and thermal inputs**, by using glazed surfaces and passive systems to capture solar energy.

The project has combined advanced efficiency systems to deliver minimal environmental impact and to make the building energy self-sufficient

### Environmental benefits:

- ✓ Self-generation of 128,000 KWh/year
- ✓ Optimal use of 540 m<sup>3</sup> of water

In terms of **installations**, the hotel has been fitted with a biomass boiler, a vapour-absorption air conditioning system and a full ventilation system including heat recovery regulated by CO<sub>2</sub> probes in every room. A solar array allows the building to be completely '**off grid**' and self-sufficient in electricity needs



Also of note is the integrated optimal use of **the full water cycle**. Water is obtained in summer from boreholes and in winter from a stream. Rain and drainage water is also collected and used, while grey water (from wash-hand basins and showers) passes through a system of oxidation and phyto-purification - using plant-root bacteria - before being held in a pond and used to irrigate fruit trees and vegetable gardens

