

Lafarge and the Nicolas Hulot Foundation construct an educational and eco-friendly building

The Nicolas Hulot School for Nature and Humanity in Brittany, open since 2004, receives visitors of all ages who learn about biodiversity and how to conserve it. The very walls of the building bear the imprint of Lafarge: the Group supplied cement, concrete and aggregates.

As a partner of the Nicolas Hulot Foundation, Lafarge has helped build the school named after the French conservationist and TV personality. The architecture of the school was based on pro-environmental criteria and employed High Environmental Quality (HEQ) standards. The choice supports the common desire of both partners to make the school a place to discover and study the environment in which the buildings themselves become teaching tools. A number of Lafarge's French Business Units – Lafarge Ciments, Lafarge Bétons and Lafarge Granulats – joined forces to supply the Foundation with construction materials that met these criteria.

"We needed this teaching tool to be exemplary in terms of its design and, first and foremost, its construction," declared Nicolas Hulot at the inauguration ceremony on October 21, 2004, attended by the French Minister of Ecology, Serge Lepeltier. In practice, only a building meeting HEQ targets would suffice for the realization of the project. "There was no question of building it any other way," says Florence de Monclin, educational adviser to the Nicolas Hulot Foundation. "It's quite impossible to imagine a teaching tool dedicated to biodiversity, renewable energy, stewardship of water resources and so on in a building that did not itself apply these principles. And of course, it is the ideal vehicle to demonstrate how all these things function and what can be done in terms of environmental protection at the construction level."

Today, visitors to the school include children (school parties, activity groups and individual children) and families who take part in come for themed days and weekends, while companies, community organizations and teaching and training organizations hold seminars, symposia and courses there. They are all provided with a multitude of information and modern, interactive teaching tools for learning about biodiversity. "The aim is to give the children and families who stay here a less abstract view of what biodiversity is about so they can understand just to what extent reduction of biodiversity, involving the extinction of certain species, compromises the chances of humanity itself surviving," explains Nicolas Hulot. The operation is proving a great success!

An ecological building

The HEQ initiative is based on 14 targets. The Nicolas Hulot School for Nature and Humanity applies the five following as priority: a harmonious relationship between the buildings and the natural landscape of the park; the use of environmentally friendly processes and construction materials; stewardship of energy and water; visual, humidity and temperature comfort; and disabled access.

A single-storey structure, the building alternates “closed” sections (multimedia room) and “open” ones (activity rooms, bedrooms) by the use of large windows looking out on to the countryside. In the same way, architect Jean-Pierre Chouzenoux has made the most of the site’s natural resources – in this case the difference in levels – to optimize thermal performance. The school is built partly below ground so that “the earth is used as insulation,” as the architect puts it. In terms of materials, most of the building is built of concrete, “a natural material because it derives from calcined rock.” Also used are wood (cladding) and flax (floor covering).

Solar panels provide heating for water for the showers and a geothermal system supplies central heating through nine specially-drilled bores linked to a water-to-water reversible heat pump. Filtered rainwater is used for the WCs. Wastewater is treated in an aerobic lagoon*. There is an area for selective sorting of waste and organic waste is composted. Ventilation is through five two-way flow air circulation fans with heat recovery.

The entire project cost just under €2 million. €300,000 of materials were supplied by sponsoring companies, including Lafarge.

** This is a system in which waste water flows through a network of shallow ponds. Through the action of the sun and the wind, oxygen ferments the sludge in the ponds and produces compost to be used as garden fertilizer. This product is extremely rich in trace elements and means that the sludge is dual-recycled.*