

LE TEMPS

ECOLOGY Wednesday, June 1, 2011

Building with straw, user manual

BY GERALDINE SCHÖNENBERG

A group of architects from Lausanne continued commitment in this proven technology that is revolutionizing the Minergie-P and the passive house

In the minds, a bundle of straw does not measure up to the brick or concrete and you can imagine assembling fetus lifting in the wind. Yet, on balance, a bundle of standard size displays 200 pounds. Because once compacted by the baler, the tangle of dry strands offers resistance to any event.

Since its inception in 2009, the quartet of architects CARPE Lausanne (Collective Architecture participatory and ecological) raised to the rank of straw building material.

It took only two years to build a reputation not only by advocating an architecture based on local raw materials but also a site for educational purposes where professionals and amateurs working together. Since a first embodiment in Morrens in 2009, where the straw was simply used as insulation in an enclosed timber, through word of mouth, architects are increasingly solicited and thanks to their help that Lausanne has endowed itself with an office building in the first straw bale was asked last week (May 24, 2011 LT).

The plant as a supporting structure

Elsa Cauderay only woman in the group of architects, is a specialist in the construction of straw and earth, having worked on projects abroad, mainly in France or Latin America. But also in Haiti, where she spent the winter to train masons and carpenters in these techniques.

"Many individuals have embarked on projects in wood-frame house and filling straw, but we also build houses of straw passive carrier," she says. A process called "Nebraska" since the discovery of a church erected in 1928 in this region of the United States by settlers who had no construction material.

The ecological advantage of the plant is obvious: it is local (there are boots among the peasants), inexpensive (see box) and requires no labor. "You have to imagine the straw bales like bricks, the difference is that we do not put mortar, the boots are so heavy and coarse that they take themselves, playing with the forces of friction" said Elsa Cauderay.

Once stacked, they are covered with a coating of mud, taken from the same field during the excavation, which is an essential coating, reinforcing the wall. Detail that we may find confusing or poetic as the perception that one has the strength of a building, the joints perpendicular wave following the irregular contours of bales of straw, drawing sharp drifting indoors outside.

Ecology and Philosophy Community

The architects of carp are not only designers ecological habitat, they also want to teach and disseminate their know-how as a collective projects (see box). "We committed exclusively on projects that have a participatory value," says Elsa Cauderay is one of our conditions. That, for us, as important as ecology and it is expected that the project owner also put his hand into the dough. What we want is change there is a relationship between architects and construction companies, to change the course of mistrust between the different trades, and highly focused professionals who keep their skills for them. We want the sites are a platform for exchanges and training, whether

for professionals or nonprofessionals. We want to collectively share the know-how and show that it is possible to build differently. "

Real link between participants present at the site, members of CARP, both designers, craftsmen, supervisors and trainers have more time to breathe. Orders came ... "People contact us all the time. It provides a solution to those looking for different projects, professionals who are tired of cement and concrete, "said Elsa Cauderay.

Ecology, sustainable development are words that resonate louder in the minds of owners who want a quality of air in their homes, the drastic reduction of energy consumption and are also keen not to degrade the environment when building their home. The recipe for a healthy habitat and economic seems to be in these ancestral practices built.

"We talk a lot of allergies developed by children in modern buildings, said Elsa Cauderay. We also want to offer alternatives to that. The techniques we advocate are not so old that it was just forgotten for a century we knew how to do this kind of constructions. Since the arrival of the concrete after World War II completely changed the way of building. Companies have preferred to use processes faster, more efficient but also much more energy. At the time, we do not think about these issues. Building with straw and earth, is to use unprocessed material from industrial processes and therefore recyclable. "

Construction phareen Romandie

The first realization of the architectural collective straw carrier in western Switzerland is a family house on the town of Lausanne Vers-chez-les-Blanc *. Masters of the book, Levy and Kelly Sebastian Homberger live since November 2010. Tenants in common, they bought the land without knowing how to build housing. "We wanted a house that looks like us and who have the least possible impact on the environment," states Kelly Levy. The idea of a house of wood and straw seduces them but the encounter with the collective carp convinced to be more radical and use straw as a carrier material.

The boots were commissioned in spring 2009 from several farmers depending on the size of the baler, prompting some astonishment ... "One of them took us for fools!" Kelly Levy fun. Harvested in late summer 2009 and stored all winter, the boots were delivered in March 2010. "The fronts north, east and west are carriers, only the south facade has a wooden structure with straw insulation," says Kelly Levy. The only concession to modernity is the heightening of the soil (composed of a slab covered with pine straw) with a few small concrete pillars that allow for continuous aeration, preventing moisture and mold.

The soil used in coating the interior comes from the land to which we added sand and water for perfect consistency. The floor is covered with a hard oil. "This is the only experimental composition, admits Kelly Levy. We are given two years to see how it will evolve. It can wear out, fall apart. "

The adobe wall of the living room is a central element of the building. The mud is a technique of masonry mud that has a regulatory function of energy. Earth, sifted, is added gravel and sand poured into a formwork and compacted using a pneumatic tool to give optimum density. Once completely dry and décoffrée, it forms a load bearing wall which is thermal mass. "The only source of heat in the house is the wood pellet stove in front. The adobe wall stores heat, publishes and manages moisture in the house, "said Kelly Levy.

On the walls, beautiful natural tan and beige shades. For these soft tones and matte at the sight of deer, were applied color land purchased in bags that are warming the gray original paint, which would prevent the house to breathe, being banned. As for the outside, it is smeared with lime and the south facade is clad with beveled strips pine, for aesthetic choice.

Comfort and controlled atmosphere

When moving into the house, one experiences a feeling of indefinable freshness subtle, as if the atmosphere is constantly regenerating "It's very nice to live in a house without additive, the air is pure. We can walk barefoot in summer and winter. The slab of clay ground floor is cool in summer and warm in winter. This winter, however, very rigorous and very wet, we started a week. When we came back it was 17-18 ° C, the house has excellent insulation even without heating, Kelly says Levy. In the kitchen, it's great, the earth absorbs all smells. "

Elsa Cauderay said: "Having the land on the walls and the floor gives a homogeneity in terms of effusivity (ability of a material to exchange heat energy with its environment, ed)."

Question openings, the owners would have liked, in the central room, take advantage of large windows offering a generous view of the garden overlooking an expanse of farmland. But for reasons of heat balance, they had to give, too much light overheating the house.

But unlike some homes Minergie-P where you should not bring outside air because of the flow of ventilation, the owner feels lucky to be able, at home, open windows ...

In a corner wall, a small window, in a wing of the Indian painted wood, shows a clump of straw, the only visual vestige of the founding material. "This is the window of the truth," Kelly Levy exclaims with a smile.

* **A documentary film** was shot on the construction of the house of Vers-chez-les-Blanc. The premiere will be held June 10 at City Club de Pully. It will be screened at Zinéma in Lausanne from June

15 Information www.lecorpsdumetier.com

LE TEMPS