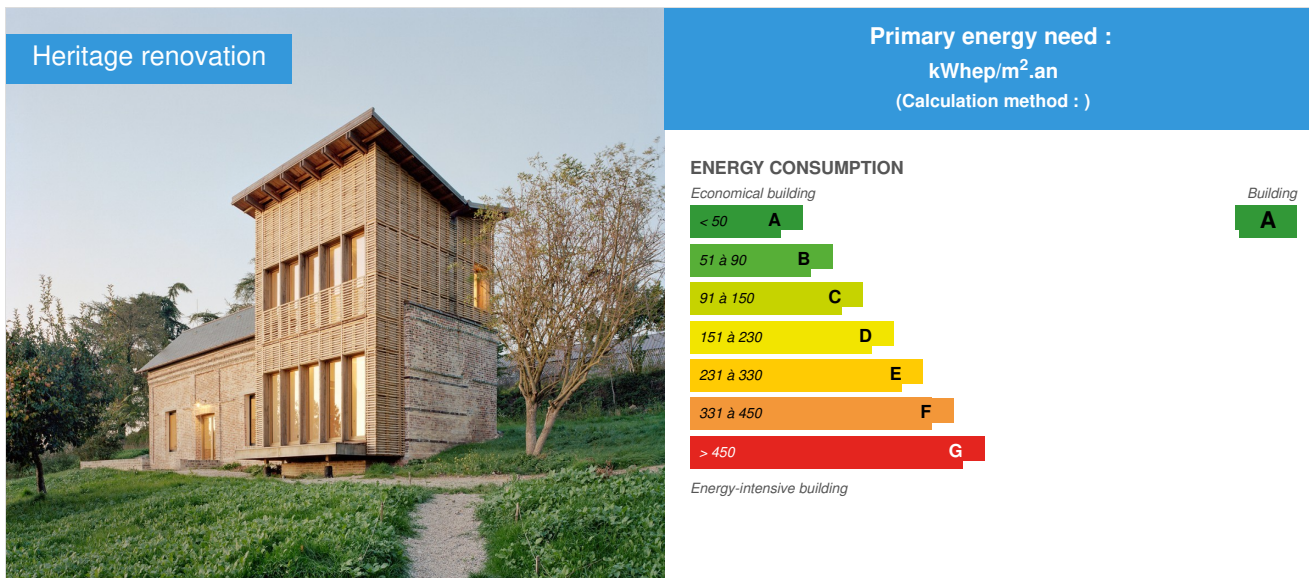


The Costil

by [Mathis RAGER](#) / 2022-05-30 00:00:00 / France / 1617 / [FR](#)



Building Type : Isolated or semi-detached house
Construction Year : 1890
Delivery year : 2022
Address 1 - street : Le Costil 61470 LE SAP-EN-AUGE, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 89 m²
Construction/refurbishment cost : 380 000 €
Cost/m² : 4269.66 €/m²

General information

Article D'A - n° 297 - April 2022

"The meeting with a private individual who had acquired a vast estate, consisting of a dilapidated manor house and its outbuildings, at Sap-en-Auge, in the Orne region, gave the team the opportunity to express its own vision, in complete freedom. "To get out of the regulatory framework, to test totally non-standard techniques, not always insurable, with 100% local materials", they claim in unison.

They very quickly convinced the owners not to undertake the long and costly renovation of the manor house, but rather to transform the adjoining 90 m² farmhouse into a holiday home, which would allow them to consider the possible transformation of the estate over time. To do this, they propose to remove some of the bricks from the farmhouse, and then to build a wooden volume in its heart on the first floor, in order to accommodate a simple programme: a cathedral living room extended by an open kitchen, which is itself overlooked by a mezzanine office. The new wooden volume houses the bedrooms on two levels.

[...]

Located in a rural area, the project to renovate the farmhouse - which is intended to be a short circuit - requires a physical presence in the area. Consulting the available companies and craftsmen, then creating a close relationship with the inhabitants and elected representatives requires a long-term involvement, to the point that the architects literally camped out on site for several months. They draw a map of the region, within a radius of 100 to 150 km, a map born of a clearing and meshing of both material and human potential. This long sourcing process precedes the architectural project.

Their research into how to make the most of their know-how leads them to innovate, in a form of rural hacking. The craftsman who harvests chestnut branches on horseback and makes horticultural ganivelles is asked to make the house's cladding. The hemp industry and agricultural machinery are involved in insulating the

roof slopes and in spraying 15 cm of hemp-lime insulation onto the walls. The hemp-lime spraying machine is equipped with larger nozzles to accommodate this type of mixture. The intermediate floor between the night spaces is made with 700 cattails, a mixture of green wood, local soil (slurry) and agricultural hay. The cattails were installed for a week by 15 volunteers - the only time the site was open to the public. Inspired by the traditional half-timbering of the Auge region, the framework is made of Douglas fir, surrounded by reused bricks, cleaned on site.

The whole of the wooden volume in R+1 rests on foundations without concrete or reinforcement. Technically, this is one of the most sensitive and experimental points of the project: the architects drove 12 black locust piles 3 metres long and 30 cm in diameter into the ground. The logs were manually debarked with planes and burned on the surface to become rot-proof. The piles were driven into the ground with an agricultural auger and rammed to a depth of about 2.5 metres. Finally, the heads were planed to the required level to accommodate the cyclopean foundations made of lime and flint only, thus allowing the creation of a ventilated hedgehog. The black locust was supplied by Forestiers Associés, a small family sawmill that also manages the rational logging of local forests within a radius of less than 30 km.

100% local renovation of a house in Costil with materials exclusively from the Pays d'Auge area:

- Reused clay bricks [0 km].
- Acacia wood pile foundations [40 km].
- Douglas fir framework [30 km]
- Hemp wool and hemp soil insulation [50 km]
- Rot-proof insulation made of reused cork stoppers [30 km]
- Cattails and raw earth plaster [0 km]
- Cladding in chestnut poles [120 km]
- Flooring in reused oak paving stones [220 km]

Renovation carried out by :

- MOA: SCI Le Costil
- MOE: Anatomies d'Architecture
- Timber frame: Depuis 1920
- Traditional masonry: Scheck & Déco
- Roofing : Grolleau
- Hemp insulation: Eco-Pertica
- Sawyer : Forestiers Associés
- Mex : Planète Mat

Building users opinion

Remarkable comfort of biosourced materials (insulation, phase shift, hygrometry).

See more details about this project

<https://www.batiactu.com/edito/normandie-un-projet-ecologique-et-militant-bouleverse-63786.php>

https://actu.fr/normandie/sap-en-auge_61460/une-renovation-immense-et-100-ecologique-pour-faire-revivre-un-ancien-chateau-du-sap-en-auge_43493067.html

<https://www.ouest-france.fr/normandie/argentan-61200/en-images-a-sap-en-auge-ils-renouvellent-une-longere-avec-du-bois-du-chanvre-de-la-terre-et-du-liege-fde4fe98-9a43-11ec-8851-630f3e65523a>

<https://www.amc-archi.com/article/restructuration-d-une-ferme-sap-en-auge-orne-.85601?preview=11>

Photo credit

Anatomies d'Architecture + Olivier Sabatier (photographer)

Stakeholders

Contractor

Name : SCI Le Costil

Contact : 54bis rue de Clichy

https://www.instagram.com/le_costil/

Construction Manager

Name : Anatomies d'Architecture

Contact : contact[a]ada2018.fr

<https://www.anatomiesdarchitecture.com/>

Stakeholders

Function : Company

Depuis 1920

Wood frame + carpentry + cladding

Function : Company

Scheck et Déco

traditional masonry + reuse of bricks + foundations + finishing coats

Function : Company

Couverture Grolleau

slate roofing + copper + hemp wool crawling insulation

Function : Company

Eco-Pertica

projection of earth-hemp insulation + supply of reused cork + supply of hemp wool

Renewables & systems

Systems

Heating system :

- Wood boiler

Hot water system :

- Individual electric boiler

Cooling system :

- No cooling system

Ventilation system :

- Single flow

Renewable systems :

- Wood boiler

Environment

Urban environment

The brick was reused for a harmonious integration into the surrounding landscape.

A few km from the village of Sap-en-auge (61470), in the Pays d'Auge, the Costil is **an extraordinary site of 180 ha preserved from human action** since always by its steep slopes, difficult to exploit by man . The house adjoins a mansion which will be the subject of a summary renovation in the years to come in order to receive the public on issues of awareness (eco-construction, permaculture, agro-forestry, etc.)

The house faces south and enjoys a magnificent view of the Tanneries stream below.

Products

Product

Schek & Deco

Product category : Structural work / Structure - Masonry - Facade

Costs

Construction and exploitation costs

Total cost of the building : 340 000 €

Circular Economy

Reuse : same function or different function

Batches concerned by reuse :

- Structural works
- Structural framework
- Indoor joineries
- Landscaping

For each batch : Reused Materials / Products / Equipments :

Reused terracotta bricks : sourced from a ruin near the construction site in the Costil area (200 ha), all the bricks used are reused by the masonry company Schek & Deco.

Crushed cork stoppers : the insulation of the lower walls was made of cork (rot-proof) from the recovery of cork stoppers in the region and crushed by the company Eco-Pertica.

Oak farmhouse : elements of the wooden framework have also been retained and reused in the building by the roofing company Grolleau.

Wooden paving stones: in the living room, the floor was made with wooden paving stones from old oak joinery by Atelier R-Are.

Field of use and material origin :

1. **BRICKS** : Existing - 0km
2. **CORK**: Reuse (4.5 m3 of crushed bulk cork from cork stoppers)
3. **OAK** : Reuse (existing farm / wood paving / furniture)

Environmental assessment

Impacts avoided : water, waste, CO2 :

To date, the candidate has not provided the information needed to carry out the environmental assessment of the project using the calculation tool.

Contest

Reasons for participating in the competition(s)

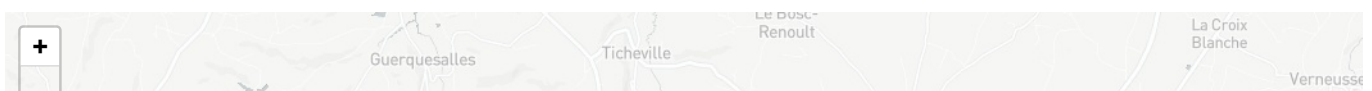
Comment relocaliser l'acte de construire sa maison ? Autrement dit, comment reconnecter l'habitat à son territoire en tenant compte de ses particularités et de ses ressources : ses matériaux, sa richesse patrimoniale, ses savoir-faire régionaux ? Et comment tirer parti de cette relocalisation pour apporter une réponse architecturale aux enjeux de l'ère anthropocène ?

Nous proposons d'**aborder la construction écologique selon une approche inédite : une Anatomie d'Architecture** . Il s'agit d'imaginer un projet de construction, ici la rénovation d'une dépendance au Costil dans le Pays d'Auge, en déterminant au préalable un cahier des charges très restrictif pour sourcer des matériaux locaux de types biosourcés, géosourcés ou de réemploi qui seront les fondements du projet. Notre travail porte ainsi sur **la mise en lumière de ces filières locales et de ses multiples retombées positives dans son territoire afin de redonner du sens à la provenance des matériaux, aujourd'hui si lointaine et si floue pour les usagers...**

Building candidate in the category



Prix du public





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