BOISARD vineyard cellar

by Gwennaël Liger / 2020-06-11 13:33:43 / France / 2515 / FR

Primary energy need :

0 kWhep/m².an

(Calculation method : RT 2012)

ENERGY CONSUMPTION

Economical building *Building*

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

Energy-intensive building

Building Type : Other building
Construction Year : 2019
Delivery year : 2019
Address 1 - street : Domaine du Mortier 37140 SAINT NICOLAS DE BOURGUEIL, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 370 m² SHON
Construction/refurbishment cost : 250 000 €
Cost/m2 : 675.68 €/m²

General information

This project concerns the construction of a wine cellar intended to raise and transform organic wine. The use of biobased materials here is fully consistent with the directions taken by producers to focus on organic wine production. The materials used, which are straw and earth, provide the building with a great inertia, making it possible to fight against temperature variations which would have a disastrous effect on the quality of the wines produced. These materials also help naturally manage hygrometric variations. The use of wood cladding contributes to integration into its environment. The semi-underground structure does not require heating or cooling and ventilation is done naturally, in particular thanks to a buried air inlet.

Sustainable development approach of the project owner

The materials used, which are straw and earth, provide the building with a great inertia, making it possible to fight against temperature variations which would have a disastrous effect on the quality of the wine produced. These materials also help naturally manage hygrometric variations. Existence of a well for hygrometry which is little, or even not used, due to a low water flow. Nevertheless, it is part of a very old network of wells connected by faults and natural galleries, allowing air circulation at around 12 ° C saturated with humidity. The semi-buried structure requires neither heating nor cooling system and ventilation is done naturally in particular thanks to a buried air inlet. The use of wood cladding contributes to integration into its environment.

Architectural description

Vertical walls:
Envelope:

- Timber frame wall with distributed straw insulation.
- Solid wood cladding (Douglas)

Low floor:
- Uninsulated cement screed to keep the soil temperature

Roof:
- Steel tank cover
- Insulated ceiling in blown cellulose wadding (40cm thick),
- OSB panel
- Timber joists.

See more details about this project

https://www.envirobatcentre.com/centre-de-ressources/les-projets/fiche-projet/chai-du-vignoble-boisard

Photo credit

M. Patucca

Stakeholders

Contractor

Name : SCEA Vignobles Boisard

Construction Manager

Name : Mickaël Patucca

Energy

Energy consumption

Calculation method : RT 2012

Renewables & systems

Systems

Heating system :
- No heating system

Hot water system :
- No domestic hot water system

Cooling system :
- No cooling system

Ventilation system :
- Natural ventilation

Renewable systems :
- No renewable energy systems

Environment

Urban environment

Built-up area : 370,00 %

The project is based on an existing structure which is a place of vinification, mechanically tempered with air conditioning. It will initially be reused as such. Then depending on the quality of the wines and the time spent in the new cellar, it will serve as a storage place.

Costs

Construction and exploitation costs

Total cost of the building : 250 000 €

Contest

Reasons for participating in the competition(s)

Wood and straw allow for carbon storage, beyond the near absence of GHG emissions during the operation of this building. The semi-buried structure requires neither heating nor cooling system and ventilation is done in a natural way notably thanks to a buried air inlet.

Building candidate in the category

Bas Carbone

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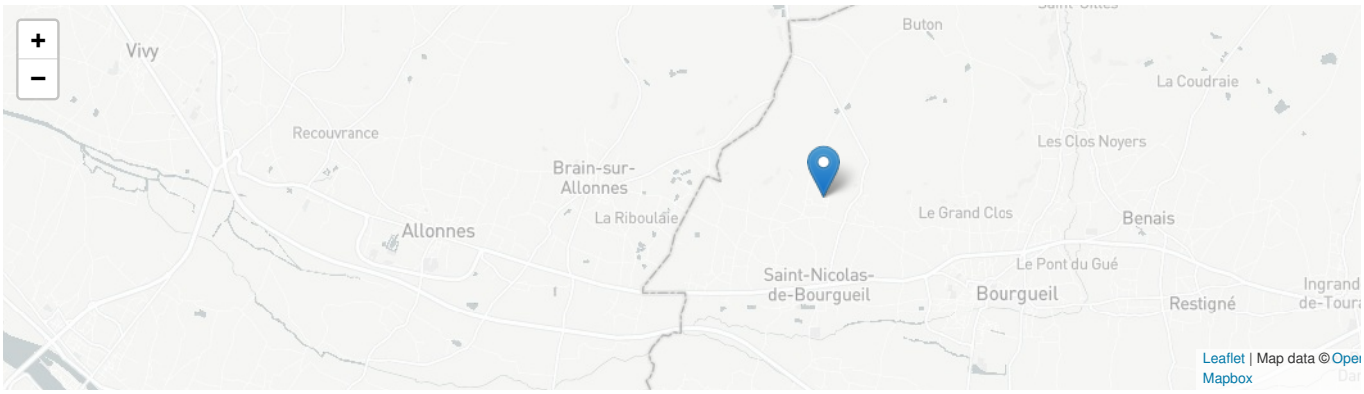

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