


# Lycée Costebelle Gymnasium

by pascale Bartoli / © 2017-06-01 11:09:13 / France / 13019 / FR

**New Construction**



**Primary energy need :**

58 kWhep/m<sup>2</sup>.an

(Calculation method : RT 2012 )

**ENERGY CONSUMPTION**

*Economical building*

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

*Energy-intensive building*

*Building*

**A**

**Building Type** : Indoor gymnasium, sports hall, stadium  
**Construction Year** : 2014  
**Delivery year** : 2016  
**Address 1 - street** : rue du Vélodrome 83400 HYÈRES, France  
**Climate zone** : [Csa] Interior Mediterranean - Mild with dry, hot summer.

**Net Floor Area** : 2 080 m<sup>2</sup> SHON RT  
**Construction/refurbishment cost** : 3 179 768 €  
**Number of Seat** : 200 Seat  
**Cost/m<sup>2</sup>** : 1528.73 €/m<sup>2</sup>

**Certifications :**



**General information**

## Sustainable development approach of the project owner

The Costebelle gymnasium, which is part of the sustainable building approach to the Mediterranean, displays a deliberately stripped architecture. The project is based on three principles: the sobriety of use, the austerity of technical means and the affirmation of raw material. The use value and the consideration of people and their environment are instinctive principles that guided the insertion of the project. Sharing with neighboring facilities makes possible to promote the reconstruction of the site.

Our approach to bioclimatic design is based on the reduction of consumption of the building and its ease of maintenance. An environmental logbook was given at each phase to clarify the answers proposed for each BDM label.

A specialized design office has accompanied the companies in the construction phase on the air-tightness of the building.

## Architectural description

The gymnasium is in the form of a compact composition, consisting of a hall in structure and wood facing near which two volumes of raw concrete are inserted: changing rooms and depots.

The geometric net developed from the basic figure of the triangle dynamically plays with the light and allows to open the sports hall on a forest of cork oaks to the south and the Costebelle stadium in the North which offers a wide clearance on the landscape .

No cladding or skin added, Larricio Pin (local resource) is left apparent holding the role of exostructure, curtain wall and sun protection.

The immaculate whiteness of the room contrasts with the shady color of the pre-shaded rafters in order to be confused with the trunks of the surrounding trees.

## Building users opinion

The occupants are very satisfied

## If you had to do it again?

We have a regret about the external facilities that were not realized according to the master plan drawn up by our team.

## See more details about this project

[https://www.dropbox.com/s/j52vfow4tpm4ygo/2016\\_07\\_26\\_ARCHI54\\_BOOK\\_A4\\_COSTEBELLE\\_DP.pdf?dl=1](https://www.dropbox.com/s/j52vfow4tpm4ygo/2016_07_26_ARCHI54_BOOK_A4_COSTEBELLE_DP.pdf?dl=1)

<http://www.envirobat-med.net/spip/retour-en-images-visite-du-gymnase-de-costebelle-a-hyeres>

<http://www.prixnational-boisconstruction.org/panorama-des-realisation-en-bois/item/8900-gymnase-du-lycee-costebelle>

## Stakeholders

### Stakeholders

Function : Contractor

REGION PROVENCE ALPES CÔTE D'AZUR

Function : Contractor representative

AREA PACA

Serge Sanchiz

Function : Designer

Architecture 54 Thierry Lombardi et Pascale Bartoli

Thierry LOMBARDI - contact@pascale-bartoli.com

<http://www.architecture54.com>

Function : Assistance to the Contracting Authority

Domene

Gabrielle Raynal

Function : Other consultancy agency

AB Sud Ingénierie

absud@neuf.fr

## Type of market

Global performance contract

## Energy

### Energy consumption

Primary energy need : 58,00 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 200,00 kWhep/m<sup>2</sup>.an

Calculation method : RT 2012

## Real final energy consumption

Year of the real energy consumption : 2 016

## Envelope performance

Envelope U-Value : 0,25 W.m<sup>-2</sup>.K<sup>-1</sup>

Building Compactness Coefficient : 0,22

Air Tightness Value : 1,12

## Renewables & systems

### Systems

Heating system :

- Water radiator
- Wood boiler

Hot water system :

- Solar Thermal

Cooling system :

- No cooling system

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Solar photovoltaic
- Solar Thermal
- Wood boiler

Solutions enhancing nature free gains :

Facteur lumière du jour 4 % en tout point

### Smart Building

BMS :

Night-time overvoltage / motorized shutters connected to weather station

## Environment

### Urban environment

Built-up area : 2 272,00 %

Green space : 10 000,00

Sports shelter located in a residential and forest area

## Products

### Product

Pin Laricio

Scierie Albertacce

scierie.palandri@gmail.com

<https://www.facebook.com/Sarl-albertacce-bois-Palandri-504938849701020/>

Product category : Gros œuvre / Charpente, couverture, étanchéité

Building structure

The project required a very large quantity of class 4 wood with large sections. This volume required a reasoned approach because few sawmillers usually have such a stock, and the tender for the carpentry lot included a "Bilan Carbone" criterion in order to give priority to local timber in the choice of supplies the company. Laricio pine from Calacuccia (Corsica) being still little known stocks were available and the Carbon balance excellent.



## Costs

### Construction and exploitation costs

Cost of studies : 438 000 €

Total cost of the building : 4 033 500 €

## Health and comfort

### Water management

Consumption from water network : 425,00 m<sup>3</sup>

Water Consumption/m<sup>2</sup> : 0.2

Water Consumption/Seat : 2.13

### Comfort

**Health & comfort** : All parts are illuminated naturally FLJ 4% at any point. Acoustic comfort Enhancement of the view on the outside. Landscape treatment of adjacent outdoor spaces Wooden netting used as a solar breeze

**Calculated thermal comfort** : Etude thermique dynamique : la température dépasse 28 ° pendant 19h / an

## Contest

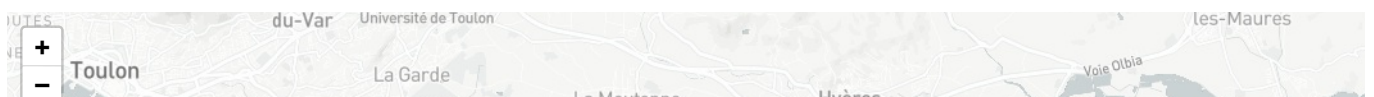
### Building candidate in the category

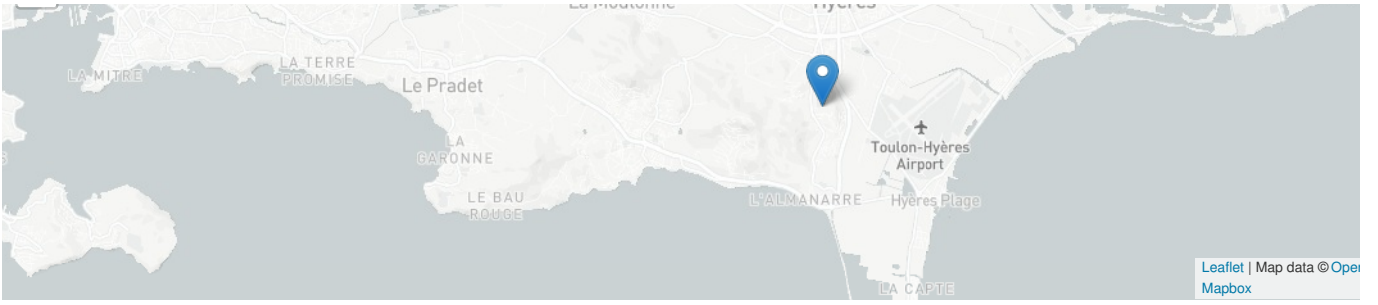


Energie & Climats Tempérés



Coup de Cœur des Internautes





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