

# Mysterra - Labyrinth Park and Guest House in Montendre (Charente-Maritime)

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**Building Type** : Other building  
**Construction Year** : 2017  
**Delivery year** : 2018  
**Address 1 - street** : La Taulette 17130 MONTENDRE, France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

**Net Floor Area** : 525 m<sup>2</sup>  
**Construction/refurbishment cost** : 1 522 500 €  
**Number of none** : 3 none  
**Cost/m2** : 2900 €/m<sup>2</sup>

## General information

### MAJOR PROGRAM COMPONENTS:

- 10ha labyrinth park
- reception, shop, entertainment room, interpretation room, snack bar, walkways of 100 and 50m, sanitary shelters in the park
- Wood boiler, **Natural Ventilation Assisted and Controlled (NVAC)** in all rooms including public toilets, dry toilets, solar hot water production, all-wood building: structure, envelope, insulation,
- **local stone mantilla** without doorkeeper with a height of 8m on a square plan of 8x8m

### SITE CONSTRAINTS : (URBAN LOCATION OR, CLIMATE, ORIENTATION, DIMENSION, SLOPE ...)

The Labyrinth Park of Montendre project is part of the continuity of the existing leisure base, in a desire to **promote the site respectful of the environment** . The presence of **protected areas in the immediate vicinity** of the park calls for a particular expectation on the landscape integration of the park supported by an ambitious architectural and environmental approach. The project aims to **take advantage of forest amenities while benefiting the site and limiting impacts on the natural environment** .

- Oceanic climate / multiple orientations / integration with topographic surveys, slopes and existing landscape lines / 10ha park cut by a municipal road.

### Sustainable development approach of the project owner

The proximity of the Natura 2000 zones implies a particular design, sensitive to the environment of the park and its constructions. The project takes advantage of forest amenities by limiting the impact on the natural environment. The following points are particularly developed: - Local wood supply boiler - Fully natural ventilation (Natural Assisted and Controlled Ventilation), sanitary included - All-wood building : structure, insulation, cladding- Dry toilets for the park- Solar hot water - Local materials: maritime pine and avy stone

### Architectural description

The Labyrinth Park of Montendre project is part of the continuity of the existing leisure base, in a desire to promote the site, respectful of the environment. The presence of protected areas in the immediate vicinity of the park calls for a particular expectation on the landscape integration of the park supported by an ambitious architectural and environmental approach. The project aims to take advantage of forest amenities while benefiting the site and limiting impacts on the natural environment. The House of Mysterra is the key to a gradual journey that embraces various

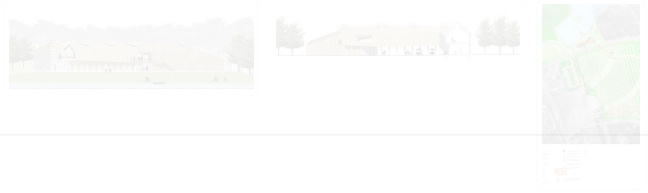
points of view to capture on site. It is an overhanging moment, a landscape architecture, belvedere, which articulates the place where it takes place. The bridges link the lake and the park, the open part to the bonded part. On the floor, the reception shop receives the visitor, who enters the park at the turn of the interpretation room. In the lower part are the activities with an outdoor extension: the meeting rooms and the café and a large covered area in the shadow of the building.

See more details about this project

[https://www.atelierphilippemadec.fr/architecture/equipements-culturels/mysterra-\\_maison-du-parc-des-labyrinthes-\\_qe-vnac-\\_bois-et-pierre.html](https://www.atelierphilippemadec.fr/architecture/equipements-culturels/mysterra-_maison-du-parc-des-labyrinthes-_qe-vnac-_bois-et-pierre.html)

Photo credit

Pierre-Yves BRUNAUD



## Stakeholders

### Contractor

Name : Communauté de Communes de la haute - Saintonge  
Contact : Patrick GIRAUDEAU : Mairie de Montendre : 05 46 49 36 42  
<http://www.haute-saintonge.org/accueil-cdchs>

### Construction Manager

Name : atelierphilippemadec  
Contact : Yann LEMETAYER  
<https://www.atelierphilippemadec.fr/actualites.html>

### Stakeholders

Function : Other consultancy agency  
IGREC INGENIERIE

01 53 94 73 73

<https://www.y-ingenierie.com/fr/>  
bet tce + economy

Function : Other consultancy agency  
TRIBU

Hélène Michelson : 01 43 49 55 75

<http://www.tribu-concevoirdurable.fr/>  
bet environment

Function : Structures calculist  
C&E INGENIERIE

Jean-Marc Weill

<http://www.ceingenierie.fr/>  
bet structures

Function : Company  
ACTION BOIS CONSTRUCTION

Paul Leveau : chef de projet : paul.leveau@actionbois.fr

<http://www.actionbois.fr/>  
company los bois

Function : Construction Manager  
guliver design

Bruno TAINURIER 01 46 59 14 11

<https://www.guliverdesign.com>  
scenography and furniture

Function : Construction Manager  
AGENCE BERTRANT PAULET

Bertrand PAULET : 01 42 64 42 67

landscape

## Energy

### Energy consumption

Primary energy need : 31,20 kWh/m<sup>2</sup>.an

Calculation method : Other

Breakdown for energy consumption : local woodplate heater

### Real final energy consumption

Final Energy : 31,20 kWh/m<sup>2</sup>.an

### Envelope performance

More information :

wood frame walls with: plasterboard / wood wool insulation 18 + 8cm / wood cladding

wood frame roof: plasterboard / wood fiber insulation 30cm / wood cladding on steel tray

Low floor on solid ground with 10cm insulation and rubber floor

floor top on exterior: CLT wood slab / 30cm wood fiber insulation / wood cladding

exterior woodwork and external blinds on exposed façades with reinforced double glazing

## Renewables & systems

### Systems

Heating system :

- Wood boiler

Hot water system :

- Solar Thermal

Ventilation system :

- Natural ventilation

[↗ ventilation naturelle Assistée et contrôlée / compris sanitaires](#)

Renewable systems :

- Solar Thermal
- Wood boiler

- Wood boiler fueled by wood chips from woods less than 10km

- DHW production by solar panel for the bar part

- recharging park phones with autonomous photovoltaic charging stations

Solutions enhancing nature free gains :

protection solaires par stores extérieurs sur les faces exposées / enveloppe thermique performante / brasseurs d'air

## Environment

### Urban environment

Land plot area : 100 000,00 m<sup>2</sup>

Built-up area : 1,00 %

Green space : 98,00

The labyrinth park is part of a territorial strategy that makes it an equipment departmental and regional radiation. The project is located near Lake Baron-Desqueroux and is part of the pine forest surrounding it, on a regional scale facing the labyrinths park it also proposes the articulation of uses at the local level open to walkers and the regulars of the lake.

The park house is an overhanging moment, belvedere on both the lake and the park, a landscape architecture that articulates the different levels of the place and the project. In the upper part it hosts the ticket office of the park, a tourist information area, a shop, an interpretation area. In the lower part are set up the entertainment rooms and a space of conviviality which benefits from external prolongations, as well as a large covered space inspired by the balettes of the vernacular architecture.

## Products

## Product

natural ventilation turret EDMONS

EDMONS

Product category : Génie climatique, électricité / Ventilation, rafraîchissement  
Natural ventilation turrets

ras

[↗ RAS](#)



self-adjusting air inlet

duco

françois laurent +32-(0)58/33 00 66

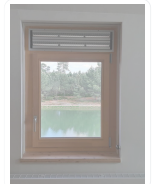
[↗ https://www.duco.eu/produits/ventilation-de-base/passage-dair](https://www.duco.eu/produits/ventilation-de-base/passage-dair)

Product category : Génie climatique, électricité / Ventilation, rafraîchissement

self-adjusting air inlet: ZR and Twin model installation (with integrated external awning)

ras

[↗ RAS](#)



RISCH AEROPLAN ECO

Product category : Génie climatique, électricité / Ventilation, rafraîchissement

air brewers

very well accepted in this contemporary volume

## Costs

### Construction and exploitation costs

Global cost : 3 140 000,00 €

Reference global cost : 0,12 €

Global cost/none : 1046666.67

Reference global cost/none : 0.12

Cost of studies : 557 350 €

Total cost of the building : 3 697 350 €

Additional information on costs :

Competition amount:

building cost: € 1,384,500

amount works landscape and VRD: 650 000 €

walkway and belvedere: 250 000 €

course animations design: 650 000 €

sceno support equipment: 88 000 €

furniture and small signage: 72 500 €

signage of the site: 45 000 €

TOTAL: 3,140,000 €

Reference rate: 0.11623

complexity rate: 1.39

% remuneration: 17.75

remuneration: 557,350

Amount after works and after MOA requests:

building cost: 1,652,008.92

gateways cost: 371 966.02

cost and park: 2 301 927,77

shelter cost of the park: 167 626.12

## Contest

## Reasons for participating in the competition(s)

The project is located in Montendre, south of the Charente Maritime, which has a oceanic and temperate climate. Its implementation depends on the site: on one side the lake and the view, on the other the forest and games and the topography of the place, slightly overhanging the lake, it follows the curves of the natural terrain to lead the entrance to the site and open to visitors.

The **bioclimatic design also presides over its design** : efficient envelope (and biosourced), crossing building, limited openings to the North, solar protection in the South and on the large gable in the East, natural lighting in all rooms. On the ground floor shutters in the same wood as the cladding form a sunscreen at the same time as they allow night ventilation while avoiding intrusion.

The **building is frugal, ventilation is natural** : self-adjusting air inlets facades and turrets of natural ventilation regulated on CO2 probe or presence detection. The hot water production of the snack is ensured by thermal solar panels. **Heating by a woodblock boiler** . The cooling is assured by air brewers that limit the sensation of heat. **Consumption is limited thanks to the bioclimatic design and the use of "passive" architectural devices mentioned above** . The unique non-biobased consumptions serve the lighting (limited thanks to the consideration of the luminous contribution in the design) and the power supply of the computer equipment.

## Building candidate in the category



Prix tertiaire & industriel



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