

Media Library Wild South

by Nicolas Peyrebonne / 2018-05-24 08:43:22 / France / 17333 / FR



New Construction

Primary energy need :

58 kWh_{ep}/m².an

(Calculation method : Other)

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 : Library, documentation center

Construction Year : 2017

Delivery year : 2017

Address 1 - street : 97480 SAINT-JOSEPH, France

Climate zone : [Af] Tropical Wet. No dry season.

Net Floor Area : 2 494 m²

Construction/refurbishment cost : 6 200 000 €

Number of Seat : 492 Seat

General information

The media library of Saint-Joseph (Reunion) questions the identity of the contemporary architecture of Reunion, that of the Sud Sauvage more precisely. It refers to **images**, block of basalt, fagot of vetyver, geko, kalbanon but especially for **uses**, taking again the progressiveness of the sequences of traditional entries, creating a progression between the public space and that of the intimate one.

The building incorporates a direct relationship to the outside, blurring its limits with the interior. Only way to succeed, the design of an open building, passive, so without air conditioning. He achieves this by insulating, protecting himself from direct sunlight, by ventilating naturally and by adding a low-pressure chimney.

Sustainable development approach of the project owner

Total sustainable development approach

Architectural description

See more details about this project

http://co-architectes.com/site/portfolio_page/mediatheque/

Stakeholders

Contractor

Name : Commune de Saint-Joseph

<http://www.saintjoseph.re>

Construction Manager

Name : Co-Architectes

Contact : info@co-architectes.com

<http://www.co-architectes.com>

Stakeholders

Function : Thermal consultancy agency

Tribu

abornarel@tribu-concevoirdurable.fr

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

definition of sustainable strategy and thermal design (envelope, natural cooling)

Function : Environmental consultancy

Adhoc - Paysagiste

Function : Other consultancy agency

ABTEC - Economiste

Function : Structures calculist

Gui Jourdan

Function : Other consultancy agency

Héliotropic + EFITEC - BET Fluides

Function : Other consultancy agency

Intégrale Ingénierie - BET VRD

Contracting method

Separate batches

Type of market

Table 'c21_luxembourg.rex_market_type' doesn't exist

Energy

Energy consumption

Primary energy need : 58,00 kWh/m².an

Primary energy need for standard building : 500,00 kWh/m².an

Calculation method : Other

CEEB : 0.0001

Breakdown for energy consumption : Office 7.7 Lighting: 7.4 VMC (Sanitary / Changing rooms): 0.6 Air brewers (5,0) Climatisation (Server, precious funds, guardian): 6.1 ECS: 0.8 Various: 3.0

Real final energy consumption

Final Energy : 29,00 kWh/m².an

Year of the real energy consumption : 2 017

Envelope performance

More information :

The indicators Ubat, compactness or airtightness are not applicable for a non-conditioned building in a tropical climate. Only count the sun protection of the porosity of the envelope to make natural refreshment

Solar factor of bay windows: N 0,30 E 0,30 S 0,40 O 0,25

Solar factor of opaque walls: 0.05

solar factor of the roofs: 0,02

porosity of facades: 30%

More information

Project delivered in December 2017 so waiting to return. The PREBAT program of the ADEME will allow a precise measurement.

Renewables & systems

Systems

Heating system :

- No heating system

Hot water system :

- Solar Thermal

Cooling system :

- Tape
- No cooling system

Ventilation system :

- Natural ventilation

Renewable systems :

- Solar Thermal

Renewable energy production : 70,00 %

Solutions enhancing nature free gains :

ventilation et rafraîchissement entièrement passifs à l'exception d'un local serveur et d'un local fonds anciens

[🔗 98 m2 de photovoltaïque en attente de mise en place](#)

Environment

Urban environment

Land plot area : 7 394,00 m²

The media library assumes its status as public equipment, it is now a signal in the heart of a city center, a meeting place especially for the youth of St. Joseph.

The square is thus treated like a public place, terminals to sit down, an amphitheater taking place in bottom of scene, to wait or to attend the shows outside the walls of the media library.

Products

Product

Crossline

Nora

remi.duvert@nora.com

<https://www.nora.com/france/fr>

Product category : Second œuvre / Revêtements de sol

Natural rubber tiles in slabs 1mx1m

MOA convinced by the product

Sopranature

Soprema

contact@soprema.fr

<https://www.soprema.fr/fr/>

Product category : Gros œuvre /
Charpente, couverture, étanchéité

Green roof on the base and above the
youth area

Participates in the landscape of the floors,
totally accepted by MOA



Costs

Health and comfort

Water management

65% of the water requirements of the sanitary systems fed by the recovery tank system

Indoor Air quality

In any case, the air exchange rates required by the natural cooling are between 120 and 300 vol / h and evacuate in a few minutes any internal pollution.

Comfort

Calculated thermal comfort : inconfort selon la méthode de Givoni sur moins de 1 à 3% du temps selon les locaux

Acoustic comfort :

The mismatch between natural ventilation and acoustics has been treated by multiplying the absorption devices in vertical and horizontal walls:

- Acoustic wool between fishnet and floors
- Perforated placo + absorbent
- Wool of compressed wood in dressing
- Acoustic baffles in ventilation shaft
- Rubber floor for impact noise reduction

Carbon

GHG emissions

GHG in use : 24,00 KgCO₂/m²/an

Methodology used :

29 kWh / m² year of electricity with a Reunion mix at 0.820 kg CO₂ / kWh

Life Cycle Analysis

Eco-design material :

wood

- wood structure on:
 - facades and roofs of the youth boxes (Mamothèque, story room, ...)
 - facades R + 1 of the administration building
 - façades R + 1 to R + 3 of the building Adults
- Wooden cladding on facades R + 1 to R + 3 of the building Adults
- Wooden shingles on roofs of youth boxes; wood cladding
- Wood solar protection
- Acoustic ceilings made of solid wood on the Vetiver building

Contest

Reasons for participating in the competition(s)

Passive building **without air-conditioning** functioning through ventilation through a low-pressure chimney. Protection of solar radiation and over-insulation. Light wooden facades to reduce the inertia of the walls. Water management by maximum permeability, establishment of green roofs and recovery of sanitary EP.

Contribution of the landscape as much in its relation to the interior / exterior space as for reducing the effect of overheating at the foot of the building.

Building candidate in the category



Energie & Climats Chauds



Coup de Cœur des Internautes



Prix des Etudiants

Date Export : 20230428045135