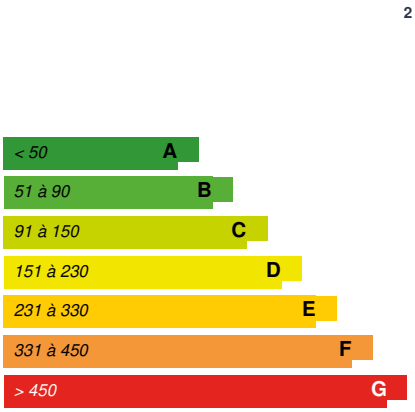
"Murs à pêches" Pool



Building Type : Swimming pool
Construction Year : 2017
Delivery year : 2017
Address 1 - street : rue Maurice Bouchor 93100 MONTREUIL, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 3 800 m^2
Construction/refurbishment cost : 16 500 000 €
Number of Shower/day : 1 125 Shower/day
Cost/m2 : 4342.11 €/m^2

General information

Construction of a swimming pool including:

- a fun pool and learning center 400 m2,
- a small play area 40 m2
- a river running 212 m2
- play area for toddlers 75 m2
- a large wellness area with pool 154 m2, steam room, sauna, spa
- a restaurant
- an outdoor natural bath 1,265 m2
- an outdoor slide
- an outdoor pentagliss 110 m2.

Sustainable development approach of the project owner

The city of Montreuil wanted the construction of an exemplary pool in terms of respect for the environment and sustainable development. This future equipment dedicated to "educational and leisure aquatic activities" is complementary to the Maurice Thorez water sports stadium which offers exclusively sports activities. The client is involved in a HQE approach with the following main objectives: 1- harmonious relationship with his environment 2- optimization of energy resources 3- optimizing the use of water. CONCERN TO CREATE AN EXEMPLARY BUILDING IN TERM OF USE OF RENEWABLE ENERGY AND MATERIALS WITH LOW CARBON FOOTPRINT, ENERGY SAVING AND WATER TREATMENT ...

Architectural description

Project organized several buildings integrating the various functions and activities of the occupants (reception, cloakrooms, pools halls, outdoor spaces). Each volume revolves around circulations and access to these entities. The implementation of these volumes allows to benefit: sunshine and optimum lighting, open perspectives on the landscape, the outdoor pool and the proposed activities. Architecture offers a continuity between the inside and the outside. The choice of building materials such as wood, and green roofs will have an impact on the

building performance as well as on the environmental aspects and the thermal and acoustic comfort of the uses.

Building users opinion

Very good level of lighting, very good acoustic quality, excellent thermal comfort. Quality of bathing water (no chlorine).

If you had to do it again?

Wind turbines. They have been deleted because they are not profitable enough on this project.

See more details about this project

http://www.coste.fr/projet.html?projet=ec161

Stakeholders

Contractor

Name : EST ENSEMBLE
Contact : Anne-Marie Heugas
est-ensemble.fr

Construction Manager

Name : AGENCE COSTE ARCHITECTURES
Contact : Emmanuel COSTE
coste.fr

Stakeholders

Function : Designer
Coste Architectures

Emmanuel Coste, architecte gérant

http://www.coste.fr
Architecture

Contracting method

Separate batches

Type of market

Table 'c21_algeria.rex_market_type' doesn't exist

Energy

Energy consumption

Primary energy need : 2 548,00 kWhep/m^2.an
Primary energy need for standard building :3 900,00 kWhep/m^2.an
Calculation method : Other
CEEB : 0.0001
Breakdown for energy consumption : - Building heating: 149 KWhEF / m2 / year; - Basin heating: 561 KWhEF / m2 / year; - Energy recovery: 40 KWhEF / m2 / year; - Auxiliaries air treatment: 154 KWhEF / m2 / year; - Lighting: 38 KWhEF / m2 / year; - DHW: 319 KWhEF / m2 / year; - Water treatment: 402 KWhEF / m2 / year

Real final energy consumption

Final Energy : 1 667,00 kWhef/m^2.an

Envelope performance

Envelope U-Value : 1,40 $W.m^{-2}.K^{-1}$

Renewables & systems

Systems

Heating system :
- Heat pump
- Low temperature floor heating
- Wood boiler

Hot water system :
- Solar Thermal
- Wood boiler

Cooling system :
- No cooling system

Ventilation system :
- Natural ventilation
- Free-cooling
- Double flow heat exchanger

Renewable systems :
- Solar photovoltaic
- Solar Thermal
- Wood boiler
- Heat pump

Renewable energy production : 79,00 %

Solutions enhancing nature free gains :
Isolations, toiture végétalisée, éclairage naturel, protection solaire intégré dans l'architecture, récupération des eaux grises, récupération chaleur rejet eau bassins, récupération chaleur déshumidfication ...

Environment

Urban environment

Land plot area : 17 000,00 m^2

Built-up area : 22,00 %

Green space : 6 300,00

In the Hauts de Montreuil, in a fast growing environment with housing, schools, soft transport, so well integrated. The building is located in the historical site of the fishing walls.

Products

Product

Natural bathing

Procédé Aquatic Sciences

Jean-Christophe Gérard / Directeur Commercial France

http://www.aquatic-science.com

Product category :
Biological filtration system for public bathing

Well accepted by users and maintenance team

Costs

Construction and exploitation costs

Reference global cost : 2 500,00 €

Reference global cost/Shower/day : 2500

Total cost of the building : 16 500 000 €

Carbon

GHG emissions

Building lifetime : 40,00 année(s)

Life Cycle Analysis

Eco-design material :
Wood, green roof

Contest

Reasons for participating in the competition(s)

1st aquatic center with spaces in passive construction (energy neutral), construction in wood frame labeled PEFC, centralized technical management, reinforced insulation, recyclable materials, heat pump, wood boiler, solar thermal collectors, green roof, hydrolise salt, comfort ventilation, high **effi** ciency heat recovery, a low-nuisance ...

Natural outdoor swimming without chlorine.

Total primary energy = 79% renewable energy.

Building candidate in the category

Energie & Climats Tempérés

Coup de Cœur des Internautes

Prix des Etudiants

Date Export : 20231014193534