


Newsid

by Julien DACLIN / 2013-02-23 12:25:43 / France / 12700 / FR

New Construction



Primary energy need :

76.4 kWhep/m².an

(Calculation method : RT 2005)

ENERGY CONSUMPTION

Economical building *Building*

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

Energy-intensive building

Building Type : Office building < 28m
Construction Year : 2012
Delivery year : 2012
Address 1 - street : 41, avenue de Verdun 92250 LA GARENNE COLOMBES, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 19 000 m² Other
Construction/refurbishment cost : 38 000 000 €
Cost/m2 : 2000 €/m²

Certifications :



Proposed by :

gecina CERTIVEA

General information

NewSide is an office building of 19,000 sq.m., located in the Garenne Colombes instead of an old car factory. This operation is part of the sustainable development of GECINA. It was an HQE and BBC label, as well as international certifications LEED and BREEAM.

Energy goal of the project is to obtain Newsid the BBC label without resorting to the use of photovoltaic panels. The building design has privileged

- Optimizing thermal facades with exterior insulation
- The management of solar gains, with the use of automatic awnings and sunshades, -
- A hybrid ventilation in connection with the quality of indoor air with CO2 sensors,
- The establishment of radiant ceiling reversible, associated with a double flow ventilation to recovery wheel

- Integration of a preheating system for solar thermal hot water the restaurant business, -
- The use of LED lighting in public areas and dimmable fluorescent fixtures with detection presence in the office space.

GTB, according to information received from the weather station located on the roof, relays a message opening or closing the windows to the occupants. When opening the front and in the open position, according to the information of the CO2 probe, hybrid ventilation and heating systems are stopped or regulated.

This project is the recipient of the call for proposals BBC (2nd session) PREBAT.

SUB Award 2013: contribution of the building to the "City of the Future"

Build weekly equivalent of a city of one million involves people think the city differently and give more importance to the concept of sustainable development to conserve resources.

In Gecina belief, it is necessary to focus on the density as opposed to sprawl, coordinating built-up areas and green areas to preserve biodiversity, reinject diversity, and promote public transport. Optimize resources, rethinking urban metabolism pooling sometimes some smaller-scale processes, better managing inflows and outflows of the city: energy, water, de , waste, greenhouse gas emissions ... The city should not be conçue comme juxtaposition of buildings in isolation by merely reasoning scale of the building, but benefit from an integrated approach to the neighborhood and the entire city, the "city of the future."

first building in France with triple certification Environmental exceptional HQE, LEED and BREEAM Excellent and platinum the BBC label, delivered in June 2012, was designed by Newside workshop Valode Pistre Architectures and on behalf of Gecina.

Located at the edge of the town, the building is one of the between the major city of La Garenne-Colombes. Its architecture is the result Urban depth of reflection, a search for better working conditions and a genuine consideration of environmental factors.

Newside represents a new generation of building "eco-smart" when measuring, monitoring and continuous improvement of environmental performance optimizes their operation.

insert the c & oelig , the heart of the "City of the Future"

Reclaiming a derelict urban density the city to participate in the functional diversity become in s & rsquo , based on existing infrastructure and future, as was the purpose of the implementation of the building Newside. Linking Nanterre, the hub of Defense and the center of Paris, he participated in the creation of activity in a residential area in conversion and the development of new activity area "Champs Philippe."

Newside is connected to the city by the existing urban network (tram extension T2, La Garenne-Colombes station, bus lines and direct access to motorways) and implementation of infrastructure for the development of soft modes of transport (local bike recharge area for electric cars, places dedicated to carpool).

Contribute positively to " City of the Future "

"future city" will be resource efficient ... It is with this will, led the integration of eco-design in the heart of the project, the building was erected Newside.

Particular attention has been paid to the design of a high-performance envelope the implementation of advanced equipment and the use of renewable energy. To follow closely the behavior of the urban metabolism, the building was fully instrumented by installing multiple sensors connected to a BMS (Building Gestion Technique).

In addition to this discussion, the perfect integration the building in its environment and the integration of biodiversity is a key feature of the building Newside. Indeed, with a total surface of 1850 m2 of green areas, 35% of the plot, the vegetation is divided between large roofs vegetated, patios and green wall located at -1 overlooking the meeting rooms.

This cover gives the whole thermal regulation, improves the quality of the outside air and participates the buffering of rainwater by storing in the substrate while valuing and privileging local biodiversity.

Improving the quality of life < / p>

design a building that meets the needs of its occupants involves taking into account parameters comfort (thermal comfort, natural lighting, indoor air quality, acoustics), the supply of services and anticipation of the reversibility of the building.

The building shown Newside exemplary in the treatment of interiors for the comfort and well being of users. The combination of light colors and materials, dark wood and stone, helps to create a refined and warm atmosphere, while the generous volumes and large glazed areas create a framework where the light becomes matter.

configuration trays offices Newside was designed to foster greater organizational flexibility and e , clearly the first day. Large workspaces light outward, offer all employees a work environment where serene quality sound and thermal insulation helps to create a pleasant atmosphere for all.

air quality is one of the parameters influencing the productivity of employees. This is why Gecina paid particular attention to the choice of materials focusing on materials low VOC (Volatile Organic Compounds) and performing with LHVP (Laboratory Hygiene of the City of Paris) measures air quality inside the reception building. The results of these measurements revealed a high level of air inside the building. The indoor air quality and other parameters influencing the particular non absenteeism of employees of a tenant, was analyzed and modeled by Goodwill, putting and forward the intangible value of a building as Newside.

Newside The building is also distinguished by the quality of services and dedicated spaces:

- 320 seats restaurant located on the ground floor and a cafeteria open to the gardens
- meeting rooms arranged R-1 benefiting from natural light and views of the various patios
- project auditorium seating 100 people
- style="font-family: Wingdings; mso-fareast-font-family: Wingdings; mso-bidi-font-family: Wingdings;"> access to outdoor terraces of the building
- style="text-align: justify; text-indent: -18pt;"> A concierge.

Believing that educating users to the responsible use of buil , partment is essential for the achievement of target performance, Gecina wanted to involve the future occupants of the building Newside developing a system by opening windows & rsquo , occupant according to a message posted on the screen based on outdoor conditions. Innovation combined with common sense is, obviously, the key to the success of "building manager". The commitment to a performance guarantee from energy use to accompany this certainty.

Sustainable development approach of the project owner

Gecina, a strong commitment to sustainable development: <http://www.gecina.fr/fo/accueil/le-developpement-durable.html> Gecina has the 2007 sustainable development in its strategy and operations. This commitment involves employees and partners around issues mobilizers, while contributing to the economic efficiency, innovation and sustainability of the Group. Gecina has the ambition to be a reference in its field of activity and pursues a policy of continuous improvement and innovation dynamics around three main areas: the development of a sustainable, attention to people litter and taking into account the criteria of sustainable development in all business functions.

Architectural description

AN URBAN PROJECT Two bodies of main buildings are implanted in limited public roads along the axis east-west. Three buildings connecting link between these two entities through which a garden project. Part Verdun 1916 North R 5 is a high rise building, part of the ceiling of 25m. It has a constant width of 18.70 meters (with a one-time adjustment to the East). Part Veuve Lacroix South R 3 is the low building, triangular in plan with a wide back 5m geometry of the plot. In relation to the residential area, within the limit of the ceiling height of 18 m on the street, she enrolled in a scale familiere buildings housing surrounding it. This difference in levels accompanied sectional change of scale of the city, from the scale of the urban road at the scale of residential areas. An answer provided by the environmental architecture: Each of the facades of the project was conceived in terms of its position relative to its orientation. Current part, the expression of the envelope of the building is a stone wall pierced with windows. North, glazed surface is three frames for a full frame, the solar being low, protecting it vertical shading in the summer of glazings low rays of the evening sun. South, glazed surface is two frames for a full frame. The shading are specifically oriented oblique, and are supplemented by a western vertical elements, protecting it from sunlight horizontal lateral. The facades of buildings exposed junction due west and protected by sunshades are supplemented in each case by occlusions exterior chassis-mounted in back of the plane sunshades. In addition, this building will be an exemplary building in the field of sustainable development. It is registered certification within 3 repositories, HQE targets with 8 very powerful, BBC (Building Low Consumption), LEED and BREEAM.

See more details about this project

<http://www.gecina.fr/fo/index.php?id=6986>

Stakeholders

Stakeholders

Function : Contractor

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Function : Certification company

CERTIVEA

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Function : Certification company

US Green Building Council

<http://www.usgbc.org>

Function : Certification company

Building Research Establishment

Contracting method

Separate batches

Type of market

Global performance contract

Energy

Energy consumption

Primary energy need : 76,40 kWh/m².an

Primary energy need for standard building : 162,60 kWh/m².an

Calculation method : RT 2005

Breakdown for energy consumption : 21% Heating9% CoolingECS 6%32% Ventilation25% Lighting7% Auxiliary

Real final energy consumption

Final Energy : 106,52 kWh/m².an

Envelope performance

Envelope U-Value : 0,66 W.m⁻².K⁻¹

More information :

The percentage of glazing has been limited to 50%.Double glazing has solar control low permissiveness and argon filling.Wall veil piercingIsolation from the outside.

Indicator : I4

Air Tightness Value : 1,70

More information

Calculated results with the RT2005.The total final energy consumption is estimated and includes positions as non Regulatory computing.The building is not yet occupied.

Renewables & systems

Systems

Heating system :

- Heat pump
- Radiant ceiling

Hot water system :

- Solar Thermal

Cooling system :

- Reversible heat pump
- Radiant ceiling

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Solar Thermal
- Other, specify

Renewable energy production : 31,60 %

Smart Building

BMS :
GTC Class A

Smartgrid :
Not

Environment

Urban environment

Land plot area : 5 250,00 m²

Built-up area : 75,00 %

Green space : 2 700,00

The land enjoys a strategic location at the entrance of the city of La Garenne-Colombes, a joint between the main avenue and urban residential area in the direction of the place of Belgium. The project is located on the land issue no 308p, currently occupied by the old workshops belonging PSA. Currently an area of 6471 m², it is the subject of a division. This division will be for the benefit of the common Garennes Colombes and Nanterre and allow the creation of a new path. The plot has been a permit to demolish. The plot of the project after division has an area of 5626 m². It is located in the perimeter of the ZAC des Champs Philippe (Area Plan mass), and is subject to the regulations in force PLU USPM Zone. A sales agreement was signed between PSA and society GECINA. This plot is facing position in the long axis of the east-west direction between the Avenue de Verdun 1916 in North and South rue Veuve Lacroix. To date this plot is built as a whole and its perimeter is connected to the existing road network. All of the free surface being paved parking use, with the exception of a few hurdles. Along the avenue de Verdun 1916, a line of trees planting large (typeplane) characterizes the cityscape. Rating rue Veuve Lacroix, the way street is bordered by residential buildings, houses Housing and garden fences. In the East, a residence housing adjacent to the property. It has two gable facades "" on three levels with days of suffering, and a back terrace level facing the limit of ownership. The interior of the plot through a channel to the other is held by a court plantee and a lawn garden.

Products

Product

ERACS SL-Q

Climaveneta

benoit.de.marcillac@climaveneta.fr

<http://www.climaveneta.fr>

Product category : HVAC, électricité / heating, hot water

Heat pump 4 pipe "Energy Raiser" equipped with screw compressors, High Performance, production of simultaneous iced water and hot water. The versatile devices of the series ERACS-Q type "À energy raiser," are able to simultaneously satisfy the demands of hot and cold water and replace so intelligent way conventional systems (chiller + boiler) for applications such as offices, centers and pools business.



Valuation of natural ventilation.

Deerns / Artelia / Gecina

j.daclin@deerns.fr

Product category : HVAC, électricité / ventilation, cooling

A Title V has been filed and accepted value for the opening of windows by occupants in the regulatory calculation combined with dynamic thermal simulations. To encourage occupants to open the windows in the best conditions, signaling screens positioned in the entrance hall and the elevator display different levels of warning messages from the GTB, depending on climatic conditions. The message indicates diffuse occupants if there is need to open or close the windows in order to make best use of natural ventilation. Posts are proposed:- Opening windows: The outside temperature is greater than a -15 ° C- Closing windows: The outside temperature is greater than a 26A ° C- Closing windows: the outside temperature is below -15 ° C was- Opening windows: The outside temperature is less than a 26A ° C- Closing windows: The wind speed is greater than a 5m / s



Material has low VOC emissions

Product category : Management / Others

Finishing products were selected based on their technical performance, but also environmental because all emit low VOC (Volatile Organic Compounds), performance was verified after measures of the quality of the air inside the LHVP MADE BY (Laboratory City of Paris). Levels of indoor air pollutants revealed are well below the guideline values of WHO data

Costs

Construction and exploitation costs

Global cost : 38 000 000,00 €

Renewable energy systems cost : 750 000,00 €

Health and comfort

Water management

Consumption from water network : 11 730,00 m³

Consumption of harvested rainwater : 2 650,00 m³

Calculation of water consumption model based on HQE. The rainwater is collected for irrigation of green areas (green roofs and patios).

Indoor Air quality

Finishing products (paints, adhesives, sealants, carpets) were selected based on their technical performance, but also environmental, since all emit low VOC (Volatile Organic Compounds), performance was verified after measures of the quality of Indoor Air CARRIED OUT BY THE LHVP (Laboratory of the City of Paris). Levels of indoor air pollutants revealed are well below the guideline values of WHO data. Respecting the use of force in european labels (GUT EcoLabel, EMICODE) for paints carpets, wood. This gait has been extended to other products included in the LEED gait as adhesives and sealants

Carbon

GHG emissions

GHG in use : 9,30 KgCO₂/m²/an

Methodology used :

Calculation estimates RT2005 + other non Regulatory

Building lifetime : 25,00 année(s)

GHG Cradle to Grave : 1 450,00 KgCO₂ /m²

Computation realized through the call HQE projects Performance

Life Cycle Analysis

Material impact on GHG emissions :

982

Material impact on energy consumption : 4 303,00 kWhEP

Contest



