SOGECAMPUS The Societe Generale Dunes

by Dena VILLANUEVA / 2018-06-14 22:54:23 / Frankreich / 13869 / FR

Primary energy need :

72 kWhep/m².an

(Calculation method : RT 2012)

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 : 2013
Delivery year : 2016
Address 1 - street : 6 Allée des Sablons 94120 FONTENAY-SOUS-BOIS, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 90 000 m²
Construction/refurbishment cost : 224 000 000 €
Number of Work station : 5 200 Work station
Cost/m2 : 2488.89 €/m²

Certifications :

Proposed by :

EIFFAGE

General information

The Societe Generale campus, "Les Dunes", recognizable by their beautiful wave form, is the affirmed expression of a strategy of differentiation assumed, as much by their **societal dimension** as by their **architectural innovation** , acting as a marker. of the history of the digital transformation of the bank.

This set of five metal-clad wooden buildings combines quality interior spaces with quality outdoor spaces. Each common area is a place to work alone or with others. More than a workspace, the Dunes are a meeting place to communicate at any time and in any place.

The project is remarkable thanks to the spirit of innovation and ingenuity developed for the employees of Société Générale. A project breaking with traditional offices where the main goal is to provide a place where it is pleasant to work. It embodies the desire to combine creativity and flexibility in the heart of the workplace, to work differently.

In environmental matters, Les Dunes is an exemplary campus, via two complementary certifications:

- **HQE®** 2011 vintage certification, according to the "NF tertiary buildings HQE® approach" standard, version of January 2012, with a performance profile to reach **the exceptional level** ;
- **LEED** V3 New Construction 2009 **certification** , according to the "LEED 2009 for new constructions and major renovations" **standard GOLD** .

The Dunes Campus has been **awarded the 2017 SIMI Grand Prix.**

Sustainable development approach of the project owner

2 additional certifications:

- HQE construction: French High Environmental Quality certification with the exceptional profile attributed to the Dunes building;
- LEED: International certification of high environmental quality. The Dunes are Gold certified, this gives an international visibility to the building.

3 main ambitions:

- A clean project: recycling of waste, low nuisance on public roads and low noise pollution vis-à-vis the neighborhood;
- Energy consumption reduced by 50% compared to buildings rented on La Défense. Energy consumption on the lighting divided by 3;
- Quality of life and optimal comfort in buildings: improved quality of fresh air, very low VOC emissions (Organo-Volatile compounds such as formaldehyde, toluene benzene ...), little particle emission indoors (carpets , walls ...).

Architectural description

A "landscape building"

Its architecture has been imagined in a horizontal system with an alternation between full and empty, between built and landscaped dimensions, to respond to the desire for managerial innovation that encourages the questioning of habits and the laparity of skills.

In the form of waves, the five solar-wrapped buildings in vertical strips of composite wood are connected to each other by a large ground floor which occupies the entire plot and is pierced and lit by large patios. .

Thus, three parallel lines 35 meters high and 160 meters long, facing east-west, stop at the property boundaries and become essential in the neighborhood.

Developments on the project were contained mainly on interior fittings, especially to diversify the uses over time. It is the peaceful reflection of a profound mutation of the modes of thought and current functioning.

https://www.annedemians.com/projets/dunes/

Stakeholders

Contractor

Name : SOGECAMPUS

Construction Manager

Name : Architectures Anne Démians
https://www.annedemians.com

Stakeholders

Function : Construction company

EIFFAGE Construction

https://www.eiffageconstruction.com

Contracting method

Other methods

Energy

Energy consumption

Primary energy need : 72,00 kWhep/m^2.an

Primary energy need for standard building : 140,00 kWhep/m^2.an

Calculation method : RT 2012

Envelope performance

More information :

The reduction of energy needs has been taken into account from the design stage, notably thanks to:
- a relatively compact volume of buildings;
- the installation of effective and adapted exterior solar protection (indoor, outdoor or BSO solar protection);
- sectoring of premises by activity;
- a powerful external insulation.

More information

Cep / Cep max & lt; 0.70: Cep = 72 kWhep / m² for a Cep max = 109.40 kWhep / m² (primary energy due to heating, cooling, lighting, DHW, ventilation and equipment auxiliary) Primary energy consumption (only for materials considered): 27 kWhep / m 2 SHON / year (1304kWh / m²SHON). The SHON taken into account is 87600 m²

Renewables & systems

Systems

Heating system :

- Geothermal heat pump
- Radiant ceiling

Hot water system :

- Urban network

Cooling system :

- Geothermal heat pump
- Radiant ceiling

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Heat pump (geothermal)

Other information on HVAC :

The project exploits local resources such as geothermal energy and the district heating network to cover:
- the need for hot water> = 80 ° C and additional hot water <50 ° C through the connection to the district heating network (imposed by the city under the project);
- hot water requirements <50 ° C by geothermal heat generation;
- the total cold needs by thermofridge pumps groups associated with geothermal wells (with dry dry in addition).

The combination of these systems for the production and emission of heat / cold by geothermal energy with constructive solutions performing in terms of envelope and reversible radiating ceilings, correspond to the best compromise with regard to energy consumption and therefore polluting emissions. , including CO2 and SO2.

The project exploits geothermal groundwater to cover:
- hot water requirements <50 ° C;
- the total cold needs by thermofridge pumps groups associated with geothermal wells (with dry dry in addition).

This system is very efficient in terms of associated CO2 emissions (approximately 1.8 CO2 / m2 SHON). Investment costs and operating costs remain relatively high. However, this solution does not present the problems of storage and fuel supply as is the case of a wood boiler.

Environment

Urban environment

Land plot area : 23 000,00 m^2

Built-up area : 90 000,00 %

Green space : 3 658,00

Initially, the parcel was occupied by a logistics warehouse which was demolished in the course of 2011. The project fits perfectly in a perspective of urban

requalification of the neighborhood being densified.

Volumetrically, the project is located in a densification band, located between two North-South axes, the Avenue du Marechal de Lattre de Tassigny and the A86, whose center is the "Val de Fontenay" station of the RER.

In addition, a sharing of the use of the parcel with the public space has been negotiated: a private road with a public pedestrian crossing is introduced along the joint ownership with the parcel of the BNP building at the request of the City to allow more access direct for pedestrians between the avenue de Lattre de Tassigny and the main larue towards the RER.

The project exploits local resources such as geothermal heat generation and district heating network.

It fits in while respecting the constraints on the sanitation network are limited by the establishment of tanks retaining the EP and recovery of rainwater.

Products

Product

DSGN TWEED

Modulyss

info@modulyss.com

https://www.modulyss.com

Product category : Table 'c21_germany.innov_category' doesn't exist SELECT one.innov_category AS current,two.innov_category AS parentFROM innov_category AS oneINNER JOIN innov_category AS two ON one.parent_id = two.idWHERE one.state=1AND one.id = '16'

This carpet has been installed in all floors on approximately 60,000 m2. It contributes to the good acoustic performance of interior spaces and the comfort of users. It is a material in which 69% of the content is recycled, which in particular reduces its CO2 impact.
Recycled content (69%)
• 100% PA6 Thread Dyed Nylon Solution
• Colback SMR is produced entirely from post-consumer recycled PET plastic bottles.
• Waste generated during slab cutting is chopped and added to the backing, ensuring a 10% post-industrial recycled content.
Interview
For cleaning, a water consumption of 4.72 liters / m2 / year is required, less than an acoustic linoleum or a PVC floor on foam that consume 4.8 liters / m2 / year each.
End of life
• Reuse: At the end of its life, carpet tiles can be reused in non-critical areas after cleaning to prolong the life of the product.
• Recycling: Thanks to the manufacturer's back2back program, carpet tiles can be used as raw materials for the new carpet tile dossier.
• Transformation: the manufacturer Modulyss works in partnership with Vanheede Environment Group to convert carpet tiles into secondary fuel to drastically reduce CO2 emissions.

The choice of products, systems and construction processes are in line with the estimated duration of the building estimated at 50 years.

Costs

Construction and exploitation costs

Total cost of the building : 224 000 000 €

Health and comfort

Water management

Consumption from water network : 19 481,00 m^3
Water Consumption/m2 : 0.22
Water Consumption/Work station : 3.75
Reduction of drinking water consumption:
It is possible thanks to the installation of frothers on the taps allowing to limit the flow of the washbasins to 3.8 L / min instead of 5.1 L / min.

Rainwater harvesting :
This recovery is done from the inaccessible terraces and the roof of the bike room to a tank of 128 m3. They are then used for watering green spaces and cleaning car parks.

Stormwater management at the plot:
The storage of a volume of rainwater sufficient to manage an exceptional rainy episode without direct payment on the public sewerage network, is ensured by 7 pits of retention of EP of 636 m3 in the two basements (flow of leakage limited to 102 L / s).

On the other hand, the waterproofing coefficient of the plot is 0.9. An effort to revegetate the plot was therefore made to reduce this coefficient (16% of the plot being planted).

Indoor Air quality

The quality of indoor air is ensured by the composition of the materials and by different mechanisms.

Tests performed by a service provider on 40 points gave very satisfactory results:

- **Highly efficient air renovation rate of** 36.5 m3 / h / occupying in the workplace and 9 m3 / h in specific pollution rooms;
- **Debiting** offices, meeting room, auditorium, ... controlled by presence detection or CO2 concentration via CO2 probes. The tripping threshold is equivalent to the outdoor CO2 level + 350 ppm or 1000 ppmmaximum.
- **Filtration on** M5 + F7 **air** intakes impregnated with activated charcoal + F8 (instead of F5 usually used);
- Airtightness of air networks C class;
- Use of low emission products:

- Class A + or equivalent for all interior coatings, paints, glues, plasterboards, interior insulation, ... (in accordance with LEED requirements),

- Class A minimum for interior recomposed wood products,

- For liquid or pasty products, in addition to VOC and formaldehyde have been verified.

All these elements had to be justified via test reports or certificates from laboratories accredited according to the standard NF EN ISO / IEC 17025.

Comfort

Health & comfort :

1. Accompany the transformation

The **collaborative approach turned this real estate project into a** human **adventure** , by associating, upstream, the employees with the **real estate** and programmatic reflection of the project, including the name which was born from a **competition of ideas launched within the group** . is one of the collaborators who found the name "Les Dunes".

Generation Y was indeed at the center of the Strategic Committee's reflection. The evidence of this complementarity has resulted in concrete developments, likely to seduce young graduates: a cafeteria run like a real coffee, an espresso bar, a slow coffee at extended times, a connected building track traceable by an app, an amphitheater a mile leagues from the financial world, from streetart in car parks to let life in every day.

In terms of the economic and managerial challenge of the West / East geographical rebalancing, the project facilitated the **relocation of 5,500 people from** Société Générale, Defense to Val-de-Fontenay.

In addition to its size, a notable scratch for Eiffage is to have built a building that was known to users in advance. Usually, it is the delivery of buildings to white, without information on who will occupy them, which allowed to integrate their apprehensions and their expectations from the construction phase, for example thanks to a showroom with real size.

In November 2015, a **whole floor of the Dunes construction site was set up so that employees could discover their future environment** . At the rate of 3 sessions per day, for 6 months, more than 2,600 employees were able to familiarize themselves with the general atmosphere of the place, the interior fittings, but also with the type of furniture and related equipment. Visitors were invited to share their comments, which were taken into account. For example, as a result of these returns, the color of certain pieces of furniture has changed or it has been decided to deploy more offices that go up and down, allowing standing work or the adaptation of surfaces to people in situation. handicap.

2. The Dunes, a formidable lever of comfort and attractiveness

A pleasant environment thanks to the orientation of the buildings along the North-South axis, to allow a maximum of light in the gardens, bigbaies glazed with view on the patios, a technological universe of peak, a great freedom in the way of working thanks to FlexWork, passages and relaxation areas staged to offer a change of scenery; as many times to make the work environment unprecedented.

Inside the building, the restaurant area embodies exemplarily this search for comfort where the notion of choice prevails throughout the scenography: no uniformity in the position of tables and chairs, different lighting depending on the space, acoustics that favor the exchanges around the meal, an effective but invisible technology, materials that absorb noise and delight the eyes.

Outside, the access to pleasant views is reinforced by the installation of floor balconies on the facades of buildings: the project has a balcony every 1000 m2de offices. These balconies are positioned to correspond to the zones of herbal tea floor, privileged places of user friendliness.

Artificial lighting

- Implementation of LEDSylvania-Concord downlight in the offices with an average power of about 5 W / m².
- Illumination level at 300 lux respected on the trays of offices.
- Uniformity in artificial lighting at 0.6 in office trays

Visual Comfort Indicators

- Coefficient of light transmission Vêture composite wood: 8%
- Power installed artificial lighting: about 5 W / m² (varies according to the zones)
- Average E:> 300 Lux (varies according to the zones)
- Uniformity Emin / Emoy: about 0.6 (depending on the zones)

Acoustic comfort :

The parcel is located at the crossroads of several major metropolitan areas (RER E, RER A, A86, RN186) which structure the eastern region of Paris. The site is very aggressive in terms of noise.

Several architectural and technical provisions have been implemented to limit the external nuisances of the plot, among which:

- the establishment of the volumes built along a North-South axis parallel to the RN186. They thus liberate gardens oriented North / South, particularly conducive to the planting of large plants and development;
- Specific materials implemented:

- Antivibration material at the level of the building foundations

- Acoustic screen on the edge of the parcel along the RER lane makes it possible to fill the windbreak function and to protect the building and the outside spaces of the RER nuisance.

- Insulation of spaces vis-à-vis the outside with4 classes of acoustic insulation of office spaces vis-à-vis the outside, following the orientations:

- DnT, A, tr between 34 and 39 dB

Carbon

GHG emissions

Building lifetime : 50,00 année(s)

Life Cycle Analysis

Eco-design material :

The choice of products, systems and construction processes are therefore in line with the expected duration of the building:

- concrete / steel structure with a service life of more than 100 years;
- aluminum exterior joinery with a service life of 30 years;
- interior cladding with service life (between 5 and 15 years) corresponding to the time required for redevelopment of spaces in the private office.

Always with a view to optimal environmental management at the end of life, the concepts of separability and demonstrability have also been favored with the implementation of:

- suspended suspended ceilings in offices;
- flexible flooring ("free-standing" slabs);
- removable partitions.

In addition, Les Dunes reveal a strong involvement of stakeholders in the selection of materials to reconcile the different environmental requirements, including a supply of recycled materials and regional origin.

Products with recycled content

- carpets (about 53% recycled content)

- radiating ceilings (about 30%)

- mineral insulators (between 54% and 70% depending on the valued references)

- recomposed wood elements (between 33 and 80% depending on the value of the products)

- Blast furnace slags and fly ash contained in concrete (representing only 1 to 6% of the tonnage of a standard concrete)

- All metallic elements, in particular l steel facade and structure (between 25 and 100% depending on the valued products).

Regional sourcingIntegration of materials whose manufacture and extraction were made within 800 kilometers of the site, especially for the largest contributors in volume:

- concretes and steels of structure and facade

- thermal insulation

- carpets.

Contest

Reasons for participating in the competition(s)

The building participates in the expression of a **mode of work still unpublished within large companies** (flex office, mobility, general telecommuting one to two days a week), which has a direct impact on the occupation and evolution of places.

Among these new ways of working, the most emblematic at the Dunes is the one called **FlexWork** . Its principle is to rebalance individual and collective spaces

towards more **modularity** , by giving more space to the collaborative and by planning different places according to needs: co-creation, brainstorming, telephone, stand-up meetings, etc. The **concept of moving frame** is important: benchmarks exist, but they do not hinder freedom of use.

Concretely, **with the FlexWork employees no longer have a nominative office** ; they settle, according to the needs of their project, in a shared space, with the colleagues of their choice. Moving from a territorial culture to a collaborative tool requires a 360 ° change of look, with a better quality of life and more autonomy.

The building is also an effective response to a technological challenge: to make Societe Generale the relational reference, digital, reliable, at the forefront of new technologies. At the Dunes, talent finds expression in a relaxed atmosphere, with at their disposal the range of the most innovative IT solutions.

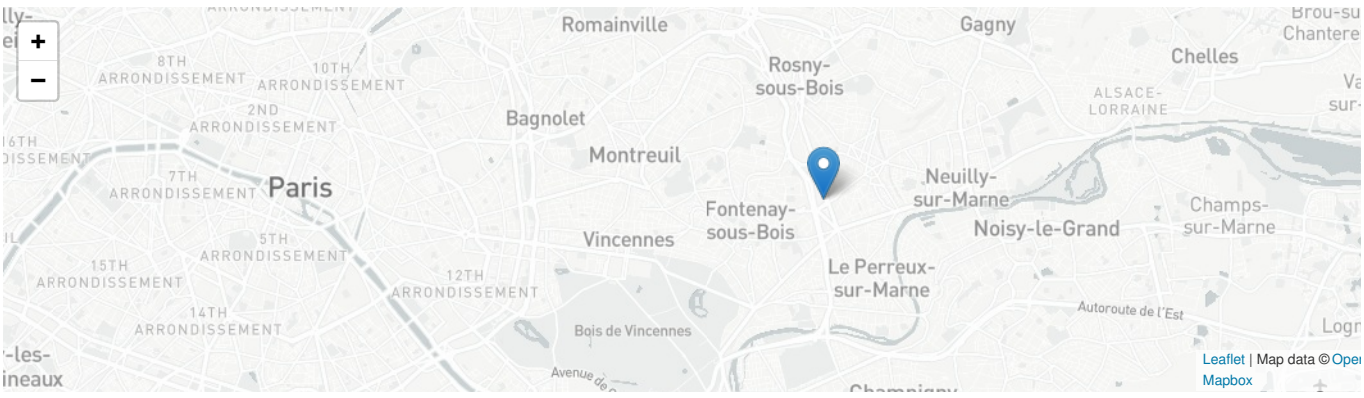
- 5,000 FlexWork workstations
- +500 collaborative spaces
- + 150 individual workspaces to focus
- 45 relaxation areas / coffee
- 1,000 m2 reserved for start-ups
- 8 street artists animate the parking

Building candidate in the category

Santé & Confort

Coup de Cœur des Internautes

Prix des Etudiants



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