Theodore

by Gauthier Kerveillant / 2018-06-19 19:33:06 / Frankreich / 10176 / FR

Primary energy need :

79.88 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 : 2015
Delivery year : 2017
Address 1 - street : 1 rue blanche 75009 PARIS, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 3 512 m²
Construction/refurbishment cost : 8 700 000 €
Number of Work station : 240 Work station
Cost/m2 : 2477.22 €/m²

Certifications :

General information

The renovation of the THEODORE building is in line with the desire of AG Real Estate to participate in the enhancement of urban heritage.

This building of 3500 m2, inscribed in a remarkable architectural ensemble which includes the church of the Trinity, was designed in 1864 by the architect Théodore Ballu. It is in his memory that AG Real Estate has named his project THEODORE.

The ambition of AG Real Estate is to revive Ageas France's former office building, and to keep it in its portfolio. To do this, AG Real Estate entrusted this major restructuring to the architects of Studios Architecture, known for having rehabilitated the headquarters of Google France located rue de Londres, also in the 9th arrondissement of Paris and was also the execution architect of the Louis Vuitton Foundation on the edge of the acclimatization garden.

The renovation program focuses on two areas:

- Preserve the past, with restitution in its original state of the facade.
- Predicting the future by offering tomorrow to the occupants of THEODORE a framework of convivial life answering the ways of work of the XXI century.

- **Iconic and strategic building**

Listed by the Architects of the Buildings of France, the building has just celebrated its 150th anniversary, emblematic anniversary to start a new stage of its history, and the opportunity to rename it by the name of its illustrious creator. Today, AG Real Estate presents some of this glitzy renovation work at No. 1 in the Rue Blanche, where the eternal lieutenant of the Trinity Church stands.

This building is spread over 3500 m2, with an inner courtyard in its center. Located a few minutes walk from Gare Saint-Lazare and the Paris Opera, the building benefits from direct and immediate connections with the strategic places of the capital.

Sustainable development approach of the project owner

From the design phase of this renovation, the architect and design offices have ensured that the issues of comfort, energy efficiency, air quality, resource management and other management issues are integrated. waste, construction site, etc. In fact, the BREEAM® and HQE ™ environmental certifications aim to limit the impact of the building on the environment, in the construction phase and in the operation phase, while ensuring the user's living conditions are healthy and comfortable.

A building designed, built and managed according to the BREEAM® and HQE ™ approaches has all the usual qualities of architecture, functionality, use and technical performance. As a bonus, its impacts on the environment seek to be durably minimized: this implies a choice of building materials respecting environmental requirements, taking into account the maintenance of the building, a reflection on its possible deconstruction. Particular weight has been given to energy savings, which will limit the energy impact of building operations and related greenhouse gas emissions.

For this renovation with ambitious environmental objectives, the Contracting Authority, in line with its desire to be part of a rigorous sustainable development approach, particularly wishes to focus on the following aspects:

- The perpetuation and enhancement of the heritage aspects of the building
- Control of the impact of the site, both from the point of view of waste management and the limitation of nuisances for the neighborhood
- The comfort and well-being of the occupants
- The energy performance of the building

Architectural description

The renovation was designed with the sole purpose of achieving the most coherent balances between the Old and the Modern.

- Leveling and strengthening of the floors
- Restore to the norms of the accesses and circulations
- Integration of a powerful air conditioning system
- Facilities adapted to new ways of working

The project from the inside

- **Lobby**

Upon entry, THEODORE plunges us into the temporal ambivalence that it represents. The historic carriage porch leads to the lobby.

- **Collaboration spaces**

Each floor has a meeting room, located near the landing, to facilitate mobility and flexibility of use.

- 11 meeting rooms spread over all floors.
- 4 meeting rooms in the basement bathed in the natural light of the vents.

See more details about this project

Stakeholders

Contractor

Name : AG Real Estate
Contact : Arnaud.Guennoc@fr.agrealestate.eu
https://www.agrealestate.eu/fr/Pages/default.aspx

Construction Manager

Name : Studios Architecture
Contact : bmathieu@studios.com
https://www.agrealestate.eu/fr/Pages/default.aspx

Stakeholders

Function : Thermal consultancy agency

Innovation fluides

j.requier@innovation-fluides.com

http://www.innovation-fluides.com/
Workmanship - Fluid / Thermal Studies Office

Function : Structures calculist

Terrell

a.bailloud@terrellgroup.net

http://terrellgroup.net/?LANGUE=fr
Project Management - Structural Design Office

Function : Other consultancy agency

De Benoist

Project management - Stone design office

Function : Other consultancy agency

JCP Conseil

Project Management - BET Lifts

Function : Others

Artelia

https://www.arteliagroup.com/fr
Moe Curage, asbestos, haulage

Function : Structures calculist

Cap Horn

http://www.caphorn-acoustique.com/
Acousticien

Function : Company

Bouygues rénovation privée

http://www.bouygues-batiment-ile-de-france.com/renovation-privee
General Enterprise

Function : Assistance to the Contracting Authority

Aliuta

fthellier@aliuta.com

http://www.aliuta.com/
Assistance for project management

Function : Certification company

01 40 50 29 09

http://www.certivea.fr

Energy

Energy consumption

Primary energy need : 79,88 kWhep/m^2.an

Primary energy need for standard building : 150,14 kWhep/m^2.an

Calculation method : RT 2012

Initial consumption : 652,00 kWhep/m^2.an

Envelope performance

Envelope U-Value : 0,98 $W.m^{-2}.K^{-1}$

More information :

At the level of the exterior joinery, all the wood joineries have been replaced and refurbished. Some authentic models have been identified in collaboration with the historian of the operation to serve as a reference for the entire project. The louvers have been renovated and maintained in a picture of the outer bays. The existing blinds have been renovated and reused to allow the control of solar gains especially on the south facade overlooking the Estienne d'Orves square.
The building envelope is multifunctional: it provides both thermal insulation, sun protection, natural lighting, energy capture, etc.
The insulation of the building was modified during these works and replaced by mineral wool. Insulation has a strong impact on the energy consumption of the building because it keeps the heat in winter.

Renewables & systems

Systems

Heating system :

- Urban network
- Radiant ceiling
- Fan coil

Hot water system :

- Urban network

Cooling system :

- Water chiller
- Fan coil
- Radiant ceiling

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- No renewable energy systems

Other information on HVAC :
Both the cold production system and the hot production system are equipped with thermostats to program the desired temperature independently in each room.
Hot and cold productions are connected to a so-called "rabbet contact" system that automatically cuts the supply of hot or cold in case of opening windows.

Smart Building

BMS :
The GTB can automatically manage the temperature and lighting instructions. It does not support the management of the blinds that are managed manually.
In the offices and meeting rooms of the ground floor at R + 5, a remote control for artificial lighting, an adjustment knob for hot and cold production systems (allowing to vary the set temperature within the limits set by regulation), offer each user the possibility to override the automatic lockers. Each remote is assigned to an area marked on the back of the remote control. These remote controls send the control signal to the multi-sensor on the ceiling, which will then transmit the given commands. Each room is equipped with one or more temperature probes
In the decorated offices, the offices of the R + 6 and the hall, the regulation of the fan convectors is done via controls on the walls making it possible to vary the temperature of setpoints as well as the air flow of the latter.

Environment

Urban environment

The existing office building is located in Paris, 9th arrondissement. The property occupies a plot located at 1-3 Rue Blanche, located at the corner formed by the Rue Blanche, perpendicular to the Place d'Estienne d'Orves, and by the street Cheverus along the Trinity Church.

50 meters. This is the distance that separates the 1 rue Blanche from the metro stop "Trinité d'Estienne d'Orves". Line 12, in front of the door of THEODORE, is the icing on the cake of a real network of transport and mobility, in direct proximity, in which we benefit from the Hub Saint-Lazare ...

Products

Product

Connecting the building to CPCU and Climespace urban networks

Engie

01 40 02 78 00

https://www.climespace.fr/

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 = '31'

The building has been connected to the CPCU and Climespace urban networks.

This choice is part of the principle of pooling energy production; has also helped to limit the impact in terms of work to be done to accommodate otherwise very large equipment. The cold groups in particular would have also entailed a considerable acoustic impediment to be treated. We have also been able to recover surfaces intended for the activities for which the building was designed. During operation maintenance interventions are less important with increased durability of the entire production system.

Costs

Health and comfort

Water management

The sanitary fixtures chosen during the renovation are very water-efficient, in accordance with the requirements of BREEAM® and HQE ™ environmental certification:
- The flush toilets incorporate a dual control tank 3 or 6 liters.
- The valves are timed (activation by infrared detection) and are equipped with flow limiters, allowing to limit the flow rate to 3 liters per minute. These operate on batteries, their life is estimated at about 5 years.
- Urinal flow is 0.3 liters per second timed at 3 sec.

Indoor Air quality

Fresh air filtered, heated and cooled by central air with energy recovery system.

Air renewal based on 30 m3 / h / person by double flow ventilation.

All products and materials (carpets, paints, ceilings ...) have been chosen to preserve the quality of the indoor air and therefore your health. The levels of VOC (Volatile Organic Compounds: main indoor air pollutants contained in glues, paints, floor coverings, etc.) have been limited. In addition, the ventilation is large enough to ensure sufficient air exchange.

- Quality of materials in contact with indoor air

The selected interior coatings meet strict requirements for content and pollutant emissions. Here are some characteristics:

- The paints used inside the premises were chosen for their low VOC content; some of them benefit from the European eco-label.
- Acoustic mineral wool insulation (at suspended ceilings) is EUCEB certified, thus guaranteeing the absence of carcinogenic fiber emissions.
- Renewal of fresh air

Fresh air is filtered to limit dust and pollen. The fresh air flow in office trays and meeting rooms is controlled by an air quality sensor that measures the CO2 level and then adjusts the amount of fresh air. The toilets are kept in depression compared to the offices and are treated by a specific permanent ventilation to avoid any transmission of odors.

Comfort

Health & comfort :

- **Office space**

The layout of the spaces has been designed for the benefit of the occupants:

- All workstations have direct access to natural light.
- 12.5 m2 of SDP / person
- 11,8 m2 of SUB / person
- Thermal comfort and acoustic tranquility.

Collaboration spaces

Each floor has a meeting room, located near the landing, to facilitate mobility and flexibility of use.

- **Amenity areas**

THEODORE responds to the need to encourage the exchange and sharing of experiences, through a convivial space suitable for conversion within the porch of 1, rue Blanche.

The courtyard of the Cheverus street building was thought of as a vegetated communal area.

- **Illumination**

- Offices: 400 lux
- Hall: 250 lux
- Sanitary facilities: 200 lux
- Technical rooms: 200 lux
- Circulation: 150 lux
- Outside: 20 lux

Recessed lighting in the false ceiling in offices except ceilings preserved.

Floor and wall lighting in offices where ceilings are kept.

Distribution of strong currents on the office area by peripheral channel. Each station will be equipped with 5 PC 10/16 A + T, 2 of which are on a wavy circuit.

Log of life

- Visual comfort

The building is equipped with low consumption LED lamps. The intensity of the artificial lighting varies automatically according to the natural lighting. Artificial lighting is also controlled by presence detection and / or time programming: its use is optimized according to the needs.

The solar protectors are blinds of type blind projection. Their operation is manual, the opening or closing of these blinds is via a rope attached to the front of a sage leaf.

Acoustic comfort :

Thanks to double glazing, the facades are very well insulated from outside noise. Shock noises (footsteps, falling objects) are dampened by the carpet in the office trays, and acoustic resilience at the slabs. The acoustic treatment at the level of the closets of the fan-convectors, is ensured by an acoustic absorbent.

The ventilation grills have also been chosen to avoid noise regeneration.

In addition, in noise-sensitive areas, wall-absorbing panels have been added and R + 6 is equipped with an absorbent ceiling. Finally, all the building's technical equipment is soundproofed: acoustic measurements were taken at the end of the building to verify this point.

The acoustic insulation intended for the glazings are:

- 30 dB on the courtyard facades
- 35 dB on street façades

Carbon

GHG emissions

GHG in use : 1,37 $KgCO_2/m^2/an$

Emission GHG phase use before renovation: 46 kgCO2 / m².an

Contest

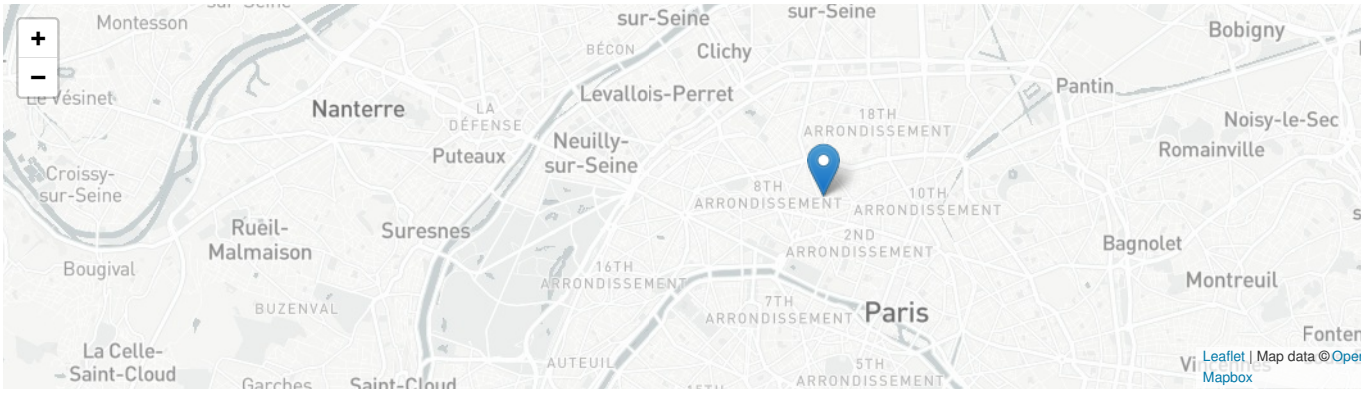
Building candidate in the category

Green Solutions AWARDS powered by Construction21.org

Santé & Confort

Coup de Cœur des Internautes

Prix des Etudiants



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