


Thaïs

by léa poirier / 2017-06-12 17:02:16 / Francia / 9621 / FR

New Construction



Primary energy need :

75.2 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 : 2017
Delivery year : 2017
Address 1 - street : 25 - 29, rue Anatole France 92300 LEVALLOIS PERRET, France
Climate zone : [Cfc] Marine Cool Winter & summer- Mild with no dry season.

Net Floor Area : 5 600 m²
Construction/refurbishment cost : 14 000 000 €
Number of Work station : 450 Work station
Cost/m2 : 2500 €/m²

Certifications :



General information

Owned by Foncière des Régions since 2001, the pre-existing building, located in Levallois Perret, has been occupied by Orange since its construction in the 1970s. The release of the telephone operator in 2014 was partial, Orange retaining its Equipment in the basement of the building. The small residential building on the street and the main office building, set back from the rue Anatole France, were razed to the site of the construction of a new building, seven floors, called Thaïs. This one meets the best international standards: NF Tertiary Buildings Approach HQE level Excellent and BREEAM Very Good level.

In order to reduce its carbon footprint, Foncière des Régions has been conducting LCAs on development or renovation projects since 2010. As for the Thaïs building, it wished to obtain the BBCA label. Without resorting to wood construction, the virtuous solutions it has implemented have enabled it to achieve this objective. It was awarded this label on 4 April 2017 in the Offices category awarded by the Association for the Development of Low Carbon Building (BBCA).

The building has been designed for openness and lightness, thanks to a sleek and elegant façade, combining glass, aluminum and stainless steel. On 5600 m², the choice of materials, the treatment of the spaces and the comfort of the occupant contributes to the attainment of a high level of well-being. Thaïs has large office desks that offer maximum flexibility. The new architecture reappropriates the writing of the previous book and transforms it to offer a large place to biodiversity and spaces of conviviality. The 1200m² of gardens and vegetated terraces are part of a global approach to fauna and flora, led by an ecologist. This strong footprint in the heart of town is a major point of this operation.

Architect (DGM Architects), AMO (Citae), general contractor (Petit), thermal engineering office (BETEC), ecologist (UrbanEco) and landscape architect (Terabilis), MOEX (SCO) have mobilized to achieve the optimum environmental quality of the Thai building.

Sustainable development approach of the project owner

Target 100% of the green heritage to 2020 THAIS office project: HQE Certificates Excellent / BREEAM VERY GOOD / BBCA

Architectural description

Offices in R + 7 of 5600 m² of floor area Preservation of most of the infrastructure Reconstruction in occupied site (orange central telephone in infra) Metallic structure Mixed concrete / prefabricated floors Facades curtain walls, sun breezes vertical enamelled glass Green roofs

Building users opinion

Building not yet occupied

If you had to do it again?

We would do it again.

Stakeholders

Stakeholders

Function : Contractor

Foncière Des Régions

Mikaël Auffret

<http://www.foncieredesregions.fr/>

Function : Contractor

PETIT (groupe VINCI CONSTRUCTION)

Bernard De Witte

<http://www.petit-construction.fr/france/petit-construction.nsf/web/index.htm>

Function : Designer

DGM Architectes et associés

Yves Tougard

<http://www.dgm-architectes.fr/>

Function : Thermal consultancy agency

BETEC

Sébastien Fert

<http://www.betecsa.fr/>

Function : Assistance to the Contracting Authority

CITAE

Clément BEGAT

<https://www.citae.fr/services/batiment-durable>

Contracting method

Lump-sum turnkey

Energy consumption

Primary energy need : 75,20 kWh_{ep}/m².an

Primary energy need for standard building : 123,50 kWh_{ep}/m².an

Calculation method : RT 2012

Breakdown for energy consumption : Heating: 22,5 kWh_{ep} / m² (22,5 kWh_{ef} / m²) Cooling: 4,3 kWh_{ep} / m² (4,3 kWh_{ef} / m²) ECS: 5,6 kWh_{ep} / m² (2,2 kWh_{ef} / m²) Lighting: 16,4 kWh_{ep} / m² (6,3 kWh_{ef} / m²) Auxiliaries: 26,5 kWh_{ep} / m² (10,2 kWh_{ef} / m²)

Real final energy consumption

Final Energy : 45,70 kWh_{ef}/m².an

Real final energy consumption/m² : 54,00 kWh_{ef}/m².an

Real final energy consumption/functional unit : 54,00 kWh_{ef}/m².an

Year of the real energy consumption : 2 017

Envelope performance

More information :

- External walls: Solid concrete 20 cm (R = 0,10 m².K / W) + insulation (R = 3,15 m².K / W) - U_{paroi} = 0,292 W / m².K
- Opaque part of the facade curtain on courtyard - R + 1 to R + 7: Opaque wall curtain facade - U_{paroi} = 1,70 W / m².K
- Opaque part of the facade curtain on the street: Opaque wall curtain facade - U_{paroi} = 1,70 W / m².K
- Opaque part of the facade curtain on courtyard - RDC: Opaque wall curtain facade - U_{paroi} = 1,70 W / m².K
- Walls: Solid concrete 20cm (R = 0,10 m².K / W) + insulation (R = 3,15 m².K / W) - U_{paroi} = 0,285 W / m².K
- Walls on unheated premises: Solid concrete 20 cm (R = 0.10 m².K / W) + insulation (R = 2.50 m².K / W) - U = 0.285 W / m².K
- Floor on LT FT: Concrete slab 25 cm (R = 0.125 m².K / W) + Insulation 10 cm (R = 3.45 m².K / W) -Wall = 0.255 W / m².K
- Floor on outside: concrete slab 25 cm (R = 0,125 m².K / W) + insulation FIBRA ULTRA FM Clarity 160 (R = 4,6 m².K / W) - U_{paroi} = 0,203 W / m².K
- Flooring on car park: concrete slab 25 cm (R = 0,125 m².K / W) + FIBRA ULTRA FM Clarity 180 insulation (R = 4,60 m².K / W) - U wall equivalent = 0,145 W / m².K
- Floor on staircase NC: Concrete slab 25 cm (R = 0,125 m².K / W) + insulation (R = 3,45 m².K / W) - U_{paroi} = 0,203 W / m².K
- Floor on LT RdC: Concrete slab 25 cm (R = 0,125 m².K / W) + Lining BA13 + LM 80mm (R = 2.25 m².K / W) - U_{paroi} = 0.368 W / m².K
- Steel roofing: Zinc 2cm + insulation (R = 5,556 m².K / W) - U_{paroi} = 0,176 W / m².K
- Accessible roofing: Plasterboard 1,3cm (R = 0,052 m².K / W) + Concrete full 15cm (R = 0,075 m².K / W) NF T 56-201 DM (R = 3,333 m².K / W) + Pure bitumen 5 cm (R = 0.294 m².K / W) - U_{paroi} = 0,257 W / m
- Aluminum windows, glazing 8/12/4 with air filling and low emissivity treatment - U_w = 1,7 W / m².K.

Building Compactness Coefficient : 0,20

Indicator : I4

Air Tightness Value : 1,70

Users' control system opinion : No feedback yet

More information

Including non-use consumption RT: 99.26 kWh_{ep}.m².an Cep project = Cep max -39% Bioclimatic need Bbio - 31%

Heating system :

- Urban network
- Electric floor heating
- Fan coil

Hot water system :

- Individual electric boiler

Cooling system :

- Urban network
- Fan coil

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Other, specify

Other information on HVAC :

Waterproofing L1 CTA, class B of networks

Renewable energies in the urban district heating and cooling network

Low CO2 emissions from the district heating and cooling networks serving the site (emission regulations + authorization title V 0.018 geqCO2 / kWh)

Solutions enhancing nature free gains :

Besoin bioclimatique : -31% sur la référence. Isolation des parois

Smart Building

BMS :

GTB in place for the programming of all technical equipment, alarm generation, water and energy counts and counters per buyer

Users' opinion on the Smart Building functions : Not yet occupied

Environment

Urban environment

Green space : 1 200,00

Métro 3 station Louise Michel - 1 min Bus 93/163/164 - 3 to 5 min Subway 3 station Anatole France - 5 min 5 car parks within 8 min RER C - 15 min Metro line 3 serves: - the RER A at the Havre Caumartin and Opéra stops (the RER A allows you to reach the Gare de Lyon and the line 7 goes to the Gare de l'Est from Opéra) - RER C at the Pereire stop (RER C makes it possible to reach the station of Austerlitz). - the RER E, the J and L transiliens at the Saint-Lazare stop. (Line 12 goes to Montparnasse station from Saint-Lazare) Vélib station 100 m from the building. Wide range of shops close to the foot of Thais: Monoprix, U Express, So West ... A bakery and a "Monop" less than 100 meters from the entrance on Rue Anatole France. A distributor LCL is located about 120m of the entrance on the street Anatole France. A mailbox is located at 80m of the project, at the foot of the metro station Louise Michel line 3 A fitness center is less than 1 km away.

Products

Product

Facade

Schüco

Jacques LLADOS (01 34 84 22 00)

<https://www.schueco.com/web2/fr>

Product category : Table 'c21_italy.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 = '6'

Enamelled glass façade with high energy and acoustic performance

No particular return of the architect

Costs

Construction and exploitation costs

Cost of studies : 1 000 000 €

Total cost of the building : 14 100 000 €

Health and comfort

Water management

Consumption from water network : 3 300,00 m³

Water Consumption/m² : 0.59

Water Consumption/Work station : 7.33

Calculation carried out according to CERTIVEA NF TERTIARY BATIMENTS HQE

Indoor Air quality

An indoor air quality plan has been developed. All interior linings are class A +. The ventilation rate goes beyond the statutory flow (30 m³.h.occupant) with a restart before occupation programmed by GTB. The networks were clogged systematically during the works in order to maintain the cleanest networks possible before commissioning. The waterproofing of the networks is class B, measured at the end of the work. The certified seal of the CTA is class L1.

Comfort

Health & comfort : An indoor air quality plan has been developed. All interior linings are class A +. The ventilation rate goes beyond the statutory flow (30 m³.h.occupant) with a restart before occupation programmed by GTB. The networks were clogged systematically during the works in order to maintain the cleanest networks possible before commissioning. The waterproofing of the networks is class B, measured at the end of the work. The certified seal of the CTA is class L1.

Calculated indoor CO₂ concentration :
non simulé

Measured indoor CO₂ concentration :
non mesuré

Calculated thermal comfort : non calculé

Measured thermal comfort : non mesuré

Acoustic comfort : The double constraint [structural on the one hand with the conservation of the infrastructure and contextual on the other hand, as road classified side facade street] imposed the realization of a building in light structure and a very neat treatment. This made it possible to achieve the basic level of certification NF BATIMENT TERTIAIRES HQE DEMARCHE, with however the respect of the level Performant on all criteria outside the acoustics of facades. The interior acoustics were therefore very high.

Carbon

GHG emissions

GHG in use : 6,00 KgCO₂/m²/an

Methodology used :

Calculation according to LCA ELODIE method (mastered operation)

GHG before use : 448,00 KgCO₂/m²

Building lifetime : 50,00 année(s)

, ie xx in use years : 74.67

GHG Cradle to Grave : 762,00 KgCO₂ /m²

Calculation according to ELV LCA method

Life Cycle Analysis

<https://www.construction21.org/france/data/sources/users/9462/bbca966149375-v16-ultime-derniere-version--demol--retour-mr-salazarrajout-v6.xls>

Material impact on GHG emissions :

448

Eco-design material : Natural wood for terraces, without treatment

Contest

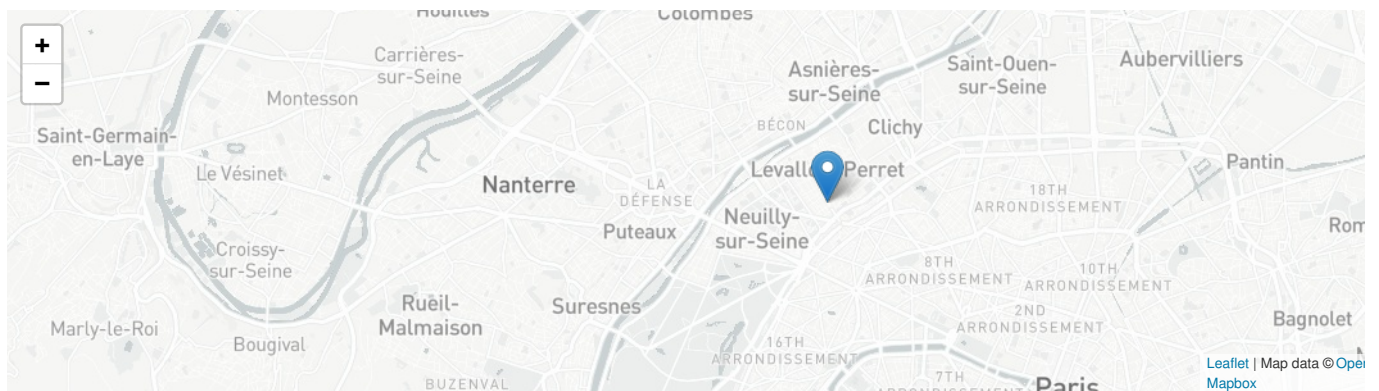
Building candidate in the category



Bas Carbone



Coup de Cœur des Internautes



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