


## Thaïs

by léa poirier / 2017-06-12 17:02:16 / France / 9348 / FR



New Construction

Primary energy need :

## 75.2 kWhep/m<sup>2</sup>.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 m<sup>2</sup> Autre type de surface nette  
**Construction/refurbishment cost** : 14 000 000 €  
**Number of Work station** : 450 Work station  
**Cost/m2** : 2500 €/m<sup>2</sup>

**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 m<sup>2</sup>, 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 1200m<sup>2</sup> 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 m<sup>2</sup> 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<sub>ep</sub>/m<sup>2</sup>.an

Primary energy need for standard building : 123,50 kWh<sub>ep</sub>/m<sup>2</sup>.an

Calculation method : RT 2012

Breakdown for energy consumption : Heating: 22,5 kWh<sub>ep</sub> / m<sup>2</sup> (22,5 kWh<sub>ef</sub> / m<sup>2</sup>) Cooling: 4,3 kWh<sub>ep</sub> / m<sup>2</sup> (4,3 kWh<sub>ef</sub> / m<sup>2</sup>) ECS: 5,6 kWh<sub>ep</sub> / m<sup>2</sup> (2,2 kWh<sub>ef</sub> / m<sup>2</sup>) Lighting: 16,4 kWh<sub>ep</sub> / m<sup>2</sup> (6,3 kWh<sub>ef</sub> / m<sup>2</sup>) Auxiliaries: 26,5 kWh<sub>ep</sub> / m<sup>2</sup> (10,2 kWh<sub>ef</sub> / m<sup>2</sup>)

## Real final energy consumption

Final Energy : 45,70 kWh<sub>ef</sub>/m<sup>2</sup>.an

Real final energy consumption/m<sup>2</sup> : 54,00 kWh<sub>ef</sub>/m<sup>2</sup>.an

Real final energy consumption/functional unit : 54,00 kWh<sub>ef</sub>/m<sup>2</sup>.an

Year of the real energy consumption : 2 017

## Envelope performance

More information :

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

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 m<sup>3</sup>

Water Consumption/m<sup>2</sup> : 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 m<sup>3</sup>.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 m<sup>3</sup>.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 CO<sub>2</sub> concentration :**  
non simulé

**Measured indoor CO<sub>2</sub> 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 KgCO<sub>2</sub>/m<sup>2</sup>/an

Methodology used :

Calculation according to LCA ELODIE method (mastered operation)

GHG before use : 448,00 KgCO<sub>2</sub> /m<sup>2</sup>

Building lifetime : 50,00 année(s)

, ie xx in use years : 74.67

GHG Cradle to Grave : 762,00 KgCO<sub>2</sub> /m<sup>2</sup>

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

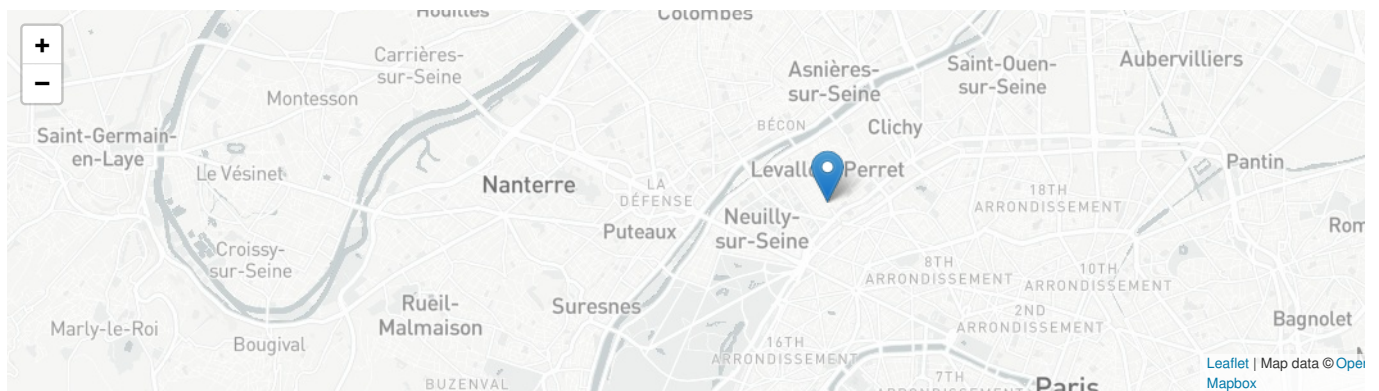
### Building candidate in the category



Bas Carbone



Coup de Cœur des Internautes



Date Export : 20230426115940