CONSTRUCTION21,

Pantin Kanal

by William LE GOFF / () 2021-05-27 00:00:00 / France / () 10123 / 🍽 FR

New Construction	Primary energy need : 75 kWhep/m ² .an (Calculation method : RT 2012)
	ENERGY CONSUMPTION Economical building Building < 50 A 51 à 90 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 : 2020 Delivery year : 2021 Address 1 - street : 159 avenue Jean Lolive 93500 PANTIN, France Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.	
Net Floor Area : 20 500 m ² SHON Construction/refurbishment cost : 50 250 000 € Cost/m2 : 2451.22 €/m ²	
Certifications :	







General informations

The KANAL operation consists of the construction of an office building located at the limit of the ZAC du Port de Pantin (Seine-Saint-Denis) between rue Lucienne Gérain and rue de Ancien Canal.

Covering an area of 20,500 m², the operation is spread over seven floors and includes a rooftop with two panoramic terraces which overlook a large interior garden and total nearly 900 m².

Committed to preserving the environment, the building will be certified HQE level Excellent and BREEAM level Very Good with the labels Effinergie +, and E + C-(objective E2C1). The operation also aims to obtain the OZMOZ (Quality & Comfort at work) and WiredScore (Quality of building connectivity) labels.

For its facades, the architect Rudy Ricciotti imagined glass slats which give the whole a new identity, reinforced by the realization of a panoramic staircase in wood and metal, also very innovative, at the heart of the project.

Designed to provide an optimal working environment, KANAL, in addition to its technical performance, will be equipped with services highly valued by urban workers (restaurant, contemporary café, locker rooms, showers, etc.) and will have a space of 500 m² for use. will be defined by its future user.

This office building is accompanied by two levels of underground car parks with 114 spaces.

KANAL is also an ultimate zero waste test site: the objective is to limit waste at source and use new outlets. Thus, several actions have been developed by the works teams of Bouygues Bâtiment Ile-de-France Construction Privée

KANAL in a few figures:

- 20,500 m² in R + 7 on 2 basement levels composed of a semi-curtain type facade with vertical glass louvers whose color and changing reflections interact with the water of the canal
- 2660 m² current platforms with views of the canal served by a panoramic staircase and a quadruplex of lifts
- A patio with a garden / oasis
- 114 parking spaces
- 11 motorized two-wheelers
- A garage that can accommodate 250 bikes
- A contemporary restaurant with a garden terrace
- A restaurant with scramble type distribution overlooking the garden and the canal
- 2 terraces of 520 m² and 320 m² enjoying 360 ° views

TECHNICAL DESCRIPTION :

- · Ceiling height: 2.75m in the offices
- False ceiling in active and inactive metal tiles (radiant ceiling)
- Califonian blind type interior occlusion device
- Natural smoke extraction from offices
- The hot and cold production sources are made exclusively by cooling production groups and heat pumps
- Specific treatment of the entrance hall by heating and cooling floors
- Fluid management and programming by the building's GTB
- Building management system for the operation, control and performance optimization of technical installations:
 - Equipment managed by the building management system
 - Plumbing
 - Elevators
 - CFO CFA electrical equipment
 - HVAC and smoke extraction installations

Sustainable development approach of the project owner

There was no initial process on the part of the project owner except for obtaining labels and certifications. The initiative was taken by the Bouygues works team.

Architectural description

The building presented echoes, in its template (R + 7), the neighboring constructions, present within the industrial port wasteland: the General Stores, the CIG, workshops, old warehouses, etc ... This massiveness of the template is tempered by flexible, rounded shapes, defining the envelope plan of the building, and thus giving it an urban ergonomics according to different singular points: the points, the ends, the angles round out, soften and become benevolent, civilized.

The entire built volume revolves around a garden in the heart of the island. This private garden, visible from the public road, is made up of eucalyptus and palm trees, thus defining an elsewhere, an exoticism that is both natural and staged. At night, this space will be carefully lit, like a dreamlike garden.

The design and materials of the landscaping are designed in continuity with the future development of the path of the dunes. The pedestrian circulation continues around the patio. There will be continuity of materials, to dematerialize the property line. The project will thus integrate perfectly into the new development of the district. Visually, the patio will be part of the public space, only 2 gates integrated into a landscaped fence will mark the space reserved for building users.

The building envelope will be made of glass louvers. These spaced vertical louvers form sun breezes, and also create a prism effect by reflection by multiplying the natural light. These slats form, by their succession, a relief on their irregular outer edge. This relief is an exact imprint of a moving, undulating and kinetic liquid surface. These vents are present on all levels except the ground floor.



See more details about this project

 Image: http://augustodasilva.com/galeries/A2541-CPI-Visite-ORS-Pantin-Kanal-4-Fev.2021/index3.html

 Image: https://www.bouygues-batiment-ile-de-france.com/actualites/premiere-pierre-pour-kanal-un-chantier-engage-en-matiere-de-developpement-durable

Photo credit

Augusto Da Silva

Contractor

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Stakeholders

Function : Designer RUDY RICCIOTTI

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Function : Investor JC DECAUX HOLDING

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Contracting method

Maximum Guaranteed Price

Energy

Energy consumption

Primary energy need : 75,00 kWhep/m².an Calculation method : RT 2012

Envelope performance

Systems

Heating system :

- Heat pump
- · Radiant ceiling

Hot water system :

- Individual electric boiler
- Heat pump

Cooling system :

· Radiant ceiling

Ventilation system :

- compensated Air Handling Unit
- Double flow heat exchanger

Environment

Urban environment

Green space : 936,00

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Costs

Construction and exploitation costs

Total cost of the building : 50 250 000 €

Circular Economy

Reuse : same function or different function

Batches concerned by reuse :

- Structural works
- Raised floors

For each batch : Reused Materials / Products / Equipments :

16,500 m2 of reused false floor slabs installed in 100% of the office areas;

2,800 m2 of false floor slabs intended for reuse in the cleaning phase of the building to be demolished located on the plot.

Partner company: MOBIUS REEMPLOI;

Reused materials rate : 96% of the false floor lot (16,500 m²).

Field of use and material origin :

Environmental assessment

Impacts avoided : water, waste, CO2 :

Standard false floor CO2 emission (FDES) = 54.5 kg CO2 eq. (DVR = 50 years) CO2 emission re-used false floor (FDES MOBIUS) = 8.68 kg CO2 eq. (DVR = 25 years) or CO2 savings of 27.67 kg CO2 eq X 20 665 m², or 572 T CO2 saved. The re-use of the 16,500m² of raised floors made it possible to avoid: The emission of 1071 tonnes of CO2, Consumption of 12,870 m3 of water, The production of 730kg of waste.

Economic assessment

Total cost of reuse : 500 000 € Cost of reuse in percentage of the operation : 1 %

Social economy

Social economy and professional integration :

MOBIUS practices professional integration for the reconditioning of false floor slabs. Mobius certifies 154 hours of professional integration hours.

Carbon

GHG emissions

GHG in use : 2,00 KgCO₂/m²/an

Life Cycle Analysis

https://www.construction21.org/france/data/sources/users/17795/20210517161724-pantin-prdkanalacv.xlsx Eco-design material :

ALGO PAINT: Paint used indoors in superstructure

FALSE FLOOR: Slab resulting from reuse used on the entire superstucture except sanitary.

Contest

Reasons for participating in the competition(s)





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