

BREEAM EUROPE COMMERCIAL

SPRING

53 RUE DU PORT, NANTERRE, FRANCE



About the building

Spring is designed as 'positive energy building'. Developed by SCCV Lavoisier (Bouygues Immobilier and Archon Group), it provides 35 200 m² of offices, on four floors with social areas, canteen and cafeteria. There are also two levels of basement parking, external parking and landscape areas.

The site is situated in Nanterre, 8 km from Paris and 5 km from La Défense.

Key facts

BREEAM rating: Interim Outstanding
Score: 90.00 %
Size: 35 200 m² (NLA)
Stage: Design
BREEAM version: BREEAM Europe Commercial: Offices 2009

Overview of environmental features

Building fabric

- Floors, external walls and roof made with in-situ reinforced concrete
- Resin-based cladding or mineral coating, with efficient insulation (20cm rockwool or EPS)
- 80% of windows are in assembled wood, with a high insulation
- Most of the indoor materials (floors, walls, ceiling) are eco-labelled

Building Services

- Heating and cooling provided by water/water geothermal heat pumps
- Automatic controlled mechanical ventilation with heat recovery
- The building's energy consumption is managed via a Building Management System (BMS)
- Solar panels providing 45% of hot water for the restaurant
- Energy used for lights reduced to the minimum with high-performance T5 high frequency lighting

Other environmental aspects

- Photovoltaic panels cover more than 6500 m² of the roof and provide more than 800 MWh/year
- 100% of water for WC and irrigation is provided by rainwater or used water from geothermal pumps

The BREEAM assessment

A 100% score was achieved in the following:

Management

- Commissioning maximises the performance of energy and complex systems

Energy

- Each mode of consumption has been optimised : heating, cooling, ventilation, lighting, lifts
- Sub-metering is more precise than ever realised, so as to compare the realistic energy consumption to design simulations

Transport

- Many facilities were implemented to enable a possibility of choice of the transport mode: cyclist, bus, train, car sharing, etc

Building services

- Heating and cooling are provided by two high-performance water/water heat pumps on site, based on 4 geothermal drillings
- Automatic controlled mechanical ventilation with heat recovery
- Energy use (heat, cold, fan-coils, lighting, lifts, blinds, computers, etc.) is measured and saved in the BMS which drives each systems. More than 18000 data points are linked to the BMS
- About 45% of hot water for the restaurant is provided by solar panels
- Energy used for lighting is reduced to a minimum, achieving 5.1 W/m² (NLA), with high-performance T5 high frequency lighting and LED used for decoration

Green strategy

- Energy consumption in the building (heat, cold, fan-coils, lighting, lifts, blinds, computers, etc.) is measured and saved in the BMS which drives these systems. More than 18000 data points are linked to the BMS. This enables precise and real sub-metering, which also covers process consumption.
- Multiple studies have been carried out during the design stage so as to get the best global energy solution for the project
- Comfort management has been studied to improve both comfort and automation: heating, cooling, ventilation, lighting intensity, but also angle of blinds are linked to the BMS so as to be automated by the external parameters: temperature, sunlight
- Water consumption is reduced to the minimum, by using rainwater and backwash geothermal water for WCs and irrigation. In addition to low consumption, infrared taps and presto showers have been included

Project team details

Client – SCCV Lavoisier
Developer – Bouygues Immobilier & Archon Group
BREEAM Assessor – Greenaffair
Architect – Di Fiore Architecture & Associes
HVAC / Electrical and Plumbing Engineer – BERIM

"BREEAM Europe certification enables our investors to compare their new projects and provides us with more motivation to reach a better environmental performance. BREEAM allows the client to improve its operation and to be rewarded for their efforts with formal certification that is recognised more and more in France."

Maxime DE CAPELE
of Archon Group

Jérémie DAGONET of Bouygues
Immobilier