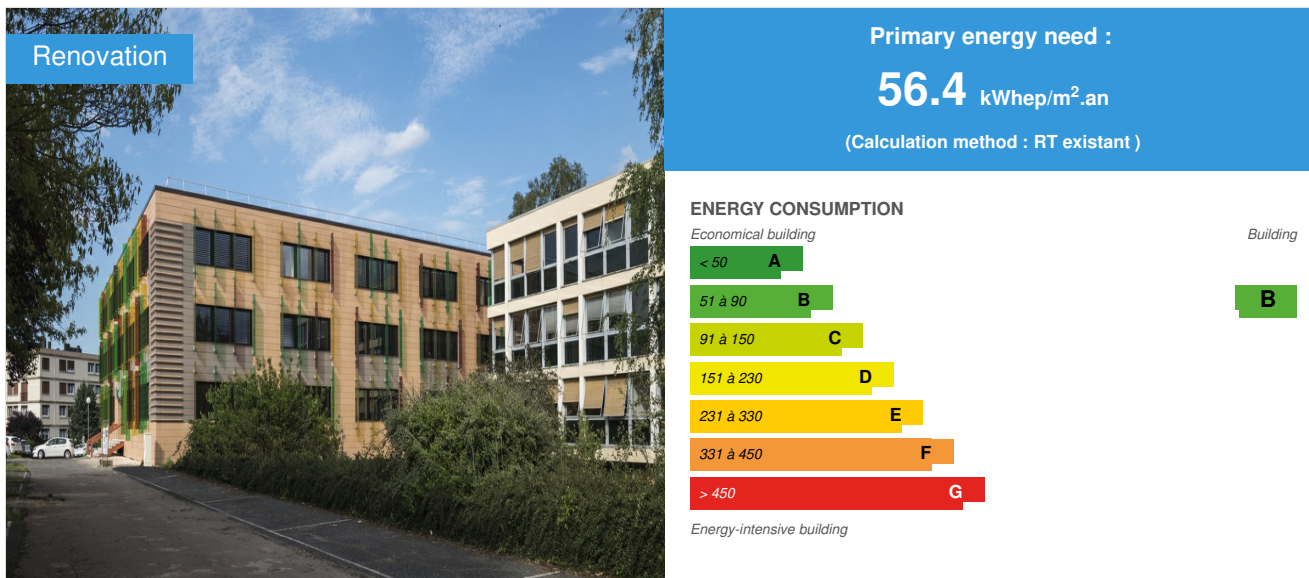


Headquarters of Groupama Paris Val de Loire

by Annick Worobel / 2017-05-18 17:53:36 / France / 8489 / FR



Building Type : Office building < 28m
Construction Year : 1970
Delivery year : 2017
Address 1 - street : 89000 AUXERRE, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 3 579 m²
Construction/refurbishment cost : 2 565 000 €
Cost/m2 : 716.68 €/m²

General information

New image and beautiful "overall" performance for this 70s office building where no heavy work had been done since its construction and which presented such discomforts that it became "unusable".

Complete recovery of the insulation of the envelope, its airtightness and thermal bridges.

Development of shared areas on the garden level for training with installation of LED luminaires running on presence and graduation of the luminosity.

Development of co-working spaces on the ground floor with specific acoustic study. Independent spaces mutualisable with the outside wooden terrace.

Release of the R + 2 shelf for tenants and / or co-owners with full accessibility of the site and independent management.

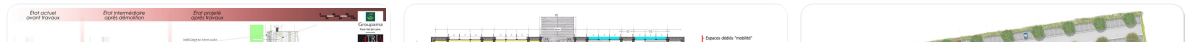
Sustainable development approach of the project owner

1. Make buildings compliant with current regulations. Accessibility Fire Asbestos
2. Bring these buildings delivered in the 1970s (45 years) to the levels of performance, comfort, ease of operation and operating costs of a new building. Work on their envelopes and facades, heating solutions and evaluate their costs.
3. Provide working conditions consistent with the activities housed in the building (offices, call center, meeting, shop window ...): Allow for evolutions. Make this building attractive. Make new digital solutions possible.
4. Examine the solutions of pooling of spaces and resources. Flexibility of use. Savings.
5. Making these buildings valuable to their heritage.

Architectural description

New image and beautiful "overall" performance for this 70s office building where no heavy work had been done since its construction and which presented such discomforts that it became "unusable". Complete recovery of the insulation of the envelope, its airtightness and thermal bridges: • Wooden tunnel walls of the existing structure for busy site intervention and encapsulation of asbestos products. Insulation distributed in these 42cm coat walls. • Exterior insulated exterior walls of minimum 20cm, removing all thermal bridges from the existing post / concrete beam structure. • Terracotta shingle finish for resistance, maintenance and the "earth" side for the Cité de l'Agriculture et des services. • Double-breaking aluminum jointed joinery $U_f = 1,1$ with high-performance double glazing. • Complete renovation of roof terraces with 240mm polyurethane and treatment of acroteres. Then, implementation of "comfort and health" solutions - summer heat - by double-stream ventilation with 2 plants per level and management of bioclimatic facades by solar protection: • Horizontal sunlight breezes on individual management and centralized by sun sensor to avoid summer overheating by wind sensor to wind up the blinds in case of strong wind and hourly programming to secure the building at night. • Vertical and colored vertical sunscreens create masks while animating the facades. Energy performance achieved at the level of a new building: • Factor 5 for consumption on all items, ie 289 to 56.4 kWh / m².an. • Factor 10 for heating consumption, ie 245.8 to 24.9 kWh / m².an. O Decrease by 50% of heating surfaces. Development of shared areas on the garden level for training with installation of LED luminaires running on presence and graduation of the luminosity. Development of co-working spaces on the ground floor with specific acoustic study. Independent spaces mutualisable with the outside wooden terrace. Release of the R + 2 shelf for tenants and / or co-owners with full accessibility of the site and independent management.

See more details about this project



Stakeholders

Stakeholders

Function : Designer

ATRIA Architectes

Jean-Pierre Bosquet et Annick Worobel; aworobel@atria-archi.com

<http://www.atria-archi.com>

Architect

Function : Thermal consultancy agency

Via Positive

Dusan Novakov; contact@viapositive.com

<http://www.viapositive.com>

Study office Thermal, heating and ventilation

Function : Contractor

Groupama Paris Val de Loire

Alain Boisfard; aboisfard@groupama-pvl.fr

<https://www.groupama.fr/web/pvl>

Manager Regional Logistics Jobs

Function : Manufacturer

Terreal

Lionel GARCIA; lionel.garcia@terreal.com

<http://www.terreal.com/>

Clay Shingles

Function : Company

Gebat Construction

Georges Miranda et Sébastien Gomes; accueil@gebat.fr

<http://www.gebat-constructions.fr/>

Outdoor thermal insulation

Function : Company

Vaucouleur SARL

Davis Vaucouleur

<http://vaucouleur.sarl.free.fr/>

Timber frame and cladding

Contracting method

Separate batches

Type of market

Global performance contract

Energy

Energy consumption

Primary energy need : 56,40 kWh/m².an

Primary energy need for standard building : 107,40 kWh/m².an

Calculation method : RT existant

Breakdown for energy consumption : CEP Heating: 24.9 kWh / m².an CEP cooling: 1.3 kWh / m².an CEP DHW: 3.2 kWh / m².an CEP Lighting: 14.8 kWh / m².an CEP Ventilation: 9.6 kWh / m².an CEP Auxiliaries: 2.6 kWh / m².an CEP Photovoltaic: 0.0 kWh / m².an

Initial consumption : 289,00 kWh/m².an

Real final energy consumption

Final Energy : 56,40 kWh/m².an

Envelope performance

Envelope U-Value : 0,60 W.m⁻².K⁻¹

More information :

Wall R-1 exterior - coated ITE:

260 mm of concrete insulated with 200 mm of PSE Th32

U-value: 0.152 W / m²K

Wall RDC to R + 2 terracotta facing - metal sheet:

Wooden tunnel walls of the existing structure for occupied site intervention and encapsulation of asbestos products. Insulation distributed in these 420 mm coat walls.

Exterior walls insulated from the outside by 120 mm of glass wool + 80 mm of rockwool.

U-value: 0.08 W / m²K

Wall RDC to R + 2 patio - ITE coated:

200 mm of concrete insulated with 200 mm of PSE Th32

U-value: 0.153 W / m²K

Wall RDC to R + 2 patio coated - sheet steel:

Wooden tunnel walls of the existing structure for occupied site intervention and encapsulation of asbestos products. Insulation distributed in these 420 mm coat walls.

Exterior insulated walls of 200 mm PSE Th32.

U-value: 0.069 W / m²K

Wall RDC to R + 2 patio - ITE coated:

200 mm of concrete insulated with 200 mm of PSE Th32

U-value: 0.153 W / m²K

Roofing:

Existing concrete slab of 200 mm insulated by 2 * 120 mm of polyurethane, lambda 0,023.

U-value: 0.095 W / m²K

Exterior wood furnishings :

Aluminum joinery thermal bridge breaker and double glazing - Schuco AWS75.II

Average Uw: 1.3 W / m²K

Ug glazing: 1.0 W / m²K

Insert: 0.04 W / mK

Solar factor: G = 46%

Building Compactness Coefficient : 1,17

Indicator : EN 13829 - n50 » (en 1/h-1)

Renewables & systems

Systems

Heating system :

- Gas boiler
- Water radiator

Hot water system :

- Individual electric boiler

Cooling system :

- VRV Syst. (Variable refrigerant Volume)

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- No renewable energy systems

Smart Building

BMS :

Dynamic front

Environment

Urban environment

Land plot area : 7 688,00 m²

Green space : 1 732,00

Site comprising 3 headquarters built in the years 67 and 70 in the heart of a residential area grouping together individual and collective housing.

Products

Product

Zephyr evolution

Terreal

lionel.garcia@terreal.com

<http://www.terreal.com/>

Product category : Structural work / Structure - Masonry - Facade

The oldest building material in the world, terracotta is obtained by the firing of clay. It is this natural raw material that gives it its strengths.

- Economical and lightweight
- Durable and maintenance-free
- Simple and fast rail mounting
- Simple, long-skinned cladding: up to 150 cm

In total agreement with the site "The City of Agriculture and Services"

ASW 75 II

Schüco

Jean-Marc GAUDARD; jmgaudard@schueco.com

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

Product category : Finishing work / Exterior joinery - Doors and Windows

Aluminum joinery thermal bridge breaker and double glazing - Schuco AWS75.II

Average Uw: 1.3 W / m²K

Ug glazing: 1.0 W / m²K

Insert: 0.04 W / mK

Solar factor: G = 46%

Well accepted



Costs

Construction and exploitation costs

Cost of studies : 295 000 €

Total cost of the building : 2 565 000 €

Energy bill

Forecasted energy bill/year : 7 500,00 €

Real energy cost/m² : 2.1

Real energy cost/Work station : 50

Carbon

GHG emissions

GHG in use : 8,00 KgCO₂/m²/an

Methodology used :

THCex Regulatory Calculation Methodology

Contest

Reasons for participating in the competition(s)

Performance énergétique atteinte du niveau d'un bâtiment neuf :

- Facteur 5 pour la consommation tous postes soit de 289 à 56,4 kWh/m².an.
- Facteur 10 pour la consommation de chauffage soit 245,8 à 24,9 kWh/m².an.
- Diminution de 50% des surfaces de chauffe.

L'extrême performance de l'enveloppe en opposition avec la passoire thermique existante. :

- Murs manteaux bois en tunnel de la structure existante pour intervention en site occupé et encoffrement de produits amiantés. Isolation répartie dans ces murs manteaux de 42cm.
- Murs façades isolés par l'extérieur de 20cm minimum, supprimant tous les ponts thermiques de la structure poteau/poutre béton existante.
- Finition par bardeau en terre cuite pour leur résistance, leur entretien et le côté "terre" pour le site de la Cité de l'Agriculture et des services.
- Des menuiseries en aluminium laquée à double rupture de pont Uf=1,1 avec des doubles vitrages très performants.
- Rénovation complète des toits terrasses avec 240mm de polyuréthane et traitement des acrotères.

Ensuite une mise en œuvre de solutions "confort et santé" – thermique d'été – par ventilation double flux avec 2 centrales par niveau et gestion des façades bioclimatiques par protection solaire :

- Brises soleils orientables horizontaux sur une gestion individuelle et centralisée par capteur d'ensoleillement afin d'éviter les surchauffes d'été, par capteur vent pour remonter les stores en cas de vent fort et par programmation horaire pour sécuriser le bâtiment la nuit.
- Brises soleils verticaux vitrés et colorés créant des masques tout en animant les façades.

Building candidate in the category



Energie & Climats Tempérés





Coup de Cœur des Internautes



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