

Jardin de la chasse - Construction of a new administrative center & a housing building for the Municipality of Etterbeek

by Emmanuel Bouffioux / © 2021-03-22 17:39:08 / Belgique / 4166 / FR

Urban renewal



Address 1 - street : 29 avenue des Casernes 1040 ETTERBEEK, Belgique

Population : 115 hab

Number of jobs : 600 emplois

Starting year of the project : 2014

Delivery year of the project : 2021

Key words : Sustainability, mobility, diversity, synergy, energy optimization



1 ha



46 853 865 €

Proposed by :



The urban revitalization of the Jardins de la Chasse (between Avenue des Casernes, Rue de Haerne and Rue Beckers) is the most ambitious project carried out by the municipality of Etterbeek.

The construction of a new administrative center regrouping in the same building the municipal administration, the OCMW and a police station is clearly the cornerstone.

But the site, in its entirety, covers an area of 3 hectares and will also accommodate nearly 250 housing units distributed in several buildings, underground parking, a daycare center, a participation house, new premises for the childcare center and a green space accessible to the public. It is thus a new district that will emerge, just a stone's throw from the Chasse.

We are not talking about the entire Jardins de la Chasse, but only the administrative center and the housing building that is part of the same mission located on Avenue des Casernes.

Thus, in order to take part in the urban revitalization, the proposal of a fair implantation at the service of the public space is primordial.

The proposal of a clear and dissociated implantation between the administrative center and the housing building adjacent to it fully favors the communications between the existing neighborhoods and the new development envisaged for the whole site.

The new administrative center is positioned at the corner of Avenue des Casernes and Beckers Street for maximum visibility, while the housing units are positioned in the continuity of Avenue des Casernes and the new housing units planned for the interior of the block near the new park.

The distinct implantation of the two buildings allows the creation of a pedestrian link connecting the projected park, located at the rear of the building, to the Avenue des Casernes and the new square generated by the implantation of the administrative center. This link allows a clear separation between the administrative building and the future housing, thus exposing the mix of uses present on the site.

The organic form of the communal headquarters accentuates the setbacks established in relation to the surrounding built and unbuilt context, confirming its position in the public space by the creation and enhancement of resilient voids and subspaces.

In front of the building, the square created by the implantation of the buildings allows to give a more important visual frame and an environment adapted to the scale of the new administrative center and the new adjoining built complex.

The functional mix is at the center of this revitalization. We find the new administrative center, itself including the offices of the municipal administration of Etterbeek, a police station, the offices of the public center for social action (CPAS) and a funeral home; several housing buildings, a day care center, a public restaurant, and the chapel currently present on the site which will be renovated and transformed into a house of participation.

This mix within the administrative center aims to improve the synergy of the administrative services between them as well as their services to the population.

A global environmental and energy strategy

Our proposal for the construction of a new administrative center and housing in Etterbeek is fully in line with a sustainable development approach of the municipality and responds to energy and environmental concerns in order to perpetuate the building while minimizing its operating costs.

The design philosophy that we have applied, from the very first sketches, is based on a sustainable approach combining global environmental reflection and a rational use of energy approach (RUE):

- In order to be able to objectify our approach, we referred to the most widespread and successful environmental assessment method for buildings, namely the BREEAM method. The project is designed to achieve a Very Good performance level, which will place it at a level of environmental performance higher than 75% of new buildings with BREEAM certification.
- For the assessment of the project's energy performance, we used the "PEB Passif 2015" regulatory framework, which came into force in Brussels in 2015. The project is designed to achieve a passive performance level, tending towards "zero-energy".

Our environmental design approach

The design choices made for this project are based on the ambition to achieve a sustainable, homogeneous and long-lasting design of the project, encompassing all aspects of a global sustainable approach. Our choices focus in particular on the following points of attention

- the choice of building materials
- water management
- waste management

Our energy design approach

In parallel to our environmental design approach, the project was subject to an energy optimization that is realized by first reducing the energy needs of the building primarily through choices related to the envelope via passive design strategies. These choices make it possible to meet a primary objective in the design of a passive building: the minimization of energy needs while guaranteeing a high level of comfort. These are the following passive design strategies:

- Optimization of the building form, allowing to reach a very high compactness, favorable to obtain high energy performances.
- Envelope design that meets passive criteria by combining reinforced insulation, high air tightness and optimized constructional nodes.
- Solar architecture combining a thoughtful choice of the building's location on the site, an optimization of the facades and their shape as well as the choice of the location and ratio of the glazed surfaces. For the administrative center, the design of the exterior solar protection is based on a modulation of the geometry of fixed elements according to the summer solar gains to be protected for each zone of the façade. The choice of fixed elements also simplifies their maintenance as much as possible. These fixed elements are found in the form of architectural concrete slats and panels, directly suspended from the curtain wall.
- The choice of glazed surfaces also stems from a desire to maximize the natural lighting of the living areas, thereby increasing the level of visual comfort while reducing the associated electrical consumption.

The efforts made on the envelope allow us to greatly limit the complexity of the systems, and to use simple, efficient and proven technical systems, adapted to the limited remaining energy needs.

The primary purpose of a building is to protect its occupants from external conditions and to provide them with a high level of comfort throughout the year as well as optimal health characteristics. The design choices made and validated by the BREEAM approach will ensure :

- A high quality of air thanks to the choice of VOC-free materials and the generalized double-flow ventilation allowing to ensure a hygienic air renewal in compliance with the PEB regulation.
- High hygrothermal comfort, thanks to the passive design of the project.
- A high level of visual comfort, thanks to the visual access to the exterior and the high levels of natural light.
- A high level of acoustic comfort (the building will comply with the NBN S01-400-1 standard).

Programme

- Housing
- Offices
- Public spaces

Project progress

- Operational phase

Key points

- Governance
- Quality of life
- Mobility
- Energy /Climate

More info

🔗 The administrative center was built with the aim of being able to contribute to the BREEAM "very good" certification, this one is being developed - all the buildings constructed are passive according to the Brussels "passive 2015" regulations for t

Data reliability

3rd part certified

Photo credit

Georges de Kinder
Philippe Van Gelooven

TERRITORY

Type of territory

The new administrative center is located on the grounds of a former military hospital, near the large campus of the Vrije Universiteit Brussel itself located in the municipality of Etterbeek, one of the most upscale municipalities in the capital, with nearly 50,000 inhabitants.

Its reputation as a chic town, where high property prices have been reinforced over the past 10 years by the massive arrival of European officials who have decided to settle there for the proximity of the European institutions.

Beyond this ease of access, this affluent population finds a pleasant living environment (green spaces, calm, shops, etc.).

Etterbeek is therefore a central municipality in the Brussels-Capital Region, adjacent to the European district and to the famous Parc du Cinquantenaire. It was almost completely urbanized during the 19th century and today presents a homogeneous architectural character.

Close to both the city center and the Sonian Forest, this town is crossed by the prestigious Louis Schmidt and Saint-Michel boulevards which allow quick access to the European road network. This ideal geographical location is confirmed by the proximity of a series of services:

- 10 minutes walk from the ULB university campus
- 11 minutes walk from Etterbeek station
- 1 minute walk from tram and bus services
- 1 minute walk from the shopping center
- 12 minutes by car from the European district and its institutions
- 9 minutes by car from the exit of Brussels

It is a town also very famous for the importance of its green spaces. In the lively district of "La Chasse", the rue des Tongres and the place Jourdan are privileged

places for their local shops and the famous markets they house.

Etterbeek asserts its reputation as a mixed municipality where offices, shops and quality housing intermingle and complement each other. The urban revitalization of the former military barracks of Etterbeek on the Jardins de la Chasse site is a concrete example of this desire.

Climate zone

[Cfc] Marine Cool Winter & summer- Mild with no dry season.

Land price

Land price : 3 065 €/m²

More info

<https://www.etterbeek.be/homepage-fr>

<https://www.etterbeek.be/votre-commune/jdc-2019/jdc-2019>

<https://www.realo.be/fr/etterbeek-quartier-la-chasse/5198848>

KEY FIGURES

Neighbourhood paved surfaces

Neighbourhood paved surfaces : 3 000 m²

Green areas, roofs included

Green areas, roofs included : 1 300 m²

Public spaces area

Public spaces area : 3 558 m²

Office floor area

Office floor area : 15 381 m²

Commercial floor area

Commercial floor area : 310 m²

Housing floor area

Housing floor area : 4 300 m²

Number of residential units

Number of residential units : 38

Total investment costs (before tax)

Total investment costs (before tax) : 46 853 865 € HT

GOVERNANCE

Project holder

Name : Municipality of Etterbeek - Public Works

Type : City

General description :

The Public Works department is in charge of most of the public space for which the municipality manages. It thus ensures the maintenance of green spaces and 42 km of municipal roads, and supervises all work related to urban development and improvement: (re) asphaltting, renovation of sidewalks, markings on the ground and signage, development of roads. "Zones 30", replacement of street furniture, planting and flowering, coordination of applicants, etc.

This service is also responsible for all matters relating to road occupancy requests. Finally, he too should be contacted to report a problem related to a development located on the territory of the municipality.

Two other services depend directly on the Public Works service: that of Public Cleanliness and that of Mobility.

<https://www.etterbeek.be/votre-commune/jdc-2019/jdc-2019>

Project management

Description :

During all stages of the project, all the stakeholders from the various authorities and offices were called upon to ensure that the functional skeleton of the premises corresponded to the expectations and wishes of each organization.

Project stakeholders

Municipality of Etterbeek - Public Works

Function : Contractor

Project owner

Dmitri DIELENS, ddielens@etterbeek.irisnet.be, +32 2 627 26 51

Construction21 company page :

<https://www.etterbeek.be/votre-commune/jdc-2019/jdc-2019>

Jaspers-Eyers Architects

Function : Architecture agency

Stefaan Van Acker

Construction21 company page :

<https://www.jaspers-eyers.be/etterbeek-city-hall>

BAEB - Bureau d'Architectes Emmanuel Bouffieux

Function : Architecture agency

Emmanuel Bouffieux, baeb@skynet.be, +32 2 376 06 10

<http://www.baeb.eu/projects/etterbeek-city-hall/>

BPC

Function : Operator

General construction company

Vincent Peeters

<https://www.bpc.be/realisation/jardins-de-la-chasse/>

CIT Blaton

Function : Operator

Entrepreneur

Arauxo David

<https://www.citblaton.be/fr/projets/administration-communale-detterbeek>

Greisch Bureau

Function : Operator

Design and structural office

Franck Gazzard

https://www.greisch.com/projet/centre_administratif_logements_etterbeek/

NEO & IDES

Function : Operator

Thermal study office

Mathieu Leroy

<http://www.neo-ides.be/detail.php?projet=cite-administrative-etterbeek>

TPF Engineering

Function : Operator

Design office

Didier Debauche

Construction21 company page :

<https://www.tpf.eu/fr/projects/jardins-de-la-chasse-area-etterbeek/>

PS2 DESIGN OFFICE

Function : Operator

Safety and health coordinator

Olivier Louette

<https://www.bureaus2.com/2021/02/02/jardins-de-la-chasse-construction-dun-centre-administratif-et-de-logements/>

D2S International

Function : Operator

Acoustic studies office

Geert Desanghere

<https://archello.com/fr/project/etterbeek-city-hall>

SOLUTIONS

Company :

QUALITY OF LIFE

SOLUTIONS

Diversity of functions and enhancement of sub-spaces

Description :

Administrative center

Beyond the replacement of the old administrative center of Etterbeek, the new municipal headquarters aims to improve the synergy of administrative services between them as well as their services at the service of the population.

The large reception hall accessible directly from the square created on Avenue des Casernes is the heart of the project. There are the various reception points and counters for the various services. This visibility of the different services, from the entrance to the administrative center, reinforces the image of an administration available to its inhabitants and not the other way around.

The general shape of the building positions the main entrance intuitively under the central point of the curve generated between the two high points of the building.

The reception hall on two levels links all flows and services. This also allows the crossing of the building towards the park and the new district located at the back of the building.

CPAS

The reception of the CPAS is separate, with its own reception desks and its entrance while remaining accessible from the general hall.

Police

The new police station is positioned on the forecourt on the main facade under the highest point of the building in order to have optimal visibility as well as great accessibility and independence regarding opening hours. It is also accessible through the main lobby.

The realization of a building accommodating services specific to authority and security is a symbolic and functional challenge.

Thus, with the general image of the administrative center, we propose a building with a facade highlighting the functions it hosts. The police station, by its position on the square, takes full advantage of the symbolism of the facade and its prestige.

Basements

The basement is developed on three levels and includes the parking lot and the funeral home.

Accommodations

The housing building is distributed by 3 vertical circulation cores and has 41 housing of different sizes, favoring 2 and 3 bedroom apartments. The apartments are all crossing. Each apartment has an outdoor space, either a terrace or a garden for the apartments located on the ground floor.

Public restaurant

The public restaurant is located on the side of the future park, on the rear ground floor of the apartment building.

- Other

ECONOMIC DEVELOPMENT

TRANSPORT

Mobility strategy

- Creation of a new public square.
- Creation of a new gentle circulation linking the future park to the Avenue des Casernes.
- Promotion of soft mobility by making indoor and outdoor bicycle parking spaces available to owners, staff and visitors.
- Reducing the demand for parking on public roads by creating a large underground car park on three levels for owners, staff and visitors.

In terms of numbers, this car park includes:

- 278 car spaces including 8 charging stations, one fast for the police and 7 conventional for the municipality and the police. All of these places are intended for the staff of the various institutions present in the administrative center and for visitors to these institutions. A certain number of places are reserved for the apartment building (41 apartments) due to a minimum of one space per unit and two spaces per unit according to the standard of the Brussels regional planning regulations (RRU). The finality of the interpretation of this standard belonging to the project owner himself placing the locations in rent to the various owners of the apartments.
- 10 motorcycle spaces for the police and the municipality
- a 61-seater bicycle rack for police or municipal staff to promote soft mobility.

The entire management of the car park is carried out by an independent company.

RESOURCES

Water management

The project provides for the majority of roofs with green roofs and acting as a water retention basin so as to be able to relieve the drainage network while recovering the recovered water for applications that do not require drinking water such as toilets and urinals, building and surrounding maintenance applications as well as cleaning service vehicles. The communion of green roofs and water retention is also at the service of biodiversity.

Domestic water consumption (hot and cold) will be controlled through the adoption of water consumption limitation systems such as dual-control flushes or flow-limiting taps. The project will have a gray water circuit supplying the toilets and urinals with water from the rainwater recovery tank, thus limiting the building's consumption of drinking water.

The project will have a leak detection and water consumption metering system at each sanitary block, which will also make it possible to detect any leaks.

The building is also equipped with a leak detection on the main arrival with a signal picked up on the GTC.

Waste management

Particular attention was paid to the site in terms of waste treatment, accounting and minimization. In particular, no waste was taken to a technical landfill center.

The tenant undertakes to correctly use the room dedicated to the storage of waste made available to him in R-1 of 66m². This is labeled to allow efficient sorting of operational waste.

ENERGY/CLIMATE

Energy mix

- Individual gas boilers
- Gas condensing boilers

Hot / cold radiant ceiling
Floor heating
Water radiators
Thermal solar panels
Photovoltaic solar panels
Geothermal heat pump on probes to which all the heating and cooling units are coupled.
Double-flow ventilation with energy recovery (> 80%)

- Surface of hot / cold ceilings developed 9814 m2
- The geothermal heat pump on probes provides 33% of the heating needs of the housing building (37 housing) & 75% of the cold / heat ratio for the administrative center
- Total area of thermal & photovoltaic solar panels developed 700 m2

SOLUTIONS

High performance architectural concrete - in the form of passive solar protection directly attached to the curtain facade

Description :

The most innovative part of the project is undoubtedly its multiform organic envelope made up of ultra-efficient architectural concrete slats & panels suspended directly from the curtain facade. These, beyond the aesthetic aspect emphasizing the monolithic aspect of the building, provide solar protection and develop differently over the entire facade depending on the summer solar gains which must be protected for each of the zones of the building. The analysis of the sunshine patterns throughout the day in all seasons made it possible to establish a thermal map of the building surface expressed as a percentage in order to establish a center distance to be respected (see diagrams) As mentioned above, the ultra-high performance concrete slats and panels are also an important exterior architectural element. Indeed, these animate the facade giving it a vertical impetus while accentuating the organic curves of the volumes. All the facades were therefore treated on a regular basis, according to the heat maps mentioned above, with the aim of obtaining optimal access to daylight and minimal solar impact. It also helps create exciting and differentiated indoor and outdoor experiences, and once night falls those feelings are quite different. The vertical momentum of the building disappears in the night, the interior light emanates from the office spaces thus emphasizing the horizontality of the free internal spaces (see photo day / night).

- Renewable energies

Geothermal energy on probes

Description :

See report & further information

- Renewable energies

Photovoltaic panels

- Renewable energies

Thermal solar panels

- Renewable energies

BUILDINGS

Link to Buildings of the area in Construction21 database

Link to Buildings of the area in Construction21 database :)



Etterbeek Administrative Center

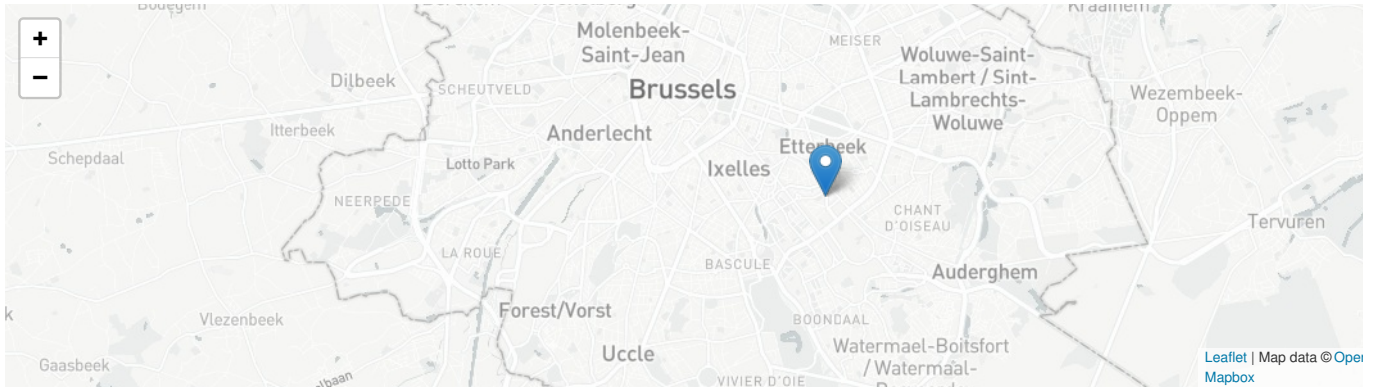
Construction Neuve
Immeuble de bureaux

Contest

Reasons for participating in the competition(s)



- Bâtiments compacts ; implantation et orientation des bâtiments afin de minimiser l'impact solaire et les pertes énergétiques.
- Toitures vertes au service de la biodiversité assurant également le rôle de bassin de rétention d'eau afin de stocker d'une partie de l'eau de pluie et ainsi éviter un risque de surcharge des réseaux d'égouts en cas de fortes pluies.
- Réutilisation de l'eau de pluie pour l'ensemble des chasses d'eau et équipement sanitaires de seconde nécessité.
- La mise en place de panneaux solaires photovoltaïques (± 700 m²) sur l'ensemble des toitures & le développement de la technologie de géothermie en sous-sol afin d'assurer les besoins de chauffage et de refroidissement comblant la nécessité d'avoir recours à des énergies fossiles.
- Favorisation de la mobilité douce par la mise à disposition d'espaces de parkings vélos intérieurs & extérieurs à disposition des propriétaires, du personnels et des visiteurs.
- Allègement de la demande en parking sur la voie publique par la création d'un grand parking en sous-sol sur trois niveaux à destination des propriétaires, du personnels et des visiteurs.



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