

## Boucicaut Eco District

by Cedissia About - de Chastenet / 2016-06-20 15:15:26 / France / 9235 / FR



Renovation

**Address 1 - street** : 75015 105 RUE DE LA CONVENTION - PARIS, France

**Gross density** : 171.33 logt/ha

**Population** : 1 300 hab

**Starting year of the project** : 2002

**Delivery year of the project** : 2016



3 ha



164 000 000 €

**Certifications :**



### ID CARD

In September 2003, the City of Paris has adopted an overall site development plan and an initial site development phase was launched with the signing of a public development agreement concluded between the City of Paris and SemPariSeine over the period 2003-2009.

In 2007, a development zone was created to carry out the 2nd phase of this operation and the developer SemPariSeine was designated in May 2009.

The program offers to perform a wide variety of housing: social housing, controlled rent, housing home ownership and a social residence for migrant workers. A business incubator and business occupy one of the old pavilions of the hospital, rehabilitated. A cultural center and a home for disabled adults find space on the ground floor of separate buildings.

Previous studies have defined the number of lots to achieve in the program, and the implementation of equipment. Review of batches were then specified the volume of buildings, defined their access, their implementation and proposed choice of materials.

The urban project goes beyond local and regulatory ambitions, putting forward very strongly the themes of energy, rainwater management and biodiversity. Through specifications field disposal costs, the developer requires manufacturers all requirements for urban development, sustainable development and social inclusion. So, are particularly attached to CCCT (itself attached to the deed of sale):

- a lot drawn by architect coordinator to guide architectural design of buildings (positioning of access, choice of materials ...)
- a list of environmental requirements and sustainable development (SCESD) written by AMO team in charge of sustainable development and adapted to the possibilities inherent in each batch,
- a site charter Low nuisance for every batch depending on its location, especially vis-à-vis residents,
- a model clause on social inclusion to be included in work contracts by the manufacturers.

Furthermore, receivers are retained by the developer with private developers:

- 5% of the sale price HT at the signing of the sales agreement to ensure compliance with the requirements for sustainable development. The escrow is released by part at different stages of the studies (70%), then to the end of construction (30%);
- 1% of the sale price HT at the signing of the deed of sale to ensure compliance with the requirement in terms of social inclusion. The escrow is released at the completion of work if the goal is reached.

Invested with a target of less consumption, bioclimatic design was favored with directions chosen for sunshine. The compositions of the outer walls, designed to increase the thermal performance, are lined with windows adapted to each orientation to maximize solar gain and winter to limit summer overheating.

The hot water is provided by solar panels and the entire neighborhood connected to the District Heating Network.

The rainwater infiltration is favored with more than half of the surface of the permeable operation, including through green roofs and complete infiltration of rainwater in public spaces.

Finally, the ZAC Boucicaut was designated by the City of Paris, pilot operation on biodiversity. This will result in the host type to bird nesting devices, wild pollinators and bat, hives, choice of species selected for regional plants, micro wildlife crossings built in the closing walls ...

The workflow is placed under the sign of social inclusion as 6% of the hours worked on construction sites are usually reserved for people distant from employment (long-term unemployed, disabled workers, unskilled young people ...). This is followed by the Fondation Agir Contre l'Exclusion, on behalf of the SemPariSeine.

Started in 2012, the first buildings were delivered. The last two projects will begin mid 2014. At the heart of the new district, the square of the old hospital will be reclassified, extended and opened to the public in mid 2015. The neighborhood, entirely pedestrianized, will end in 2016.

## Programme

- Housing
- Offices
- Businesses and services
- Public spaces

## Project progress

- Delivery phase

## Procedure type

- Urban développement permit
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## Key points

- Smart city
- Biodiversity
- Energy /Climate

## Approaches used

- Ecodistrict national label
- Local charter

## Certifications

- Ecodistrict national label

## Data reliability

3rd part certified

## TERRITORY

### Type of territory

The site is located within the old Boucicaut Hospital, which occupied about 3 hectares west of the 15th district. The operation is part of SDRIF Local Urban Plan of the City of Paris, the repository "Sustainable development for Paris" Plan Territorial Climate-Energy and Biodiversity plan. The Boucicaut Area Development guidelines contained in the Paris Local Urban Plan approved on 12 and 13 June 2006 are: - Conduct public facilities and public gardens, - Build housing, including social, and local tertiary activity respectful of social diversity and balance of urban functions, - Consider the memory of the site and its architectural and landscape heritage. - These guidelines respond to the will of the City of Paris to include the project in the context of sustainable development and solidarity to reconcile ecological concerns of environmental quality and the objective of fighting against social and territorial disparities. The operation is in the scope for protection of two buildings classified as historic monuments: an old creamery has retained its vintage storefront, located 124 rue Saint Charles (listed in the inventory) and Saint Christophe de Javel church located 28 rue de la Convention. Site development Boucicaut will create two pedestrian easements along the buildings, on private land. One will connect the street Lourmel in the driveway Marianne Breslauer, upfield of the business incubator; the other will connect the street Cevennes in the driveway Irene Nemirovsky. The purpose of these links is to increase the permeability of the island for the residents of the neighborhood.

### Climate zone

[Cfb] Marine Mild Winter, warm summer, no dry season.

## KEY FIGURES

### Green areas, roofs included

Green areas, roofs included : 7 533 m<sup>2</sup>

### Office floor area

Office floor area : 6 296 m<sup>2</sup>

### Commercial floor area

Commercial floor area : 1 600 m<sup>2</sup>

### Public facilities floor area

Public facilities floor area : 6 874 m<sup>2</sup>

### Housing floor area

Housing floor area : 38 295 m<sup>2</sup>

### Number of residential units

Number of residential units : 514

### Number of social housing units

Number of social housing units : 290

### Green spaces /inhabitant

5.79

### Amount of the investment taken in charge by the local authorities

## GOVERNANCE

### Project holder

Name : PARIS

Type : City

### Project management

Description :

An important communication has been set up around the project:

- A quarterly newsletter is distributed around the ZAC Boucicaut (about 10 000). - The news sites are displayed on site and on the operation of the website to communicate around the project milestones and projects (designation of a builder, architect, mounting a crane ...).

- A yearly festive afternoon is organized on site to present the project to residents and raise awareness of the developed themes: sustainable development, biodiversity, ... - bonuses to neighborhood councils to make points of steps on progress of the project (at the request of district councilors)

- A website dedicated to the operation and allows users to send emails to the project team.

The management of the project by the developer is followed by a project team within the Directorate for Land of SemPariSeine composed of the Director of Planning, responsible for two operations, a communication officer and a land negotiator, together with a team of architects and landscape coordinators, an AMO in charge of sustainable development and an AMO in charge of social inclusion.

The operation control involves many stakeholders and is structured around several bodies:

- In the presence of steering committees elected Cabinets concerned to address cross-cutting issues and charge for the year of the broad guidelines of the project,

- Technical committees with technical services departments of the City of Paris for specific issues related to the future management of these areas by services, - monthly meetings attended by project owners designated for regular progress Points and share common experiences,

- Weekly meetings attended by companies to manage the construction of interfaces.

### Project stakeholders

SLG Paysages

Function : Construction manager

Public spaces design and management

[Construction21 company page](#) :

## QUALITY OF LIFE

### Quality of life / density

Gross housing density: 171 / ha The draft provides exclusively for collective housing, suited to dense urban project. Social intermingling, functional and generational are highlighted:

- Availability of social housing, controlled rent, private for rental and private; - Programming of housing, offices, shops and facilities; - Nursery, EMI, middle school / healthcare apartments for seniors ... The program provides many amenities to meet the needs of future residents and maintain social vocation of the site: Nursery, EMI, schools, local associations (Short Film Agency) home for women in need, day centers for adults home disabled, healthcare apartments for dependent seniors, social residence for migrant workers, disabled adult homes.

### Net density

171.33

### Culture and heritage

The site, occupied for over a century by the former Boucicaut hospital is the witness of an era in which the residents were attached. All the pavilions is part of the history of the neighborhood and its development. The use of brick as the old hospital building material is the witness of that time and the residents wanted to keep

this historical aspect of the site. Thus, the architect coordinator quickly proposed to favor this material for future buildings giving a real identity to the project. The heritage study for the project definition has identified 4 buildings not degraded by successive mutations of the hospital. Thus, the reception pavilion of the old hospital, the Lenègre Vilain and pavilions and the chapel are preserved, valued and rehabilitated. The buildings have preserved the general appearance of the building site (bricks and roof tiles, for example). Note that some twenty trees, judged outstanding, are also maintained on site. The Marquise of chestnut trees and the stone basin around which it is organized will, in the future square, the witness of the memory of the site. The area was heavily marked by the presence of the Boucicaut hospital for over a century. The nearest metro station door eg name "Boucicaut". It was therefore important to preserve the memory of the site, as the architectural, the philanthropic desire of Mrs. Boucicaut as part of his legacy. Thus, buildings are rehabilitated and many facilities have been provided for sensitive groups: children, the disabled, senior citizens ...

## Social diversity

The ZAC Boucicaut project provides a variety of housing favoring social diversity:

- Social housing (PLUS PLAI, PLS) • Housing in controlled rent (€ 17.77 excluding charges / m2 of surface useful value 2012)
- Rental Private accommodation (22.00 € excluding charges / m2 of surface useful value 2012)
- Private accommodation in accession. In addition, the type of housing has been diversified to accommodate homes of any size and from any generation. Pursuant to the request of local residents at the conciliation, large housing dominate with 51.6% in Q3 and more. Age diversity has also been sought since reception facilities are provided for both children (nursery, school, medical-educational institute) that for seniors (hospital apartments). This mix that fits into housing supply diverse 15th Arrondissement, and can meet the different needs of households. It should be noted that the City of Paris has particularly wanted to diversify the supply of private housing ZAC Boucicaut thus adapting to households that do not meet the criteria for allocation of social housing, however, have difficulty accessing free housing market. The overall layout is distributed harmoniously between buildings and open green spaces of the neighborhood. The project proposes an alternation of restored buildings and new buildings and public spaces to encourage exchanges between the residents:
- A square of 3 444m2,
- Three fully walkways on which residents can stroll,
- Shared terraces ( Lots C and D) for creating meeting places within buildings, reinforcing social cohesion among neighbors,
- Cultural facilities set up in the ground floor of one of the buildings (lot C) where can take place one-time events,
- Shops that animate the life of the neighborhood. Moreover, some outdoor spaces offer more privacy as the school yard and private courtyards. Physically separated from the public space by a railing, and they allow a balance between privacy and interaction spaces. The philanthropic outreach site, inherited the legacy of Mrs. Boucicaut to the Assistance Publique, guided the programming of the ZAC. So are made:
- 15 units in house and 3 relay emergency housing for women in need (position A)
- Two hospital rooms apartments of 11 to the home of the dependent elderly (plot B),
- A social residence 49 rooms for migrant workers (lot C)
- Two homes for disabled adults 12 (lot E) and 8 (lot D) rooms
- Two day care centers for the disabled (pin B and lot E)
- A medico-educational institute for handicapped children (pavilion Lenègre rehabilitated).

All of these structures is integrated housing projects so as not to stigmatize, to include them in the best neighborhood life. However, they have specific inputs.

Please note that all public spaces allows access to the disabled. The presence of new equipment, opening new shops and installation of innovative enterprises contribute to the dynamism and attractiveness of this sector. Green spaces created and embellished benefit to local residents, creating new practices and new uses in the area.

A study was conducted in order to develop social inclusion through economic activity. He has been asked to manufacturers of building lots to integrate a social integration clause in work contracts of their companies: 6% of hours worked must be performed by personnel insertion. The yards of the ZAC Boucicaut have already enabled 7 people initially hired insertion, sign long term employment.

## Ambient air quality and health

All residential buildings will be certified Habitat and Environment. In addition, the neighborhood, entirely pedestrianized, will be a quiet and peaceful area in the heart of the 15th district. Air quality: The air pollution in the area is average and the values are not superior to the quality and health objectives related to French standards. The air quality is nevertheless improved by the presence of the garden in the heart of island. Concerning the quality of indoor air, to respect thresholds were imposed in the specifications of environmental requirements for pollutant concentrations in wall coverings, namely: - Volatile Organic Compounds (VOC) 10 g / L; - Formaldehydes 10 ug / L; - Organic solvents 2% L; - No heavy pigment compound or class I or II of reproductive toxicant is allowed in paints and varnishes. The presence of natural or mechanical ventilation and double flux in the buildings finally improves the quality of indoor air. In addition, for offices and shops, a minimum ventilation rate of 0.5 vol / h was required in all local prolonged occupation and restrooms. Finally, for outdoor spaces, planted species were chosen especially for their low allergenic potential.

## ECONOMIC DEVELOPMENT

### Local development

Territorial development: Boosting the territory

With a large diversity program that combines offices, shops and public facilities (15,000 m2) in the housing (about 38,000 m2), the Boucicaut operation contributes to local economic development and attempts strike a balance between jobs and housing on its perimeter.

The creation of a nursery and a business hotel, offering flexible space to rent located in the Paris market prices, including promotes young companies installing and job creation, and the development of innovative projects on topics such as design, e-health, aeronautics ...

Moreover, the presence of equipment on the ground floor of buildings (shops, local associations for the Short Film Agency ...) and a school, a nursery ... paces neighborhood life and animates public spaces.

This mix also reduces trips to go and develop small town not focusing on soft mobility and public transit. Thus, the site which has a high density of public transport (metro, tram, bus, Autolib, Vélib) and close to many shops will be entirely pedestrian. A parking space for bicycles will be installed in public spaces and space for bikes are made in each building (along with changing rooms and showers in the office building), as well as charging stations for electric vehicles planned in parking lots buildings.

Finally, the operational phase, the revitalization of the territory also through the optimization of local resources and industries, despite the dense urban context. Thus the concrete from the demolition of old not kept the hospital pavilions were used after crushing as backfill on site. Solar thermal panels were installed on the roof of residential buildings (phase 2). In the nursery and the hotel business, it is an energy recovery system produced by workstations and a rainwater collection tank that were installed and fuel for heating and drinking water not all of the building. A beekeeper also operate locally hive installed on the building roof.

Furthermore, a social integration clause is included in all work contracts. The Parisian public and especially the 15th district are favored wherever possible. The support and monitoring companies is provided by an AMO Social Integration appointed by the SemPariSeine in 2010.

Thus, the Boucicaut operation aims to contribute to the development of the area, both economically and socially, bringing uses, favoring the use of soft modes and promoting local resources.

## Functional diversity

The functional diversity presented by the program of the ZAC, including business incubator, aims to encourage the installation of innovative businesses in the heart of town. This arrangement will reduce commuting.

Moreover, the purpose of the incubator is to assist the development of startups to bring out innovative projects on the following themes: the smart city, design, e-health, aeronautics and energy / construction.

## % of office area

21

## % of commercial area

5

# TRANSPORT

## Mobility strategy

The entire area will be fully accessible to pedestrians and bicycles, scooters ... The site is very well served by the Paris cycle network as the tracks pass rue de la Convention, rue de Lourmel and rue Lacordaire (bicycles circulate counter meaning in the latter two). 28 bikes supports inverted U will increasingly set up in public areas of the BIA which will promote the development of green means of transport for locals. Finally, many shops are located nearby, rue de la Convention and rue Saint Charles: bakery, butcher, supermarket, ... promoting travel by active modes.

Located in dense urban areas, all buildings of the ZAC is less than 300m from the metro station Boucicaut, and several stops regularly serviced bus. In addition, pedestrian links will be treated to ensure secure access to the decisions of transport. The use of public transport is heavily favored. Furthermore, Velib and Autolib terminals are also nearby.

No vehicle will be allowed to circulate within the eco-neighborhood and no surface parking space is created in the grip of ZAC. Parking will be limited to peripheral streets and parking garages constructed in each of the new buildings.

charging stations for electric vehicle will be introduced in car parks in most lots (between 4 and 10 terminals according batches) to anticipate the development of this use.

In addition, bicycle premises are provided for all items: from 104 to 211m2 following batches. For lot F, consisting of offices, showers and changing rooms are also fitted.

A parking and traffic study was conducted in 2011 to identify the impact of the project on the streets near the project in terms of parking, deliveries of places ... This study revealed no malfunction expected .

Minor adjustments were made to progressively delivery of buildings:

- In the school cafeteria, a delivery area was built on the plot set back from the street of the Convention, which allows not to impede traffic on this very street circulated.

- For the medical-educational institute, parking spaces for the disabled have been created on Lacordaire street.
- For lot F, consisting of office and retail, delivery spaces are provided in the basement to limit the impact on the surrounding traffic.

Finally, delivery of the spaces will be created by the services of the City of Paris at the end of the development project, when the surrounding roads redevelopment work.

## SMART CITY

### Smart City strategy

ZAC Boucicaut, located in a dense urban area, is at the heart of a large network of Internet distribution.

As part of the work of the developer, the sleeves will be set up in public spaces created to serve lots. However, it is for each project owner to get the network operator of their choice.

Note that the lot F (nursery and hotel companies) is equipped with fiber optics for the needs of installed companies.

The functional diversity presented by the program of the ZAC, including business incubator, aims to encourage the installation of innovative businesses in the heart of town. This arrangement thus will reduce commuting.

Moreover, the very purpose of the incubator is to assist the development of startups to bring out innovative projects on the following themes: the smart city, design, e-health, aeronautics and energy / construction.

## RESOURCES

### Water management

Alternative structures of stormwater infiltration and ensuring functioning in a reduction of 55 to 65% of a rain of 16mm to the plot are in place.

In addition, rainwater recovery tanks allow the reuse of water for watering outdoor spaces and the supply of health (Lot F).

To preserve water resources, the whole lot F of the office project is equipped with water-saving devices (pressure reducers, aerators, toilet dual control, etc.).

The water resource is preserved via a consumption reduction policy: installation and performance-efficient equipment, counters differentiated (cold water, hot water and electricity) installed in the units and allowing real-time monitoring of consumption of housing, rainwater collection tank for watering outdoor areas ... in addition, a specific approach was initiated concerning stormwater management with the implementation of valleys on public and private green spaces, green roofs semi-intensives substrates with thickness between 18 and 35cm.

### Soil management

Soil pollution :

The history of the site, its occupation for medical activities and especially the presence of an incinerator, required a diagnosis of soils. This showed the presence of several pollution pockets made of metals (lead, mercury and copper), and hydrocarbons near the old incinerator, dioxin and furans on the square of the land surface and that the law of the former incinerator.

To avoid risk for future populations, a polluted land management plan has determined the work to be done. On the influence of the former incinerator, the soil has been excavated and disposed of in an approved center. For superficial land of the square, a specific work was carried out with the prime contractor for cleanup work, services DEVE and specialists trees to achieve the clean without harming the maintenance of the chestnut trees. The following management plan has been implemented:

- On the outer edges of the rows of chestnut: excavation of 15 cm of soil and intake 30cm healthy soil;
- In the center of shaft alignment: excavation of 50 cm of soil and intake 40cm healthy soil;
- Around trees: excavation of 40 cm of soil and intake 30cm healthy soil.

The company's staff attended a training day on-site to raise the specificity of the site, ancient trees and the methodology to be used. The lands were then removed using a suction down so as not to damage the roots located at shallow depths.

Moreover, construction lots must evacuate the classroom earthmoving land adapted or reused on site as backfill with the exception of the surface layers.

### Waste management

Clean site charter has been implemented including requiring companies:

- To assess the type and quantities of waste they produce during their on-site phase contest;
- Phase project, the establishment of sorting bins. Sorting has been verified on site at regular intervals during site visits by AMO environment;
- Material recovery or energy of at least 70% of construction waste.

Recovery and sorting waste products are also favored. The kitchens of homes are adapted in size to the practice of waste sorting and all buildings have recycling bins. The outdoor areas have meanwhile slots for composters. The buildings around the ZAC does not all have large enough space to accommodate recycling bins, a glass column to be installed in public areas of the BIA.

## BIODIVERSITY

### Biodiversity and natural areas

ZAC Boucicaut was designated pilot operation in the Biodiversity Plan for the City of Paris. The measures implemented are:

- The reintegration of local biodiversity (plant palette, birdhouses, wildlife crossings)
- Conservation of remarkable trees,
- Diversification of plant strata (tree, shrub, herbaceous) across the ZAC,
- Differentiated management of green spaces including the establishment of mulch, the lack of use of pesticides and the establishment of areas in late mowing,
- Roofs totally or partially vegetated on different lots and a vegetation of some facades.

Enhanced biodiversity: Green spaces dominate in the project both in quantitative and qualitative terms. ZAC Boucicaut was designated by the City of Paris pilot biodiversity.

## ENERGY/CLIMATE

### Energy sobriety

The actual energy consumption of future new buildings below 50 kWhEP / m<sup>2</sup> / year and less than 80 kWhEP / m<sup>2</sup> / year for buildings rehabilitation. This is a more ambitious goal than the Climate-Energy Territorial Plan in order to reduce operating costs for tenants but also to minimize the impact of the eco-neighborhood in terms of gas emissions greenhouse effect.

- He was selected to favor solar panels because they allow a direct reduction in charges inhabitants.

The desired energy sobriety thus resulting in an efficient bioclimatic design and the use of renewable energy (exploitation of natural sunlight, use of natural ventilation, 40% of domestic hot water provided by solar panels (phase 2) , connection to the district heating network to all residential buildings using almost 50% renewable energy and recovery, etc.).

## BUILDINGS

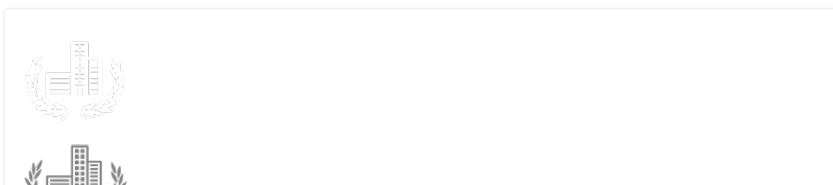
### Buildings

Following a study of the built heritage carried out in 2002, the architectural interest of several buildings was highlighted. Considered the least altered by successive transformations, they deserved to be preserved. Thus, the old hospital reception pavilion was rehabilitated in comprehensive school by the City of Paris (architect: Jean-François SCHMIT); two hospital wards have been restored and each host equipment for early childhood in the former Pavilion Lenègre (architect Naud and lice) and a business incubator in the old pavilion Vilain, now attached to a new building (architect Paul Chemetov AUA).

The former hospital chapel will be restored to a destination that will be decided later by the City of Paris (designation course architect). Finally, the plant heritage was also preserved with the conservation of a set of 20 chestnut trees pruned in Marquise.

## Contest

### Building candidate in the category







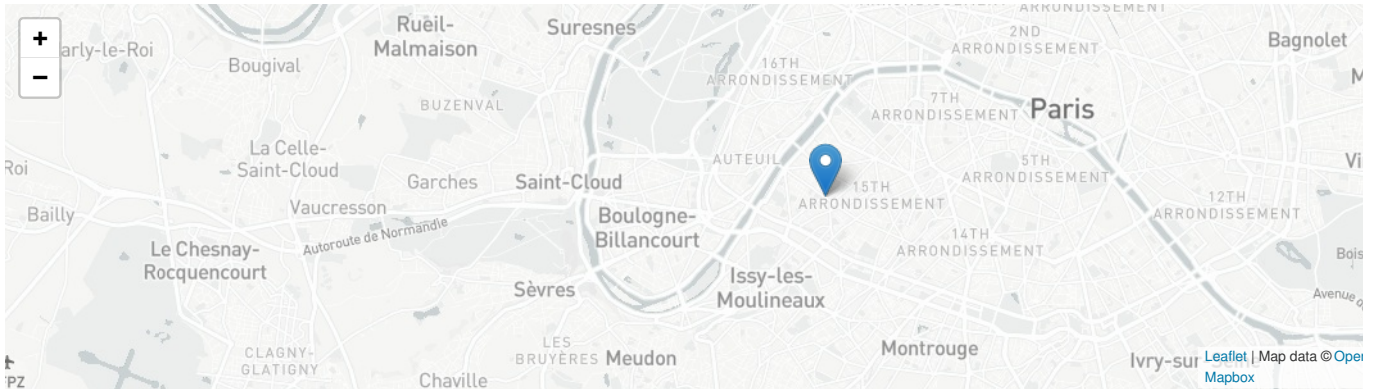
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