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Clichy-Batignolles in the metropolitan dynamics of northwest Paris

A 10-hectare park, the future Paris Courthouse and more than 500,000 square metres of mixed-use developments are the driving forces behind this urban transformation reaching well beyond the scope of the Clichy-Batignolles project. By renewing this part of the 17th "arrondissement," the project also contributes to the metropolitan dynamics at work across the northwest area of Greater Paris.

Clichy-Batignolles is a decisively mixed-development project. In terms of economic activity, the focus on providing office space is fully justified by its location bordering the central business district, and by a high-performance transit network, soon to boast the extension of metro line 14, with 2 stations, and tramway T3.

In residential terms, its contribution to the housing production effort is significant, as 3,400 units will be built (with 300 in the Saussure sector). Half of the surface area will be devoted to social housing, including solutions for specific needs: students, seniors, young workers, etc.

The emblematic 160 metre-high skyscraper designed by Renzo Piano for the future Paris Courthouse will lend a strong sense of quality and elegance to the area.

The architectural design of the property development projects strives to make the most of the park, the railway landscape and the possibilities for constructing residential buildings up to 50 metres high. Design freedom prevails, provided it is coherent with the overall project and environmental performance requirements.



Clichy-Batignolles is in the process of obtaining the French government's "EcoQuartier" certification. Measures to promote energy savings, electricity production by solar panels and the use of renewable energies are all in compliance with Paris' ambitious Climate Plan. Clichy-Batignolles also takes the lead when it comes to implementing the Biodiversity Plan, specifically with the Martin Luther King Park, which offers a very contemporary vision of nature in the city.

The project is entering the final phase. The park is two-thirds completed and has already proved its attraction and key role in transforming the image of the district; on Avenue de Clichy, all of the housing and amenities have been delivered or are in the process of being completed; construction of the Courthouse is underway; the property development projects are now starting along the Saint-Lazare railway tracks. All of the remaining works will now move forward quickly, with completion of the Clichy-Batignolles project scheduled for 2019.





A new urban hub

Clichy-Batignolles, at the heart of a modernised 17th district

The 17th district is located at the interface between the western and northern areas of Paris. This particular location explains why, or Paris. This particular location explains why, from Plaine Monceau to Ternes, and from Batignolles to Épinettes, the area is full of contrasts. The Clichy-Batignolles urban project is located precisely at the boundary between these two existing neighbourhoods, bourgeois and business-oriented to the west and more working-class and residential to the north. The eco-district breathes new life into the 17th district and refocuses its identity on contemporary values of sustainable development.



A strategic and dynamic part of the city

Clichy-Batignolles is part of a triangle linking the central Parisian business district to La Défense and Plaine Saint-Denis.

The urban modernisation that is progressing in this northwestern part of the Paris region is gradually eliminating the administrative boundaries and the barrier represented by the ring road, fostering the emergence of new economic centres such as Clichy and Saint-Ouen, to complete the production and support functions of the Plaine Saint-Denis.

At the junction of these areas, Clichy-Batignolles will soon play a strong role in the metropolitan dynamics thanks to the flagship project for the new Paris Courthouse, while boosting its tertiary activity to create a highly mixed urban environment.



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A well-connected distric

Clichy-Batignolles already enjoys

With the RER C regional train line,

and the northwestern part of the city.

hub at the Saint-Lazare train station via the Transilien (Pont Cardinet Station)

Its location along the ring road (Porte de Clichy exit) and its proximity to the A1,

Cergy-Pontoise), offering a quick connection

to the A86, gives it excellent road access.

A4 and A15 motorways (Argenteuil,

the district is linked to the Porte Maillot area

(convention centre), the Left Bank of Paris

It is connected to the multimodal transit

a good level of accessibility.

and by line 13 of the metro.

A transit system soon to be greatly improved

In the coming years, several public transport projects will considerably improve access to Clichy-Batignolles in this metropolitan area.

Tramway line T3, called the "Maréchaux tramway", will be extended from Porte de la Chapelle to Porte d'Asnières in 2017.

The gradual upgrading of the RER C line, to be completed in 2017, will improve the level of service and the performance of the lines.

The local bus plan will also be restructured to meet the needs of the future neighbourhood.

The STIF (public transport authority) and the SNCF (national rail) are studying the possibility of increasing the frequency of trains between Saint-Lazare and La Défense, with a stop at Pont-Cardinet station.

Finally, line 14 of the metro, which will eventually become the north/south axis of the Grand Paris Express project, a new automatic metro network/system, will alleviate congestion on metro line 13 by 2019, thanks to the extension from Saint-Lazare station to Saint-Ouen, with two stations in Clichy-Batignolles: Pont Cardinet and Porte de Clichy. It will connect Clichy-Batignolles more closely to the 1st, 2nd and 9th districts; the Madeleine guarter will be just two stations away from Pont-Cardinet. Furthermore, this line will connect the district directly to the transit hubs of Saint-Lazare (centre/west of Paris),

Châtelet-les-Halles, Gare de Lyon (TGV),

and the emerging Docks centre of Saint-Ouen.





Remaking the city around Martin Luther King Park and the Paris Courthouse

Three symbols are expressed and interact with one another in the park, greeting the visitor, awakening emotions, and giving the park a unique, original identity: the weather, the body, and water. Jacqueline Osty landscape architect





© Sergio Grazia



© Sergio Grazia





Clichy-Batignolles, creating urban links and activity

More than just a new district, Clichy-Batignolles is a vast piece of the city which will rebuild the urban continuity between Paris and Clichy, reconnecting the quarters of the 17th district which were long separated by zones occupied by logistics activities and the railway. A new major metropolitan centre is being created around the expanded transit hub and two key amenities: Martin Luther King Park and the Paris Courthouse

A new fabric of public spaces largely devoted to pedestrians will open up this once isolated area. Many new passages will be or have already been created via the 14 access points of the large central park, via the new road parallel to Avenue de Clichy alongside the railway tracks, and via the bridges and footbridges crossing over the tracks. The scope of the urban project also covers existing public spaces such as Boulevard Berthier and Avenue de la Porte de Clichy, where renovation works will attenuate the barrier between Paris and Clichy created by the ring road. a feature that is notably lacking traditional parks.

The unbeatable advantage of a big park in the city

In the northwest corner of Greater Paris, one of the densest and least green sectors of the entire area, the City of Paris began planning back in 2001 for a broad green space in the Batignolles quarter. The development plan designed by the urban

planner François Grether and the landscape architect Jacqueline Osty gives a key role to the park. Its generous 10 hectares puts it in the ranks of Monceau Park (8 ha) and André Citroën Park (13 ha).

This large, open and attractive space conveys a very contemporary vision of nature in the city. not just for public health considerations in the contained manner of Haussmann and Alphand, but accessible and more spontaneous, fitting closely into spaces between buildings. The park combines the delight of varied landscapes and atmospheres with a wide range of facilities and spaces for playing urban sports,

The three symbols of the park

The weather is that of the changing seasons, highlighted by the choice of plant species and foliage; that of weather variations - covered spaces facilitate the use of the park regardless of conditions; and that of the passing of time, symbolized by works of art. The body represents physical exercise, made possible by many playgrounds and fitness trails. Water is featured in the park in all its forms: spraying, still, running, cloudy: it lends itself to every use and purpose: resource, ecology, play, enjoyment, decor, symbolism, reflection...



streets and a large diagonal lane connect Square des Batignolles to Porte de Clichy







© Sergio Grazia











Facing Avenue de Clichy A varied urban silhouette with bold architectural designs takes shape by the park © Atelier François Grether

A context-specific project

To the east, along Avenue de Clichy, the neighbourhood joins onto the existing city. The new housing developments, most of which have direct access to the park, respect the geometry of the existing city blocks. The pathways thus created allow the park to extend through to Avenue de Clichy, offering views as well as access. Amenities and neighbourhood shops will help tie together the urban space. By the end of 2015, all of the developments in this sector will be completed.

Along Rue Cardinet, where there was once a blind wall, a broad green alley extends from the new park, opening up the view to passers-by and residents, mirroring Square des Batignolles. It provides access to a residential underground parking structure.







East/west sectional view The western area overlooking the park and the railway area





Façade facing the railway © Atelier François Grether



Façade facing the park © Atelier François Grether

"Butte des Batignolles" served by a broad and lively street

To the west, an urban quarter of approximately 200,000 square metres, with dense and mixed-use functions, will be integrated between the park and the Saint-Lazare railway tracks. Raised by a 10-metre-high technical platform, its contrasted skyline, featuring diverse architectural styles, will reach peaks of 50 metres by the park - this is fairly exceptional in Paris. Residential buildings will face the park and Rue Cardinet, whereas office buildings will be developed along the railway, acting as a noise barrier. For office occupants, this location will offer the privilege of clear, far-reaching views.

The district's main road will run through the centre of this artificial hill. In order to channel flows and increase the street's level of activity, two retail complexes create a dynamic tension. To the south, at the end of Rue Cardinet, an inter-district shopping centre will be served by metro line 14. With 9000 sq.m of retail space, it will be an attractive shopping destination, will complete the existing retail offering. To the north, facing Boulevard Berthier, a cultural and recreation centre with a 7-screen multiplex cinema will add to the cultural nature of the site, along with the Odéon Theatre (Ateliers Berthier). At street level, the buildings will house a series of local shops that will connect the two complexes.











An emblematic metropolitan facility

In the near future, Porte de Clichy will be the site of the new Courthouse of Paris. This emblematic 160-metre-high building by Renzo Piano, soon to be a major feature of the Paris skyline, will open its doors in 2017.

At a single location with a surface area of 90,000 square metres, all of the currently scattered services of the district court. all or part of the subdistrict courts and the police court, the future Courthouse of Paris will become one of the largest courts in Europe. The regional headquarters of the Judicial Police will leave its current location on Quai des Orfèvres to set up in an adjacent building of 30.000 sg.m.

These judicial institutions will have very real ramifications for the local area: some 9,000 daily users (of the Courthouse alone) will greatly contribute to activity in the area, ensuring the vitality of the surrounding shops and services.

A new metropolitan hub

The Courthouse will be served by a new transit hub by Porte de Clichy, where the extensions of metro line 14 and tram line T3 will converge. supplementing the existing RER C line station at Porte de Clichy and metro line 13.

One of the main entrances to the park is on Boulevard Berthier, which will be completely redeveloped with the new T3 tramway. Porte de Clichy, the Courthouse plaza and the redeveloped Avenue de Clichy will attenuate the barrier of the ring road by favouring active modes of mobility and a more peaceful urban ambiance.

A site for innovation

The city will extend right up to the very edge of the ring road thanks to new property developments, mostly office buildings (39,000 sq.m), for companies likely to be attracted by the new Courthouse and improved public transportation. Urban services (recycling centre, logistics base, and concrete mixing plant) will be inserted close to the ring road and railroad tracks.

The last plot to be marketed, plot N2, at the intersection of the ring road and Avenue de la Porte de Clichy, with about 13,000 sq.m of floor area, is one of the 23 sites selected by the City of Paris in its call for innovative projects.



Renzo Piano designs a new landmark of the Paris skyline

With its timeless elegance, the tiered, crystal-like silhouette of the future Paris Courthouse breaks free from the archetype of the massive office tower. Its composition of three superimposed seaments creates a cascade of terraces where nature is given free rein. Its imposing height (160 m) will make it a beacon of northwestern Paris, between La Défense and Montmartre. The regional headquarters of the Judicial Police will move in next to the Courthouse, in a building designed by the architects Valode and Pistre, opposite Bastion no. 44, a vestige of the Thiers defensive wall built in 1844.

Avenue de la Porte de Clichy beautified and peaceful

Avenue de la Porte de Clichy will be narrowed from 60 metres to 40 to make room for new buildings, a broader pavement with terraces and a cycle lane. The street will become more citified, unlike its current look of an expressway In the grand tradition of Parisian avenues, two lines of plane trees will run down the centre and on the east side. The passage under the ring road, to Place des Nations-Unies in Clichy, will also be transformed to make it more hospitable, thanks to a wide pedestrian space and pleasant lighting. Project management: Anyoji Beltrando.

A vast plaza with room for nature

A large public space of 6000 sq.m. at the foot of the monumental Courthouse adds to the distinct character of this new major urban site. The broad diagonal lane of the park opens onto the plaza and a multitude of itineraries to other parts of the district. The plain granite surface of the plaza is encroached by greenery emerging from two large rifts evoking a crack in the Earth's surface from which the majestic building appears to rise. Project management: Moreau Kusunoki.

Regualification of Berthier and Bessières boulevards

By 2017, tram line T3 will glide through the district on a reserved green strip in the centre of Berthier and Bessières boulevards. As elsewhere along the Maréchaux line, the new tram will bring with it major regualification works on the public space, including the elimination of the roadway underpasses.

The future Paris Courthouse, new metropolitan emblem © L'autre image, Labtop et Lansac





Plaza of the future Paris Courthouse © Moreau Kusunoki Artefactori

An accent on mixed development



An exceptional offering bordering the central business district

With 140,000 square metres of office space, Clichy-Batignolles will become a significant centre for the tertiary sector, attracting users beyond the legal professions that the presence of the judicial institutions will naturally draw to the site.

On the business property market, Clichy-Batignolles is attached to the central-west sector, traditionally the most sought after in Paris (1st, 2nd, 8th, 9th, 16th and 17th), while occupying a pivotal position between La Défense and the towns near the western edge (Neuilly-sur-Seine, Puteaux, Courbevoie, Levallois-Perret, Clichy and Saint-Ouen).

Within this prime area, Clichy-Batignolles will be set apart by a supply of brand-new office space, which is rare in the centre

of Paris where the market is mainly composed of restructured premises in 19th century Haussmann-era buildings. An offering of full-floor surface areas ranging from 5,000 to 15,000 and 25,000 square metres is also unequalled in the central west of Paris. The prestigious, functional offices, their varied, modular sizes, their stringent environmental standards that guarantee the value of the property and reduced energy costs, as well as the quality of services available and their immediate environment will make all the difference.

An expanded cultural scene

One of the two venues of the Odéon Theatre is located in Clichy-Batignolles, in the Ateliers Berthier, built in 1895 by the architect Charles Garnier to house the stage sets of the Paris Opera House. The urban development project will add to this cultural offering with two new amenities: a municipal activities hall of 1000 sq.m, and a 7-screen multiplex cinema. Operated by SNES, it will do more than show movies: its large lobby facing the park will have a café and spaces for talks and activities.

* The Clichy-Batignolles project consists of three operational sectors: Cardinet and Clichy-Batignolles development zones, created, respectively, in 2005 and 2007, developed by Paris Batignolles Aménagement, and the Saussure sector, on the other side of the railway tracks, developed by Espaces Ferroviaires Aménagement.



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Multiple solutions to satisfy a strong, diverse demand for housing

Given the magnitude of the need for housing, Parisian municipalities have been pursuing forceful policies since 2001 to offer solutions. As one of the last major opportunities for land development in the capital, Clichy-Batignolles will contribute significantly to this effort, with 3,400 units planned in the scope of the project, of which 300 are in the Saussure sector.*

The diversity of the housing offered in Clichy-Batignolles means that a wide range of needs can be met, in particular for people facing the most difficulty finding housing in Paris: dependent seniors, students, young workers, large families, and people with low incomes. At least half of all the surface area will be social housing.

In addition to the appeal of living in a park, in a neighbourhood that is very well served by public transport, residents will also enjoy pleasant housing in more ways than one: contemporary architecture, clear views from upper floors, and all the comfort that comes with a high-quality living environment.





A place for living, working and playing

The 6,500 residents and some 12,700 people working in Clichy-Batignolles will be joined by regular and occasional visitors to the park, shops and leisure facilities, as well as those coming of course to the Courthouse, where an average of 5,000 visitors a day are expected.

The mixed development of the project is one of its key features: it ensures that

the shops, services and restaurants will have enough customers to develop high-quality offerings, both during the week and on weekends (offices/park) and throughout the day (offices/ housing). The intertwining of usages, especially at "Butte des Batignolles", is designed to foster these synergies.

Provisional calendar



Architectures Anne Demians © Sergio Grazia



Programme

All Sectors **Clichy-Batignolles** in figures

54 ha INCLUDING 10 ha of park

3,400 housing units

140,000 sq. m. offices

120,000 sq.m. future Paris Courthouse and Regional Headquarters of the Judicial police

31,000 sq.m. shops, services and activities

38,000 sq.m. public facilities Urban services (waste sorting center, automated vacuum collection, concrete mixing plant)

12,700 jobs







Los Emports. SociAtix.

Connerues Civiétue

CENTRE

D'ANI HIPTION

Detail of the housing developments

3,400 (including 300 in Saussure sector) units, with 500 units for students and young workers and 200 rooms for dependent seniors

50% social housing, of which 20% highly-subsidised, 50% ordinary subsidised, 30% partially subsidised

20% capped-rent housing

30% Owner housing



East

Plot e1 5,815 sq. m.

Developer Paris Habitat Architect Franklin Azzi Architecte Housing, day care, shops, services including Clichy-Batignolles project showhouse

• Plot **e4** 8,290 sq. m.

Plot e5

Developer Vinci

7,753 sq. m.

Architect Francis Soler

Housing, accommodations

e2

Developer RIVP Architect Philéas K Architecte Housing, school

Plot e7 3,755 sq. m.

Developer La Sablière Architect Antonini and Darmon Housing





Developer Nexity Seeri Architect Périphériques



Plot e3 3,685 sq. m.

Developer SIEMP Architect Bigoni Mortemard Housing, shops





Plot e6 e3 17,784 sq. m.

Developers Vinci + Orpéa **Architects** BP Architecture + Atelier du Pont Housing, home for dependent seniors, house of worship, shops





67

e8

.9

Plot e8 16,058 sq. m.

•5

Developers Sodearif + Cogedim Architects Gausa + Raveau + Avenier Cornejo Housing, home for the disabled, Mother and child protection centre, shops and services



Plot e9 12,410 sq. m.

Developer RIVP Architect Babin Renaud Housing, school, shops and services





e10ª

e10^b

Plot e10ª 8,715 sq. m.

Developer SNI Architects MAAST Housing, shops and services



Plot e10^b 17,981 sq. m.

Developer Paris Habitat Architects TOA + AASB Housing, home for dependent seniors, shops and services





Plot n3 6,150 sq. m.

Bar association offices Offices, shops, access metro 14



Plot **n4** 10,500 sq. m.

1

Developer ICADE Architect Corinne Vezzoni and associés Offices



Plot n5 10,000 sq. m.

Developer ICADE Architect Odile Decq Offices



North

Plot n1 11,510 sq. m.

Developer RIVP Architects Ignacio Prego and Thibaud Babled Housing, accommodation centre, shops, health centre, access metro 14





(call for innovative projects) Offices, shops and services

n4

∎5

n3

West

Lot **01** 16,505 m²

Developers Bouwfonds Marignan + Groupe Financière Duval Architects Le Penhuel + Saison Menu + Sud Architectes

Doctoral student housing, housing, shops, main entrance metro 14

1 Lot **03** 20,461 m²

Developers Bouwfonds Marignan + Groupe Financière Duval Architects Le Penhuel + Saison Menu + Sud Architectes Housing, offices, shops

3 Lot **o5 21,220 m²**

Developer Sefri Cime Investors Ag2R + La Mondiale Architects Viguier et Associés + Agence Search Offices, shops and services

•5

0**6**ª

Lot **02** 11,274 m²

Developer Emerige 38 Architects Biecher + Mad Housing, day care, shops, secondary access to metro 14







Lot **04**^b 12,602 m²

٥2

Developer Kaufman & Broad Architects Aavp + Aires Mateus Housing, shops and services





Lot **06**ª 0**4**ª 9,473 m²

04^b

Developer 3F Architects Querkraft Architekten + Sam Architecture Housing, migrant worker housing, nursery school/day care, shops and services



Lot **06**^b

8,226 m²









Housing, shops and services



Developers OGIC + Demathieu Bard Immobilier Architects Fresh Architectures + Itar Architectures

NORTH





Developer Emerige Investor BNP Paribas Cardif Architects Chartier-Dalix + Brenac & Gonzalez Offices, shops and services



Developer Bouygues Immobilier Co-investor Caisse des Dépôts et Consignations Architects Baumschlager Eberle + Scape Offices, shops and services

۰9







Developers Sodearif + Nexity, SNES for the cinema Architects TVK + Tolila Gilliland Housing, activity centre, shops and a 7-screen cinema





A reference in contemporary urban development



An alliance of the city and rail

Like many land reserves of the metropolis, Clichy-Batignolles started out as a railway enclave in need of transformation.

Railway maintenance, which formerly took up a lot of space, has been restricted to an area alongside the railway tracks, under a platform overhanging the tracks. Clichy-Batignolles is now making the most of this historic railway function, thanks to an open landscape and direct connections to Saint-Lazare and soon to La Défense, from Pont Cardinet station.

An exceptional feat of civil engineering

Les Batignolles, birthplace of the Parisian railway in 1835, remains an active site for regional and national rail operation. A colossal platform has been built 10 m above the tracks to house the equipment necessary to maintain the tracks (workshop, locomotive garage), while the surface is given over to the construction of a large road lined with real-estate developments. 550 m long and 55 to 70 m wide, this work of civil engineering gives depth and shape to the future "Butte des Batignolles".

An architectural design attentive to the urban setting and usage

Clichy-Batignolles reflects the cultural and aesthetic diversity of today's world; its architecture incorporates high environmental requirements, and innovation is sought at every turn to meet the desires of inhabitants and the evolution of lifestyles. Most of the buildings benefit from the exceptional location around the park, this means that the architects systematically research the best views, exposure to sunlight, size of the balconies, loggia, green walls and roofs to create a flow of atmosphere between the park and the private spaces.

The approach to design varies with the contexts and requirements specific to each area. As for the "Butte des Batignolles", because of the view it affords from the park and railway line, combined with its size and complexity, a specific process of design has been implemented by the planning authority. Elsewhere the projects are subject to architectural design competitions with strict urban and environmental specifications.

Varied heights form a remarkable skyline

In the Clichy-Batignolles development zone, the land use plan authorises apartment buildings to exceed the 37 m height limit and be built as high as 50m. This evolution in building regulations makes it possible to combine urban density with quality, by modulating building sizes and forming a recognizable skyline to reflect the identity of the area. This will also make it possible to afford more apartments the view of the park and the horizon.

An approach which favours quality of the user experience

The question of use, i.e. how to make the available space most accessible to users, is a thread running through the architectural and urban design of Clichy-Batignolles. A number of apartments are thus extended with exterior spaces, generously distributed balconies or loggias as well as private gardens at ground level. The roof terraces are accessible and feature green spaces for the use of renters or co-owners. This idea of shared spaces (quest rooms, common rooms, workshops etc.) is still unusual in France today and it will make its début in Clichy-Batignolles.





© Aavp - Aires Mateus

© Biecher + Mad





Shared roads and a continuation of the park's atmosphere

Only 12% of the area is allocated for roads in order to limit traffic and concentrate flow along a few major roads. Public spaces are designed to be shared fairly between all users. 30km/hr zones and a winding road considerably slow down vehicles and discourage transit traffic. A structural element of this space is the vegetation, which guides the route and prevents unauthorised parking while contributing to the safety of pedestrians. Trees and bushes of various sizes and types are planted according to specific needs: slowing traffic, improving visibility, shade, safety etc. This is a break from the traditional tree-lined avenue.

© Cyrille Weiner

© Querkraft Architekten - SAM Architecture



A historic heritage showcased

Several buildings and structures that play a part in the site's history and character will not only be preserved, but will serve to underpin the whole project and add value to the neighbourhood.

The old industrial forge has been converted into a restaurant. On Boulevard Berthier, the vestiges of the old stronghold of the Thiers Wall will be highlighted by the creation of a landscaped area, not far from the warehouse built by Charles Garnier. Other heritage sites include the great hall of "quay 3", dismantled and eventually reinstalled in the park.

The Batignolles workshop, an innovative experience in urban design

The architectural design of this 200,000 sq.m urban area, divided into 10 plots, was made between June 2012 and December 2014 within the framework of two successive workshops, each focusing on 100,000 sq.m.

The sessions were led by the planning authority, with input from architect François Grether and the Paris Urban Planning Agency (APUR). They brought together the previously selected developers and their project management teams. These sessions enabled the urban space and the architecture to be designed simultaneously, that stores stage sets for the Paris Opera House they also made it possible to explore collective solutions within the framework of obligatory environmental requirements, urban density and a complex mix of uses.

A sustainable district



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A strong commitment to protect the environment

Since 2002, the City of Paris has been committed to building an exemplary eco-district in Batignolles, aligning ambitious transport, diversity and environmental protection policies. Clichy-Batignolles has since become the first 'application', on such a scale, of the Climate Plan and the Biodiversity Plan adopted in 2007 and 2011 respectively. Winner of the 'New Urban Districts' call for projects launched by the Region in 2010, today, Clichy-Batignolles is committed to endorsing the EcoQuartier certification awarded by the government.

High energy-saving standards

In compliance with the Paris Climate Plan, the buildings at Clichy-Batignolles must meet particularly stringent energy-consumption limitations. Effective insulation and glazing, natural ventilation and heat recuperation and the compactness and orientation of the buildings make it possible to optimise the sun's natural heat and light. All of these methods are required to keep the total consumption of primary energy below 50 kWh/ sq, m/year for housing, while the law has set 65 kWh/sq.m/year in Paris. Energy consumed for heating purposes must not exceed 15 kWh/sq. m/year (equivalent to the Passivhaus label) i.e. less than what is necessary to produce hot water. The specifications also stipulate that offices must not use air conditioning.

Large-scale use of renewable energies

A large proportion of renewable energies will contribute to reducing carbon emissions. The energy required for heating will be 72% renewable as the system, currently under installation, will be fuelled by geothermal sources. If necessary, extra heating will be provided by the general urban heating network of Paris. Clichy-Batignolles will also produce electricity via photovoltaic panels integrated on the roofs and some facades of office buildings. Over 35,000 sq. m of panels will produce 3,500 MWh/year. Several plants are already up and running on the roof of the first completed apartment buildings.

Innovative and green waste collection

Instead of waste collection trucks, a system of pneumatic underground waste collection, implemented for the first time in Paris at Clichy-Batignolles, reduces greenhouse gas emissions by 42%. The waste is sorted prior to being disposed of in waste terminals. The waste is then sucked through underground pipes to the compacting terminal located on Boulevard Douaumont, from where just four trucks per week suffice to take the waste away.

A significant contribution to the protection of biodiversity

When complete, Martin Luther King Park will cover 10 hectares and will add to the green corridor in the Northwest of Paris, where it joins the Monceau Park, the Bois de Boulogne as well as several small public squares and cemeteries. It will significantly help to maintain biodiversity. Several ecosystems have already been re-instated in the park, which is home to 500 species of plants. Landscaped courtyards, green roofs and a variety of plants lining the district's main road will complete this ecological system. Environmental regulations call for biodiversity coefficients which are calculated based on the amount of vegetation on the horizontal and vertical surface areas of the projects.

Rainwater recovered

The Clichy-Batignolles project aims to cut by 50% the amount of rainwater discharged to the sewage system, in comparison with a conventional development program, in order to minimize the risk of saturating the systems and of polluting the River Seine.

The presence of a large park, the low surface area of the roads, the plentiful green roofs and courtyards favour natural rainwater seepage or its evaporation into the air, which will help to attenuate high temperatures in the city. In the park, any excess water in quantities which cannot seep directly into the ground is recovered to supply a pond. This water covers 40% of the park's irrigation needs, which are quite low.

Health-friendly building materials and natural resources

The regulations strongly encourage the use of renewable materials and prohibit the use of certain materials, such as PVC. For others, certain standards are imposed (for paint, wall coverings, carpeting, etc.). The developers are required to have the grey energy of the buildings assessed and to comply with a maximum threshold.



© Jean-Claude Forget - Mairie de Paris





A constant and rigorous monitoring of results

In defining the precise environmental regulations applied to every aspect of the project, Paris Batignolles Aménagement has also developed the corresponding tools for evaluation and taken steps to ensure that these objectives are achieved.

The contractual obligation of property developers

By purchasing a plot, the property developers agree to:

- → adhere to all of the environmental and sustainable development regulations appended;
- → for housing developments, obtain the Effinergie
 + label and the Habitat et Environnement
 Certification in the 'profile A' category under 'performance';
- → ensure expertise in sustainable development and High Environmental Quality within the project management team;
- → adhere to the low environmental-impact charter for building sites;
- → append a green contract to the renter's lease or the sale agreement.

Regular inspection of environmental performance

Checks to ensure the environmental standards are being met will be performed at every stage of the project, from the blueprint to its completion and then again one year later. These inspections enable the developers to make any necessary adjustments. A sum equivalent to 4% of the land priceis retained by the planning authority and returned to the developer in the final stages if all of these objectives have been met.

An up-to-date and global evaluation of the neighbourhood's carbon footprint

The pneumatic underground waste collection system and the urban heating network, along with the production of solar energy and the use of wind farms to power the park's irrigation pumps, all combined with the buildings' energy performance should produce a neutral carbon footprint of the future neighbourhood.

Feasibility studies carried out between 2008-2009 revealed the possibility of reducing CO2 emissions by more than 90% (excluding transport and grey energy, which are not taken into account in the simulation). In 2015, the proportion of completed buildings will be such that the model according to which calculations are made can be changed to factor in the emissions produced by the completed buildings.

Shared terraces on the roofs of the doctoral student housing. © Le Penhuel + Saison Menu + Sud Architectes



© Baumschlager Eberle + Scape



CLICHY-BATIGNOLLES 2015

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