

# In the heart of the Athletes Village















# Les Quinconces, an exceptional project

After four years of construction work, the Athletes Village in Saint-Ouen-sur-Seine has been unveiled! Initially intended to host athletes at the Paris 2024 Olympic and Paralympic Games, it will be converted into a real urban neighbourhood once the competition is over. Designed from the outset with its residents in mind, the Quinconces neighbourhood is firmly rooted in its surrounding area and connected to its environment. A showcase of the latest innovations implemented by Icade, Caisse des Dépôts and CDC Habitat, it embodies the best of French know-how in terms of sustainable innovation.

In 2019, Caisse des Dépôts, Icade and CDC Habitat, as part of the SCCV Quinconces consortium, were awarded the contract to build Block D of the Athletes Village in Saint-Ouen-sur-Seine.

With the common objective of making this neighbourhood an exemplar of the sustainable city, the consortium drew on the expertise of the Caisse des Dépôts Group, including that of Egis, the engineering consultant and construction manager for the office building. As far as architects are concerned, the consortium chose to bring together old and new firms to take on the project's urban and architectural challenges.

ger biodiversity, reuse—after four years of massive construction work, the 13 buildings have risen to the challenge of setting an example and embodying the best of the sustainable and inclusive city of the future.

**6** architects

8 cranes on site during peak construction

lifestyles of future generations.

An unprecedented project in terms of its environmental and

social ambitions, Les Quinconces was also completed in

half the time required for a conventional construction site.

It resulted from an exceptional collective effort designed to

create a vibrant neighbourhood adapted to the needs and

Accessibility, low-carbon construction, energy efficiency,

500 site workers at the peak of construction

LOCATION: Saint-Ouen-sur-Seine (Seine-Saint-Denis)

52,000 sq.m

of floor area

BUILDERS: SCCV Quinconces consortium (Icade, Caisse des Dépôts, CDC Habitat)

ARCHITECTS: uapS (lead architect), ECDM, Brenac & Gonzalez & Associés, Atelier Pascal Gontier, NP2F, Fagart & Fontana, TN+ (landscape architect)

13 buildings

buildings and

1 office building

incl. 12 residential

# Questions for... Florence Chahid-Nourai Behind the scenes of four years of construction



Florence Chahid-Nourai, Head of Major Residential Projects for the Paris region, Icade Promotion

\_\_\_\_\_ CAN YOU DESCRIBE THE PAST FOUR YEARS OF WORK ON THE ATHLETES VILLAGE PROJECT AND HOW DO YOU FEEL TODAY, A FEW DAYS AFTER HANDING OVER THE KEYS TO THE PARIS 2024 ORGANISING COMMITTEE?

Florence Chahid-Nourai: These four years have been very intense, enriching and extremely stimulating. I'm very proud today to have risen to this challenge with all the teams who took part, because for me this project is, above all, a collective success. The Athletes Village project is unique in a number of ways. First, of course, because of its historical dimension, since the Games were last held in Paris in 1924, exactly a century ago. So it's an opportunity that comes around once in a lifetime. This project is also unique in the very ambitious goals it set out to achieve in record time. But what I am most proud of is that we got it done on time with the expected level of quality and kept our promises without ever making concessions or compromising the initial project.

### WHAT WERE THE MAIN CHALLENGES YOU FACED AND HOW DID YOU OVERCOME THEM?

**F. C.-N.:** The main challenge was undoubtedly time, as the date of the Paris 2024 Olympic and Paralympic Games was set in stone. As such, the Athletes Village project had to be finished in a short period of time. Another major challenge was the construction method chosen for a project that was highly ambitious in terms of reducing its carbon footprint. We achieved a total of  $698 \text{ kg CO}_2/\text{sq.m}$  versus an initial target of  $740 \text{ kg CO}_2/\text{sq.m}$ . In particular, we built with 100% European-sourced wood, the majority of which from France, and had to overcome a number of technical challenges to achieve this. With regard to the project's convertibility, the post-and-beam construction method made it possible from the outset to provide flexibility in adapting the interior layouts of the residential buildings

over time and even more so for the office building, which will initially house the athletes' sleeping quarters. The complex will eventually feature a mix of housing types including owner-occupier units and providing a neighbourhood for all. For a project like the Athletes Village, it is, above all, essential to be successful in bringing the teams together to involve and unite them around a common goal. You also have to be able to remain clear-headed and calm in all circumstances, keep things in perspective and manage the pressure, which is particularly important in a flagship project like this. You ultimately need to be available, present and responsive at all times to stay focused and quickly find solutions to the inevitable unforeseen events that arise along the way.

## \_\_\_\_\_ IS THERE A STORY YOU COULD SHARE ABOUT THE CONSTRUCTION?

**F. C.-N.:** Four years in the making, there are a lot of stories I could tell! I'm thinking in particular of the day when I first showed the façade prototypes to Nicolas Ferrand, CEO of SOLIDEO. I was very proud of the technique to be used which consisted of laying bricks and ceramics one by one, but he initially reacted with incredulity, given the deadlines involved. More determined than ever to rise to the challenge, we never wavered from this choice of quality and finally won the day!

#### "THIS PROJECT EMBODIES ALL THE VALUES THE GROUP STANDS FOR, VALUES THAT ARE ALREADY REFLECTED IN OTHER PROJECTS."

WHAT DO YOU TAKE AWAY FROM THIS EXPERIENCE?
HOW DO YOU THINK IT WILL INFLUENCE YOUR FUTURE PROJECTS?

F. C.-N.: What I've learned from this unique experience is that it's entirely possible to carry out beautiful, ambitious projects in France in a very short space of time. When all the participants are united around a common goal and you have no choice but to succeed, then everyone rolls up their sleeves and solutions are always found! From a more personal point of view, this is a project that will mark a "before" and "after" in my life. It's been four years full of adventures that have profoundly transformed and enriched my professional life, in the same way that they have enriched Icade and the Caisse des Dépôts Group. As a true showcase for the city of tomorrow, the Athletes Village project embodies all the values the Group stands for, values that are already reflected in other projects. ■



Video









#### **CONVERTIBILITY**

The Quinconces project is divided into two phases: the first aims to create temporary accommodation for Olympic and Paralympic athletes and the second will result in a permanent urban neighbourhood. From the outset, the buildings have been designed to facilitate this transformation, with modular spaces and flexibility of use. This approach was made possible through a special building permit, created specifically for the Paris 2024 Olympic and Paralympic Games, allowing the competent authority to authorise, in a single decision, the project's initial development and future conversion.

The concept of convertibility applies to a number of elements of the accommodation to enable the transition between the two phases of the project, namely demountable partitions, absence of kitchen facilities during the Paris 2024 Olympic and Paralympic Games, converting temporary bathrooms, replacing carpet with wood floors, etc.

Making the site's future conversion a major goal right from the design phase has enabled us to imagine a city that meets current needs and strengthens its resilience in the face of future changes. •

#### ARCHITECTURAL PROJECT



Quinconces project takes account of global warming and incorpoing system: homes and offices are connected to a geothermal power rates the specific characteristics of the site, i.e. a steep slope with station that circulates hot water in winter and cool water in summer the Seine river in view.

The staggered layout of the buildings, their dual-aspect apartments, the difference in height between them and the balconies on the and ideal orientation in winter.

Designed based on the principles of bioclimatic construction, the This bioclimatic design extends to the underfloor heating and cool-(up to a 6°C difference with outside temperatures), for optimum liv-

Inside, thermal comfort is enhanced by the timber-framed façade, façades that act as sunshades all provide cooling breezes in summer as well as by solar panels on the outside and large windows for natural ventilation.

#### **MATERIALS REUSE**



Materials reuse, i.e. the reuse of materials during construction and the second life of materials after construction, has enabled the Athletes Village's carbon footprint to be drastically reduced. Following the Games, materials used for interior elements, such as temporary partitions, carpeting and paint, will be reused. Outdoor reuse initiatives include the use of ceramic scrap to create gabion walls and the recovery of wood from northern Europe (Netherlands) to make outdoor furniture.

While the reuse of building materials poses many challenges, not least because of the expense involved in removing, cleaning, repackaging, storing and transporting small quantities, Les Quinconces proves that it is possible to do things differently.

By honouring this major commitment, the project is paving the way for more responsible and environmentally friendly construction.

#### SUSTAINABLE CONSTRUCTION

The Quinconces project has set itself the target of reducing its carbon footprint by 50% compared with a conventional project, both during the construction and operating phases, and of recycling half of all building materials.

To achieve this, the teams made extensive use of wood (traced and sourced 100%) from sustainably managed, PEFC- or FSC-certified forests), low-carbon concrete (whose carbon footprint can be reduced by almost 70% compared with traditional concrete) and bio-based materials.

100%

of non-load bearing timber-frame facades

-50%

Carbon footprint half that of a conventional project 10%

of materials in terms of weight are reused materials

**75%** 

of electricity consumption

from renewable energy

thanks to photovoltaic panels

on five residential buildings

of materials used during the Paris 2024 Olympics (carpeting, partitions, etc.) will be reused after the event

698 kg CO<sub>2</sub>/sq.m

Emissions per sq.m of floor area (SOLIDEO's objective: 740 kg CO<sub>2</sub>/sq.m)

for more environmentally friendly construction sites. A veritable open-air laboratory for new construction methods, the Quinconces project removed an unprecedented number of constraints in record time, particularly on the use of wood, thereby changing the legal framework so that sustainable construction becomes the new norm.

Through this project, Icade also aims to change regulations to pave the way

#### MAJOR INNOVATIONS

#### Three questions for... David Bruchon, National Technical & CSR Director at Icade Promotion

#### WHAT IS THE PURPOSE OF AN ATEX (TECHNICAL EXPERIMENTATION ASSESSMENT)?

An ATEx plays an essential role when it comes to innovation in the real estate sector, where all innovation is constrained by two major factors, namely regulatory compliance and the ten-year warranty covering structural defects. These technical reports are produced based on the building plans and assessed by the French Scientific and Technical Centre for Building (CSTB). They enable innovative practices to be recognised by insurance companies as commonly accepted practices and, as such, to be covered under the ten-year warranty.

#### WHAT ROLE DID ATEX PLAY IN THE CONSTRUCTION OF THE ATHLETES VILLAGE?

The five ATEx developed by Icade as part of the particularly innovative

construction of the Athletes Village project have made it possible, in particular, to push the limits of cladding installed on timber-framed facades and to create walk-in showers on wooden floors, an essential technical solution for the universal design of the housing available on the site.

#### BEYOND THAT, HOW DO THEY BENEFIT THE INDUSTRY AS A WHOLE?

The implementation of ATEx requires the involvement of an entire ecosystem (inspectors, manufacturers, insurers, etc.) and, beyond the project for which they have been developed, enables practices to evolve and new standards to be established for the sector. This work is a real innovation accelerator for the entire supply chain, particularly as an essential driver for large-scale low-carbon construction.



#### THE "CYCLE" BUILDING



A showcase for innovative practices in resource management and zero waste, the Cycle building aims to reduce its environmental impact of buildings and make significant progress in managing waste and water. Its goals include recycling 90% of wastewater and reducing potable water consumption by 60%.

The innovations implemented to achieve this include a water filtration system installed in the basement of the building to feed water to the flushing and watering systems, the installation of a 5,000-litre tank to collect urine before it is treated and recycled for agricultural use as well as facilities to transform faecal matter into compost and recycle all the bio-waste from Block D into compost. This sets an example for the buildings of the future!

A dedicated area on the ground floor called "Ecolab" will showcase innovations in the building and the neighbourhood at large. This local meeting place aims to raise awareness and educate residents about sustainable development, ecology and solidarity.



#### **BIODIVERSITY**

The Quinconces site is located in a dense and constrained urban environment, adjacent to the precious ecological habitats of the banks of the Seine and close to protected natural parks. It has provided for measures that make the neighbourhood an integral part of its surrounding area and preserve the diversity of local fauna and flora.

Native plant species from the Paris Basin and shaded woods at the river's edge, melliferous meadows that attract pollinating insects, shelters and nesting boxes that support small fauna, measures to minimise the negative impact of artificial lighting...

preserving biodiversity is at the heart of the Quinconces neighbourhood's design.

A 3,000-sq.m "fresh forest" is located at its centre. This island of greenery deliberately retains a "wild" appearance and allows the vegetation to grow freely just like in the woods in the Paris region. It provides shade, improves air quality and effectively combats the heat island effect. All rainwater from the roofs is channelled above ground to a wetland below, creating an environment that is particularly rich in biodiversity.

#### LANDSCAPE DESIGN





project's landscape design is helping to create a healthier, more sustainable urban environment that is particularly resilient in the face of urban forest current and future environmental challenges.

Inspired by the plant groupings along the banks of the Seine, a real fragment of a Parisian forest has been recreated. The 30-metre-long strip of trees that stretches between the buildings provides light shade and a feeling of coolness all year round, while the vegetation improves air quality by absorbing CO<sub>2</sub> and fine particles.

As for plant species, the landscape designers have mainly opted for species that can adapt to global warming, such as rowan, Turkey oak, quaking aspen, bird cherry and birch. These species have

By incorporating biodiversity, the Quinconces relatively light foliage that lets the light through. Reinforcing the intrinsic link between architecture and biodiversity, the garden extends into the spaces between the buildings, while the green roofs maintain ecological continuity for birdlife, particularly migratory species.





#### ARTISTIC INITIATIVES

As part of the Courants Fertiles art initiative that covers the entire Village, initiated by SOLIDEO and awarded the Cultural Olympiad label by Paris 2024, the artwork "Le jardin des mâts" ("The art pole garden"), erected in the Quinconces area of the Athletes Village, was designed by the artist Jan Kopp.

The coloured poles mark out the forest and are both directional indicators and local landmarks. Jan Kopp was inspired by three images, namely the maypoles from the Bavarian forests, the mooring posts of Venice to which the gondolas are tied, and the various bars used in competitions that reflect the Olympics (vaulting poles, horse hurdles, javelins). Beyond their symbolic meaning, the art poles also showcase the surrounding area as they are made from reused materials sourced from local businesses. The artist sought out local craftsmen and businesses to collect surplus materials (plastics, glass, soil, various objects) and melt them into cylinder-like shapes.

> "I think the role of the artist is always to take up the challenge of making the spaces we all share more magical."

> > Jan Kopp, artist









#### LIVING IN "LES QUINCONCES"

Starting in 2026, the Athletes Village will be transformed to offer its residents an exceptional living environment. The CDC Group will retain ownership of an office building and the active ground floors which will feature not only local shops and a restaurant but also areas open to the public.

One of the neighbourhood's landmarks will be Ecolab, located at the base of the Cycle building. This local meeting place is designed to raise residents' awareness of the issues surrounding the ecological transition and support them in changing their practices as regards sorting and recycling waste, food, water management, etc.

The ground floors will also feature activities promoting sport for all through the Social Sport Club. Its objective? To combine social cohesion and sports by accommodating sporting and cultural activities and providing a range of tailored food services.

Lastly, Les Gradins, a 9,000-sq.m office building meeting the highest environmental standards, is located at the far end of the neighbourhood. It will feature attractive workspaces adapted to the new collaborative and flexible ways of working.

3,400 sq.m

Social Sport Club 1

of space open to the public

**Ecolab** 



#### MIX OF HOUSING TYPES

In order to meet the needs of all the people who will be housed there, diversity has been made central to the design of the Quinconces

First and foremost, it includes a mix of housing types, with highquality social and intermediate housing rental units, a residence for

social housing residence intended primarily for people with disabilities (Adoma)

people with disabilities and a 149-room student residence.

There is also a mix of functions, with shops, amenities and offices in addition to residential buildings. The aim? To help to make this neighbourhood a balanced, inclusive part of the city open to all, thereby strengthening social cohesion.

student residence with 149 rooms

**UNIVERSAL DESIGN** 



The Quinconces project represented a major opportunity to reinvent the city in terms of accessibility, by making this neighbourhood a showcase for the accessible city of 2050.

To achieve 100% accessible housing, the residential units have been designed and laid out to be suitable for people with disabilities, with generous door widths and corridors and at least one bedroom and bathroom per apartment that meet standards for people with limited mobility. The common areas are also fully accessible, thanks in particular to paint choices designed to accentuate colour contrasts. These requirements also apply to the outdoors, with pathways in the heart of the forest designed to be accessible, tactile paving, contrasting materials and suitable slopes. Street furniture is also designed to be inclusive, with wheelchair-friendly benches, etc.

Lastly, a social housing residence for people with disabilities has also been planned. Managed by Adoma, it will consist of fully adapted housing to make daily life easier for residents. •

# **Sports sponsorships and patronage**

Three questions for... Prithika Pavade A French table tennis player on track for the Olympics



AFTER YOUR FIRST GAMES IN TOKYO AT THE AGE OF 17, HOW DO YOU FEEL ABOUT THE PARIS 2024 OLYMPICS?

**Prithika Pavade:** The French team for the upcoming Paris 2024 Olympic and Paralympic Games will be officially announced

in May or June. Given my results and my current world ranking (32<sup>nd</sup>, my personal best), I'm very confident about my selec- YOU? tion and hopeful of performing well during the Games!

HOW ARE THE OLYMPIC AND PARALYMPIC GAMES DIFFERENT FROM ANY OTHER SPORTING COMPETITIONS YOU'VE PARTICIPATED IN?

P. P.: For all top athletes, it's a dream to take part in the Olympic and Paralympic Games, the world's biggest sporting event. The fact that they are taking place in Paris is a great source of motivation for me and an opportunity to perform in my own country with the support of my family, my club, my partners, the fans... It's also the culmination of "Generation 2024"—a project at the World Junior Championships and launched by my club in June 2015 that has qualified for the Olympic Games in Tokyo. followed athletes during their preparation I now have the drive and potential to confor the Olympics—in which I was involved from the outset.

WHAT DOES THE SUPPORT OF ICADE, YOUR SPONSOR SINCE 2018, MEAN TO

P. P.: The support Icade has given me and my club since 2018 has enabled me to have access to top-level training facilities and training and take part in a number

#### "ICADE'S SUPPORT HELPED ME TO REACH THE **VERY HIGHEST LEVEL."**

of international competitions, helping me to reach the very highest level. At just 19, I've already won 12 French championships, 7 European titles, 2 silver medals tinue to improve and win medals at world level!



#### Pauline Déroulède A wheelchair tennis athlete and French hopeful for the next Games

Since July 2023, Icade has sponsored Pauline Déroulède, a wheelchair tennis athlete and French hopeful for the next Paralympic Games. Having lost one of her legs following an accident in 2018, Pauline Déroulède's exemplary courage, determination and talent have since enabled her to rise to the top of her discipline both in France and internationally. In 2023, she became the French wheelchair tennis champion for the third consecutive year and reached her highest world ranking (No. 13) that same year when she finished semi-finalist in doubles and quarter-finalist in singles at Roland-Garros. This partnership reflects shared values, namely the desire to push past one's limits and succeed. It also highlights Icade's commitment to promoting greater inclusion of people with disabilities, both inside the Company, through its hiring practices and the support shown to its employees, and outside the Company, through its initiatives.

#### **ICADE, PATRON OF ARCHI-FOLIES 2024:** A UNIQUE ENCOUNTER BETWEEN **SPORT AND ARCHITECTURE**

Icade is a patron of Archi-Folies 2024 for the pavilions of Olympic sports federations in the site's French section. This project bearing the Cultural Olympiad label is also supported by Caisse des Dépôts.

Archi-Folies 2024 has asked 20 national schools of architecture to design 20 pop-up pavilions, each dedicated to a sports federation for the promotion of its sport. These pavilions will be set up in Parc de la Villette in Paris during the Olympic and Paralympic Games.

Each school had to design and build a pavilion that met both environmental challenges and the needs of its Olympic federation. It was a rare opportunity for architecture students to put into practice a new construction culture in line with the ecological transition.

In September 2024, it was decided that the pavilions would continue to be used after the Games by the federations wishing to do so or by local partners.