

Horizon Nature

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Building Type : Collective housing < 50m
Construction Year :
Delivery year : 2023
Address 1 - street : 144 Avenue Thibaud de Champagne 77144 MONTÉVRAIN, France
Climate zone : [Cfb] Marine Mild Winter, warm summer, no dry season.

Net Floor Area : 5 095 m² SHON RT
Construction/refurbishment cost : 22 519 900 €
Number of Dwelling : 75 Dwelling
Cost/m2 : 4420 €/m²

General information

The "Horizon Nature" project consists in the construction of **67 intermediary and collective housing units** and **8 individual houses** for a total of 75 housing units in the town of Montévrain, in **a natural, green and preserved setting**, near the banks of the Marne.

The developer ImmoBel has opted for **a Global Quality approach** in order to deliver a perfectly executed project. At the same time, the desire to minimise the environmental impact of the operation was integrated at each stage. CSR support provided by Velux made it possible to deliver sustainable housing, while taking into account the future experience of residents.

Comfortable accommodation

The comfort of the occupants has been considered on several aspects. On a visual level, **the provision of natural light was maximised**, in particular through an atypical system of Velux skydomes installed in certain buildings. These domes can also be used for ventilation during heatwave periods. For the windows, solar protection protects against high heat.

Comfort of use is another aspect that has been integrated into the approach. Various services such as connected parcel boxes are offered to buyers, for better management of their home and better ergonomics.

The search for energy savings

With a view to reducing the environmental impact of the whole, **the Primary Energy Coefficient of the housing is 20 to 30% lower than the thresholds of the 2012 French thermal regulations**. The building envelope is reinforced through the use of insulating terracotta load-bearing bricks, a material with lower emissions than concrete.

Heating and domestic hot water are provided by **individual micro-storage gas boilers** for collective housing. The first year of maintenance of these boilers is covered by the Project Owner, for better maintenance. The eight suburban houses are also equipped **with self-consumption photovoltaic panels**. Support by GRDF resulted in an agreement with a local farmer developing a biomethane plant, with the aim of **injecting this green gas into the project network**. In addition, remote control systems for the equipment make it possible to reduce energy consumption.

The injection of biogas into the network demonstrates our efforts to contribute to the emergence of a new generation of cleaner, more virtuous, more qualitative housing: the operation was therefore a real laboratory of tests and innovations!

Yves Eveillard, Residential Technical Director at IMMOBEL

Finally, soft mobility is encouraged by **the provision of electric charging stations** for visitors.

A respected natural setting

From the first phases of the operation, the watchword was **to adapt the project to its environment** rather than the opposite. For example, the sloping nature of the land was respected, which made it possible to limit pollution linked to earthworks and embankments.

The plantations have been densified and the species carefully selected so as to favor local species. This vegetation will serve as refuge areas for local wildlife, while creating islands of freshness. Insect hotels, bird nest boxes and even bat roosts placed in different locations throughout the operation help **promote** biodiversity.

A green construction site approach

The integration of sustainable development was also done during the construction works. Various measures have made it possible to reduce nuisance and energy consumption, such as **the use of hybrid mechanical machines for earthworks**. In addition, **the choice of local companies for the works** - six of them are located less than 15 kilometers from Montévrain - has significantly reduced travel requirements.

To **raise buyers' awareness of biodiversity preservation issues**, educational workshops were organised and beehives were installed during the construction phase. The honey produced was even offered to them! Visits to the biomethanization plant are also planned for the future.

See more details about this project

<https://www.grdf.fr/entreprises/grdf-et-vous-au-quotidien/actualites/pyramides-grand-public-2021-gagnants/montevrain-horizon-nature-immobel-montevrain-77>

Photo credit

IMMOBEM

Stakeholders

Contractor

Name : IMMOBEL

Contact : Yves EVEILLARD

<https://www.immobelfrance.com/>

Construction Manager

Name : Agence Laurent FOURNET Architectes

Contact : Laurent FOURNET, laurent.fournet[at]agencefournet.fr - 01 64 02 13 69

Stakeholders

Function : Other consultancy agency

P.Cé TECH

contact[at]pcetech.fr - 01 45 11 76 01

<https://www.pcetech.fr/>

Fluid consulting

Function : Company

GRDF

<https://www.grdf.fr/>

Biogas injection into the network

Function : Company

VELUX

<https://www.velux.fr/>

CSR support

Type of market

Not applicable

Allocation of works contracts

Separate batches

Energy

Energy consumption

Primary energy need : 48,90 kWh/m².an

Primary energy need for standard building : 71,40 kWh/m².an

Calculation method : RT 2012

Envelope performance

Air Tightness Value : 0,80

Renewables & systems

Systems

Heating system :

- Individual gas boiler

Hot water system :

- Individual gas boiler

Cooling system :

- No cooling system

Ventilation system :

- Humidity sensitive Air Handling Unit (Hygro B)

Renewable systems :

- Solar photovoltaic

Environment

Biodiversity approach

Habitats for local fauna, widely present due to the proximity of the forest, have been provided between the buildings:

- Insect hotels,
- Birdhouses,
- Bat roosts.

Educational workshops helped raise residents' awareness of this equipment and their proper management!

Urban environment

Green space : 4 426,00

An 11-minute walk from the city centre, this pleasant neighbourhood offers a green living environment, on the edge of the Chigny woods.

Materials, landscaping and architectural lines have been designed so that the real estate complex respects and integrates into this rural setting.

Products

Product

Biomethane

GRDF

<https://projet-methanisation.grdf.fr/>

Product category : Génie climatique, électricité / Chauffage, eau chaude

Methanization is a natural biological process of degradation of animal or plant organic matter in the absence of oxygen (anaerobic), thanks to the action of multiple micro-organisms. It occurs naturally in certain environments such as marshes or can be implemented voluntarily in dedicated facilities.

Methanization produces two kinds of components:

- Biomethane which is injected into networks to satisfy industrial (heat), domestic (heating, domestic hot water, cooking) or fuel (BioNGV) uses;
- Digestate which can be used as fertilizer or as an organic amendment.

Roof cupola

VELUX

<https://www.velux.fr/produits/fenêtres-toit-plat/fenetre-coupole>

Product category : Second œuvre / Menuiseries extérieures

With its classic dome shape, the dome flat roof window ensures easy drainage of rainwater and dirt. It is perfectly suited to public buildings and residential rooms:

- Very good thermal insulation properties;
- Reduced rain noise thanks to integrated insulating glazing;
- Combinable with protection against heat and sun.

Costs

Construction and exploitation costs

Total cost of the building :22 519 900 €

Health and comfort

Water management

Individual houses are equipped with rainwater collectors.

Comfort

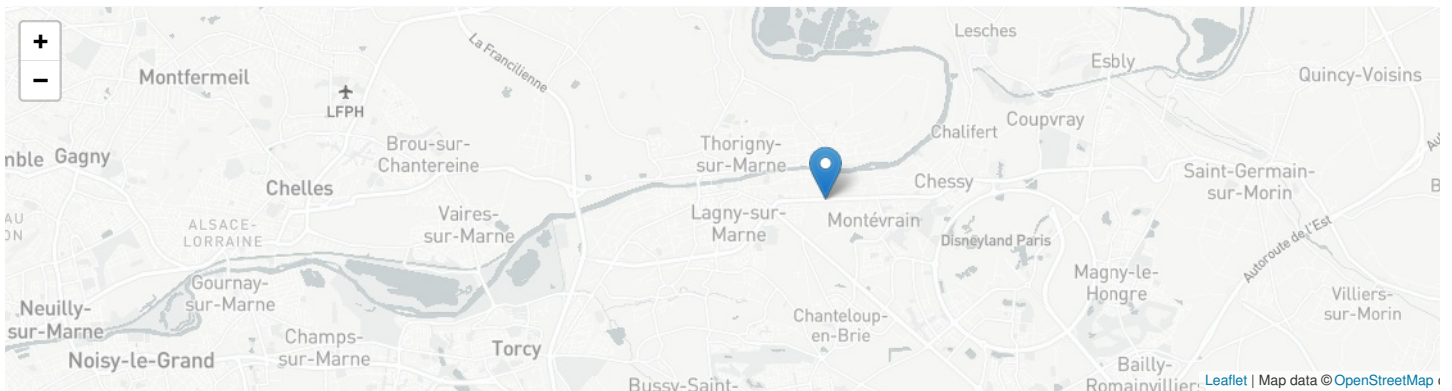
Health & comfort :

The living rooms are light-bathed and extended by beautiful private outdoor spaces which invite you to enjoy special moments.

Eight large houses benefit from private gardens of up to 700 m² and overlooking a protected wooded area.

Summer comfort : the bays of sleeping rooms and category CE1 are equipped with mobile solar protection, and the solar factor of the bays is less than or equal to the solar factor specified in the order table.

Contest



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