For the town of St Nolff, a rural town in the first ring of Vannes in the Morbihan, land pressure has greatly increased with its attractiveness and elected officials, challenged to lead sustainable development, have decided to build an exemplary eco-district in economic, social and environmental impact control.

The project, immediately baptized "Ecocity" is therefore oriented towards a high density (for the region) so that particular work has been carried out on the
morphology of the district and the building lots to find vernacular urban forms combining density, intimacy and quality of life.

In addition, a clear will of the community was to give priority to soft travel ("leave the car at the door of the neighborhood").

Today, the inhabitants and the natural environment that welcomes them are organized in symbiosis and all have the necessary space to flourish.

Programme

- Housing
- Public facilities and infrastructure
- Public spaces
- Green spaces

Project progress

- Operational phase

Procedure type

- Urban développement permit

Approaches used

- Ecodistrict national label
- Agenda 21

Certifications

- Ecocité

Photo credit

plans provided by SEM AEDM (photos Marie Lanson)

TERRITORY

Type of territory

Brittany is experiencing continuous economic and demographic growth in its last years. If this dynamism is positive, it is also synonymous with new requirements and has definite land implications. All the more so since there is a national phenomenon of household loosening which also contributes to increasing urban pressure.

As a result, artificialized surfaces are progressing very rapidly in Brittany: they have doubled in 20 years. Almost 4,000 ha were thus used each year for urban growth between 1985 and 2005, i.e. the equivalent of the urbanized area of Rennes. With job creation twice the French average and a population growing by 1.1% per year, the Morbihan department is particularly affected by these issues. The needs of the department are 7,800 housing units per year (including 1,200 social housing units).

The challenge for the municipalities is to control the development of their territory.

The town of Saint-Nolff is located in the first ring of Vannes (ten kilometers) and near the Gulf of Morbihan. This town of just under 4,000 inhabitants covers 26 km² and offers a peri-urban living environment in the countryside. The village, nestled at the bottom of the Condat valley, offers all services and local shops. Community life contributes to its dynamism.

The city is subject to a sprawl of space and strong land pressure. Since 1997, Saint-Nolff has been committed to using natural resources in a reasoned manner and to implementing a policy of sustainable and inclusive development, in particular during the revision of its PLU. In this logic, the municipality has been committed since 2005 to an Agenda 21 approach, the backbone of all the municipality’s projects on land, local activities, urban development...

It is in this context that the ecocity of Le Pré Vert was imagined and conceived, intended as an innovative living space with a reduced ecological footprint.

Climate zone
Marine Cool Winter & summer- Mild with no dry season.

**KEY FIGURES**

**Number of residential units**
Number of residential units : 130

**Number of social housing units**
Number of social housing units : 35

**GOVERNANCE**

**Project holder**

Name : AEDM  
Type : Para-public owner)  
General description :  
At the beginning of 2007, an opportunity allowed the town to acquire agricultural land of 5.7 ha, located in the northern sector of the town of Saint-Nolff, served by the RD 182.

She decided to set up her “ecocity” project there and on October 25, 2007, the municipal council adopted the initiation of the procedure and studies relating to the creation of the ZAC of the city of Pré Vert, through consultation. public.

The preliminary studies for the creation file are then entrusted to the semi-public company EADM: created in 2005, this departmental SEM has the Caisse des Dépots and local banks as private shareholders. The community of St Nolff is one of its public partners and its mayor sits on the board of directors, as general councillor of the canton.

In July 2008, following the consultation to allocate the implementation phase of the operation, development, SEM EADM was selected as the concessionaire, then in March 2009, the implementation file and the program of public facilities being approved by the Municipal Council, the ZAC went into operational phase.

The project management of the servicing works is provided by the companies ATELIER AR'TOPIA and TEM under co-contracting.

The operation is broken down into three sections of unequal importance both in their respective operational perimeter and in the number of homes built. The third tranche was redistributed in 2014 in order to maintain a balance between the investments made by EADM and the demand for building lots.

In June 2020, almost all of the lots had been sold (only 3 lots remained available).

**Project management**

Description :  
Project management was carried out by AEDM (carrier).

**Project stakeholders**

AEDM

Function : Developer

**QUALITY OF LIFE**

**Quality of life / density**

The Ecocity project is geared towards high **density** for the region (23 dwellings per hectare) so that particular work has been carried out on the morphology of the district to find urban forms combining density, privacy and quality of life.

The result is a ground plan where the shape and size of the plots are voluntarily variable and random: **irregularity, offsets and diversity** are sought.

The district is organized like a village, with a continuity of terraced houses and narrow alleys. The groves and large green spaces provide a peaceful aspect to the neighborhood.
Social diversity

Rather than a succession of operations by "blocks of operations", the project offers a social mix and project owner to the plot. Consultation and support for future buyers are a strong point of the project.

The distribution of accommodation is as follows:

- 55% of free lots, including around fifteen plots reserved for first-time buyers
- 10 to 15% of housing open to developers and investors
- 7% of social housing, in rental home ownership
- 23% social housing

Social housing is spread over all the plots. Their constructions were carried out by the OPH Bretagne Sud Habitat (7 housing units) and the ESH Armorique Habitats (9 housing units) and Aiguillon construction (16 housing units).

All the plots are accessible to people with reduced mobility, which makes it possible to accommodate people with disabilities and to be compatible with the future needs (linked to aging) of current occupants.

*Today, the objective of social and intergenerational diversity has been achieved, with peaceful cohabitation.*

## ECONOMIC DEVELOPMENT

## TRANSPORT

### Mobility strategy

One of the central points in the reflection of the project concerned mobility, with a clear desire to give priority to soft journeys.

To *“leave the car at the neighborhood door”*, shared parking lots have been distributed around the outskirts.

The heart of the district is thus a peaceful space where movements are mainly made on foot.

**Shared car parks** are planted and hidden on the outskirts of the area and located a maximum of 60 meters from any building. There are a total of 1.8 parking spaces / accommodation.

The car parks have been made of standard materials, those based on earth / stone deteriorating with very frequent use. The use of electric vehicles is encouraged by the presence of shared terminals on these parking areas.

A network of alleys, alleys and paths then serves the district:

- The few narrow streets are mixed (pedestrians & cars);
- The alleys are also suitable for vehicles but can only be used in exceptional circumstances (moving, rescue, work);
- The paths are pedestrian only.

In all cases the plots are accessible to people with reduced mobility.

A pedestrian alley leads to the town center located 700 meters away and which brings together public facilities (schools, town hall, post office, sports, cultural facilities, etc.), shops and local services.

Twelve round trips by bus, running every hour, are provided between the town and the center of Vannes, providing an alternative to the car for trips in built-up areas.

The grounds are all located within 300 meters of a bus stop.

## SOLUTIONS

### Calm heart

- Security
- Soft transportation
- Parking management

## RESOURCES

### Water management

While anchoring to the natural terrain facilitates water management, the program paid particular attention to this issue:

- The roads have been limited in order to reduce waterproofing to a minimum;
Drains and storing and infiltrating ditches collect road water (with plants treating hydrocarbons / zero harmful phytosanitary treatment);
- Roof water is collected for domestic use (garden, washing, sanitation) and tanks have been installed in vegetable gardens;
- The lower part of the land is not urbanized in order to maintain a gravity descent, without a lifting station.

**Waste management**

The collection points are grouped together at the entrance to the parking areas and integrated into the plantations. A space is reserved for the collective composting of plants.

**SOLUTIONS**

Example of valley, for water management

- Water management
- Waste management

**BIODIVERSITY**

**Biodiversity and natural areas**

The creation of ecocity is part of the will of the community to "build and develop with the concern of preserving social and environmental balances". Since the ZAC is located on agricultural land surrounded by natural fringes, particular attention has been paid to the preservation of the biodiversity they shelter.

The following developments illustrate the actions carried out to leave a central place to a natural environment that promotes the protection of biodiversity.

- The hedges, plant fences and bocage slopes which surround the architecture;
- Vegetable gardens;
- Shared wooded areas;
- The pedestrian path which leads to the town center and which is part of the ecological corridors to preserve the local fauna (insects, reptiles, rodents, hedgehogs, game ...);
- The development of a green corridor to connect the Kerloc valley;

Today, nature is omnipresent in the ecocity and invites itself in little domesticated forms to every corner of the plot or alley, to the delight of the inhabitants.

**SOLUTIONS**

Route of the future green corridor

- Management of natural areas

**ENERGY/CLIMATE**

**Climate adaptation, resources conservation, GHG emissions**

See Mobility and Resources

**Energy sobriety**

Whether built by landlords or individuals, the energy balance required for houses is the BBC standard, which implies a consumption target of less than 50 KWh/m²/year, including heating, domestic hot water, ventilation, lighting.

The positioning of the ZAC land has definite advantages in achieving this objective, in particular by the amount of sunshine available to it.

The houses were also designed according to a bioclimatic architecture:

- South orientation;
- Calculated drop shadow;
- Joint ownership;
- Limited opening to the north;
- Deciduous vegetation in the South, East and West;
- Structural sun shades of the facade (eaves, projections, balconies, etc.);
- Mobile sun shades (exterior or interior blinds);
- Interior ventilation system;
Energy efficiency of buildings.

Energy mix

The developer had the district connected to the gas and electricity networks. The installation with a heating network was considered irrelevant for supplying low-consumption houses.

The heating system is left to the choice of the manufacturer:
- Donors have opted for electric or gas solutions;
- Individuals have most often opted for pellet stoves.

SOLUTIONS

Example of BBC social housing

Renewable energies

BUILDINGS

Buildings

The district is organized like a village, with a continuity of terraced houses and narrow alleys. The objective of the community is thus to propose an urban development confined to the borough, which is coherent, balanced and harmonious for a preserved quality of life.

Most of the accommodations are designed as village houses with a small garden: the plots are stretched out and the homes overlook the alleys while the gardens face south. The collectives in "R + 1 + C" look like houses.

The architectural freedom is left to the taste of the purchaser while respecting a harmony and a general coherence. In return for an average price lower than the prices observed in the municipality, the effort required from future buyers is to build a high-performance housing BBC.

Contest

Reasons for participating in the competition(s)

L'écocité du pré vert est un bel exemple d'écocité : précurseur à son lancement, il reste très adapté aux problématiques d'actualité, comme le vieillissement de la population et la résilience climatique, mais aussi la crise sanitaire.

Ses principales forces sont son caractère paisible et sa proximité avec la nature : dans un contexte où le télétravail se généralise, la possibilité de pouvoir profiter d'un tel cadre lors d'une courte pause est un privilège !

Il s'inscrit complètement dans les objectifs de transition énergétique avec ses bâtiments basse-consommation et son approche « road diet ». Plus encore, le succès de ce programme auprès des 130 familles qui s'y sont installées démontre l'attractivité de parcelles de petites tailles, qui permettent de limiter l'étalement urbain. Cette démarche est d'autant plus vertueuse qu'elle a contribué au faible prix des parcelles et donc à développer une mosaïque sociale dans un quartier recherché.

Tous ceux et celles qui ont participé à ce sujet (notamment les nombreux particuliers qui ont construit leurs maisons en BBC) sont sortis grands de cette belle expérience.

Building candidate in the category