




## Pedagogical Garden in Villiers-en-Bière - Ekodev Carrefour Accompaniment

by [Laetitia LEGER](#) /  2017-07-17 10:42:03 / France /  5129 /  FR



### Builder

Carrefour Property

**Year of commitment** : 2017

**Green energies** : Other

**Digital services** : Waste, Resilience

**Sustainable mobility** : Roads, Accessibility

**Water cycle** : Collection, Prevention, Protection

**Circular economy and waste management** : Preservation of natural heritage, Optimization of resources, Save of resources, Organic recycling, Composting bin

**Biodiversity & Ecosystems** : / Urban Farming, Roof Agriculture, Shared garden , Green roof, Green and blue corridor, Air recycling, Other, Environment education, Ecosystems preservation /

### GENERAL INFORMATION

Begun at the end of 2015, this Carrefour support project aimed to define the interactions between the Villiers-en-Bière site and local biodiversity, the priority actions

**From this study, we have been able to define priority actions and "reflections" on their integration (territorial anchoring).** An audit on biodiversity issues was therefore conducted, highlighting various issues: monoculture plots in the surrounding areas involved in groundwater pollution but also several natural areas

of floristic and faunistic interest (type I and II), like the Gâtinais Park and the forest of Fontainebleau. The local biodiversity challenges were therefore strong and we have with Carrefour set up numerous actions whose objectives were:

- Work on agroecology in an innovative and educational way
- Integrate local stakeholders: the Bougainvilliers agricultural school, the Villiers-en-Bière district, ...
- Federate stakeholders: employees and customers
- Experimenting with new farming practices: ultra-short circuit, seasonal, ...
- Valuing heritage: parking rehabilitated!

Thus, the most ambitious action addressing some of these issues was the setting up of an above-ground pedagogical kitchen garden, inspired by responsible farming techniques (agroecology and permaculture). In addition, this project has replaced 1200m<sup>2</sup> of parking space with local biodiversity and its challenges, despite many technical brakes.

Part of the car park has been transformed into a pedagogical garden to share these benefits. Here is a presentation of the project in a few key figures:

- **1200m<sup>2</sup>** of parking have been rehabilitated on the terrace. Strong technical constraints have pushed our teams to innovate in terms of building materials and substrates used for agriculture above ground (mycelialized coffee grounds as a contribution of organic matter).
- **400m<sup>2</sup> of flowering meadow**, fallow with wet zone to favor the local wildflowers and to attract avifauna (birds) and various families of insects thanks to the varieties melliferous and nectariferous to ensure the pollination of the vegetable garden and the predation of the pests.
- **150m<sup>2</sup> of vegetable pans**, hundreds of edible varieties: imitating natural associations (agroecology) to allow better growth (mutual aid companion plants), better soil fertilization (water storage and nutrient maintenance in it) while fighting without any chemicals against pests.
- **2 composting platforms**: to transform waste created on site
- **1 relaxation area with pergolas** bringing shade thanks to climbing plants: to welcome visitors and allow them to enjoy the shade thanks to kiwis (actinidia), vines, passiflores, ...
- Dozens of artificial facilities promoting biodiversity on site and adapted to the local species to be protected as a priority: bird houses (blackbird, woodpecker, various species of passerines), butterfly house, nest box with wild pollinators (horned osmia, megachiles, ...), hotel with insects (hoverflies, carabids, ...) shelter with bat (species of noctules and rhinolophes), pond, pierced logs, ...
- **4 workshops with families** (customers and store employees) to learn the basics of agroecology and plant and sow seasonal crops and function of the "types" of vegetables

For a strong territorial anchorage: the municipality wanted to help its farmers to transform their farming methods towards more responsible techniques. Finally, the management of the vegetable pans was given to the neighboring agricultural college to serve as a plot of experimentation in agronomy while allowing to obtain various crops throughout the year.

**The garden is now autonomous and continues to live thanks to the various stakeholders.**

## Progress Status

Delivered

## Data Reliability

Self-declared

## Funding Type

Private

## Website Enterprise / Infrastructure

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

<http://topager.com/>

<http://ekodev.com/blog/Ekodev/Le-potager-Carrefour>

## Sustainable Development

**Attractiveness :**

This project is part of **Carrefour's Sustainable Development strategy** with the aim of experimenting with farming methods inspired by agroecology. This initiative has been promoted to **various stakeholders** (public, customers, families of employees, high school students, etc.) including awareness-raising actions on the theme of food (seasonal, ultra-short circuit, responsible culture, techniques from agroecology, etc.).

**A concise audit** was conducted on the Carrefour hypermarket in Villiers-en-Bière (the largest Carrefour hypermarket in Europe) to **measure biodiversity issues** and **identify local players** (agricultural high school, farmers, etc.).

The assessment of the audit revealed **groundwater pollution**, largely due to the use of phytosanitary products, but especially farmers having difficulties to turn to a more rational agriculture (lack of support and means). With all these elements, Carrefour has made a choice: **rehabilitate 1200m<sup>2</sup>** of parking in "biodiversity" zone. Various spaces could be designed, created and valorized by educational actions: experimental vegetable squares, aromatic zones, flowering meadow areas, relaxation and feeding areas, biodiversity facilities, etc.

**Well Being :**

This project is aimed at **store customers** during one-off events throughout the year.

It is also open to **store employees** to invite them to a "green" break. One of the objectives of the project is to **reconnect Man with Nature**, to make the public

aware of **the importance of biodiversity in everyday life, its direct link with agriculture, food and health.**

"Biophilia" (or enjoying "Nature" in the workplace) benefits the occupants of a site. It brings well-being, creativity, and reduced stress.

#### Social Cohesion :

The **social cohesion** generated by this project is illustrated by:

- Workshops with the general public thus creating exchanges and an excuse to discuss food (at the heart of everyone's daily life), agriculture and biodiversity.
- Workshops with employees to create different links and team cohesion.

**The management of this project also involves the agricultural college Bougainville. A team of high school students comes regularly to maintain, sow, plant and harvest.**

#### Preservation / Environmental Improvement :

Before preserving or improving the existing one, we first had to **understand** it, which is why a brief audit phase took place. **A study on biodiversity issues was therefore conducted, highlighting various issues: monoculture plots in the surrounding area contribute to the pollution of groundwater. Also, several Natural Areas of Floristic and Faunistic Interests (type I and II), such as the Gâtinais Park and the Fontainebleau Forest, are close to the site. The local biodiversity issues were therefore strong. This project started at the end of 2015 with support for Carrefour, in order to define the interactions between the Villiers-en-Bière site and local biodiversity. From this study, we have been able to define priority actions and "reflections" on the integration of the company on the territory. A roadmap of actions to put in place could be written. Among these recommendations, one of them related to the realization of a pedagogic garden. This initiative was born, here are some key figures:**

- **1200m<sup>2</sup>** of parking have been rehabilitated on the terrace. Strong technical constraints have pushed our teams to innovate in terms of building materials and substrates used for agriculture above ground (mycelialized coffee grounds as a contribution of organic matter).
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This project makes it possible to reduce the over-concreting of landscapes and bring this note of greenery in the city, allowing to improve quality of the air and surface water and underground.

#### Resilience :

The project's resilience work mainly focused on the substrates used: top soil, mushroom mycelium, and local soil (all with the Ecocert BIO label) were tested to avoid excessive leaching while responding technical constraints (low lift, tightness, ...). **Flowering meadow seedlings also allow soil cover (and therefore protection) but also complete autonomy (in terms of development, watering, flowering) to attract wild pollinators and auxiliaries from the garden. The substrates used have still not been replaced until today (project inaugurated in 2016)**

#### Responsible use of resources :

Regarding the plant palette, most of the selected species are local and adapted to the climate. These require little watering and will not create imbalances in the ecosystem.

Nearly one-third of the area is used for biodiversity-enhancing space and is a mixture of flowering meadow: wildflower seeds, native, and completely self-sustaining.

Rainwater recovery areas are installed to reinject the water recovered in the drip irrigation system. Composting spaces also make it possible to use green waste in order to amend the soil when the time comes. The optimization of the space is advocated since even the technical islets see their roofs covered with vegetation (drooping strawberry for example).

## Governance

Carrefour Interdis

**Holder Type :** Consortium of companies

Carrefour Property

**Builder Type :** Other

**Manager / Dealer Type :** Private

The Carrefour entity commissioned ekodev to carry out a study on their Villiers-en-Bières shopping center.

The AMO of the project is ekodev which carried out the studies upstream, during, found and put in touch the actors of the project, and managed the valorization and sensitization downstream.

Carrefour Interdis completed the work.

Topager realized the work of the "educational garden"

Lycée Bougainville manages the management and monitoring of the vegetable garden.

### Business Model :

Carrefour is the main financier of the project.

Initially a part of the crops of the vegetable garden was destined for the direct sale in store. The quantities being anecdotal, only educational workshops / cooking classes from fruits and vegetables of the garden are proposed.

The management and monitoring of the garden is financed by the training tax of Carrefour.

## Sustainable Solutions

Carrefour Pedagogic garden

### Description :

The rehabilitation of 1,200m<sup>2</sup> of parking on a floor in a biodiversity area has allowed to accommodate vegetable gardens, aromatic / medicinal plant reserves, relaxation areas and flowering meadow areas.

This project has been realized to allow a strong social and societal impact: this one is open to the employees, allowed to welcome families, customers, general public, during educational workshops; the management is entrusted to the agricultural school Bougainville Agriculture and Landscape.



This initiative is anchored in Carrefour's sustainable strategy to promote the short circuit, responsible food and sustainable production methods.

- Resources :
- Biodiversity :
- Citizen participation
- Proximity services
- Air quality
- Circular economy
- Infrastructure
- Water management
- Soil management
- Waste management
- Citizen-awareness
- Climate adaptation

<http://ekodev.com/projets/Nos-projets/Biodiversite/Carrefour>

Company (es) Website :

Company (es) Website :

Company (es) Website :

## Contest

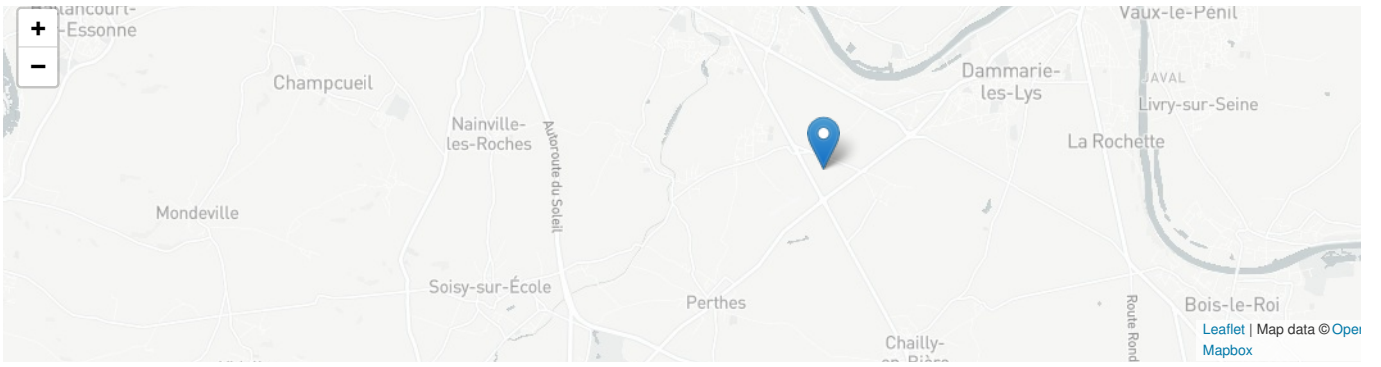
### Building candidate in the category



Coup de Cœur des Internautes



Grand Prix Infrastructure Durable



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