



# The banks of the Haute Deûle, an eco-district along the waterway

**Lille, France**

## IN A NUTSHELL

*The city of Lille turned the river Deûle into the essential element in the redevelopment of an old 25-hectare industrial site, recognising its social and environmental benefits as well as its key role with respect to climate change adaptation.*

## Context

The banks of the Haute Deûle constitute a specific territory, defined both by its industrial history, with the old cotton and linen factory Leblan Lafont, and by the presence of water. Extending across the municipalities of Lille and Lomme, this territory covers an area of 25 hectares, on the two sides of the Deûle canal.

Even though the canal crossed the district, it essentially only had an industrial role. In fact, the presence of water was not very noticeable in the surrounding neighbourhoods. The territory surrounding the city is flood-prone due to the topography of the area and the presence of groundwater close to the surface. Surface water was of poor quality, presenting eutrophication of water courses, particularly for the Deûle.

Therefore, the challenge was twofold: on the one hand to rehabilitate the old industrial area and transform it into an appealing and sustainable place to live while simultaneously enhancing the industrial heritage. On the other hand, some environmental and climatic issues related to water management had to be addressed. The redevelopment of the site started at the end of 2003 with the creation of a Joint Development Zone.

The new district ensures social diversity with a balance between properties for sale and for rent at market prices, affordable housing, and social housing.



Leblan Lafont, old cotton and linen factory, today headquarters of the "site of excellence" dedicated to new technologies

## LILLE METROPOLE



### Population:

1.1 million

### Area

611 km<sup>2</sup>

### Signatory to the Covenant of Mayors since:

2011

### CO<sub>2</sub> emission reduction target:

30% by 2020

## A water cycle both regulated and respectful of the environment

It was decided to give emphasis to the presence of water by directing it to the heart of the neighbourhood, close to housing and offices.

The development prescriptions initially regarded the regulation of discharges into the natural environment:

- ▶ Set-up of a water basins and watersheds system bringing water downstream for regulated discharge into the canal;
- ▶ Integration of the watershed system with public spaces thanks to swales, canals integrated alongside roads, and water gardens;
- ▶ Qualitative treatment of water through sedimentation in the canals and through phytoremediation in the water garden;
- ▶ Rainwater management entirely based on gravity, thanks to refined altimetric management applied to the development of public spaces (rooftops with vegetation, storage tanks);
- ▶ Prohibition of irrigation with drinking water (public or private), collection and storage of rainwater through rooftops;
- ▶ Location of buildings decided based on the soil composition, in order to respect the balance of groundwaters as much as possible.

In order to mitigate the risk of floods, the city has also decided to cap soil-sealing at 80%. Some management prescriptions have been formulated regarding the treatment of external mineral surfaces with maximum permeability in joints or materials. The technical specifications have also imposed a minimum ratio of open ground of 20% (applied to the 20% permeable soil), with local variations according to the detailed requirements of the fauna-flora study.

## Public spaces rich in biodiversity

Although the average density of the neighbourhood is higher than in surrounding neighbourhoods, the redevelopment of the district left a large part to public spaces which make up almost half the surface of the Joint Development Zone. These public spaces involve the realisation of a green network.

Two objectives have been set and achieved:

- ▶ the planting of 1,000 trees, half of which in the public space (10 hectares)
- ▶ the creation of 25% green spaces (6.25 hectares) half of which on the public space

This green network creates a pleasant landscape frame as well as a biodiversity shelter and space for rainwater infiltration, and it attenuates the urban heat island effect.

The choice of local species, used to living close to water, was favoured, and particular care was taken in the planting of trees using a differentiated management policy. Green spaces are also places for conviviality and 'breathing spaces', providing a better quality of life in an area marked by the high density of buildings.

### *Land use planning:*

Soreli

### *Urbanism:*

Atelier Pranolas  
Descours

### *Landscape architecture:*

Atelier Bruel Delamare

### KEY FIGURES

Urban renewal project of **25** hectares, including **10** hectares of public spaces

Impermeabilization of soil capped at **80%**

**20%** free ground ratio applied to permeable soils

**25% (6.25 hectares)** of green spaces

**1.6** km of swales

**1000** trees planted, half of which in the public spaces

**2** times more area dedicated to pedestrians and bicycles than cars



## Mobility, low carbon buildings and circular economy

The desire to make the neighbourhood resilient to the effects of climate change and respectful of the environment was linked to concern to minimize energy consumption.

The district was designed to limit the use of the car, particularly through the construction of carparks. Less carbon intensive modes of transport are encouraged thanks to the mesh of pedestrian and bicycle circulation. Twice as much of the neighbourhood's surface is dedicated to pedestrians and bicycles than to cars. The metro, free bike service, and a car sharing point are easily accessible, especially for people with reduced mobility.

The buildings have been designed with high energy performance requirements, making the choice of energy sources reversible and favouring the use of renewable energies. The architectural choices that were made invite developers to use a minimum amount of wood in the construction of housing to support the development of a sector still little developed in the region.

In addition, 80% of the waste is upgraded or recycled at the neighbourhood level.

## Results

The 152,000 m<sup>2</sup> of the first phase of development are now being sold, i.e. 860 housing units delivered or being finalised, and 80,000m<sup>2</sup> of tertiary surface. Given the potential of the urban project, it was decided to continue its development. The project now counts 38 hectares, including the 25 hectares of the first phase, with a short-term transformation capacity which invites to continue the development of the existing zone and use its full potential. The project ultimately includes the extension of the network of soft mobility corridors, and the creation of 'Turtle park', a vast green and recreational area.

It is also worth mentioning that the district also includes the establishment of the Eura Technologies centre, dedicated to Information and Communication Technologies in the metropolitan area, on the site of the former factory Le Blan Lafont.

The project has received many awards:

- ▶ The Urban Development Award 2010 for its social and urban diversity;
- ▶ The 2009 Eco-District award for its landscape and environmental quality;
- ▶ The Eco-district label of the Ministry of Equality of territories and housing in 2013.

### USEFUL LINKS

- ▶ Eco-districts website: <https://bit.ly/2N03uQh>

Photos © Yves Bercez



### FINANCING THE PROJECT

- + **Financing source(s):**  
budgets of the Lille European Metropolis, the city of Lille and the city of Lomme, and grants from ERDF, the National Agency for Urban Renovation, and ECOCITE
- + **Total amount:**  
75 million euros



**MÉTROPOLÉ**  
EUROPÉENNE DE LILLE



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