

Windhof Ecoparc

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New Construction



Address 1 - street : 8399 11-13 RUE DE L'INDUSTRIE, ECOPARC WINDHOF, Luxembourg

Starting year of the project : 2009

Delivery year of the project : 2015

Key words : Activity zone, Business Park, sustainable industry, economic sustainability, sustainable management, Public-Private Partnership, cooperation, C2C principles, cradle to cradle



40 ha

ID CARD

Windhof is a business park based on sustainable management. Developed as a Public Private Partnership, it aims to create a business site on which authorities and companies co-operate to improve economic and social development reducing their environmental impact. Different companies work together on a voluntary basis to go beyond sustainability by applying C2C principles. Together, they intend to establish:

- A common platform of communication: the company ECOPARC WINDHOF EIG Economic Interest Grouping.
- A coherent signposting system
- Long-term actions Implementation of sustainable development, the base of analysis and inspiration is the philosophy C2C (Cradle to Cradle) supported by the European Union.

These actions are always transversal and must take into account the three pillars of sustainable development: environment, social & economy.

- Some basic functions, such as an ATM, nurseries, a shopping center, pedestrian paths, a rest area, bike trails, a general improvement of infrastructure
- Une gestion de l'espace, de l'énergie, des déchets, de l'eau,...

" The activity zone is changing to business and commercial activities. We anticipate this change by developing a functional and rational ECOPARC. "

Programme

- Offices
- Businesses and services
- Green spaces

Project progress

- Management phase
- Operational phase

Procedure type

- Urban développement permit

Key points

- Governance
- Economic development
- Resources
- Energy /Climate

Data reliability

Self-declared

TERRITORY

Type of territory

Developed away from the city center, in the heart of a road infrastructure and public transport zone, currently in very high mutation, Windhof is embedded in a green environment. Close to nature, ideal to recharge the human potential, it brings a definite plus in terms of quality of life and work.

The town, and other local institutional actors support the coordinated efforts around the values that drive this activity center: well-being at work, respect for the environment, taking advantage of the latest technologies in energy efficiency...

Thanks to its unique concept, the Windhof business park is having a particularly rapid development, with already wide variety of companies from the ICT services and industry operating from this location.

In terms of local services, we note the presence of shopping malls, hotels, restaurants, gas stations, day care centers and schools that provide interesting complementary offer.

- Located near the Belgian border (4 km) and ideally placed along the A6 serving Belgium, less than 10 minutes from Luxembourg- City , Germany and France , Windhof enjoys an exceptional accessibility.
- A few minutes from the main poles of mobility and neighborhoods of "Grande region", Luxembourg City being only 10 minutes from the site and 20 minutes from the Findel airport.

Climate zone

[Cfb] Marine Mild Winter, warm summer, no dry season.

More info

<http://www.ecoparc.lu/environnement/>

KEY FIGURES

GOVERNANCE

Project holder

Name : ECOPARC WINDHOF GIE

Type : Autre

General description :

Economic Interest Grouping

Project management

Description :

Our action is part of the awareness and findings of various players in the area of economic activity. Their perceptions, individual, state general places of the area of activity came together.

Main consistent findings were as follows, a lack of:

- Communication between the different actors involved,
- Coordination,
- Accessibility,
- Awareness of our environmental impact: traffic, energy, waste, water...
- Image development
- Development of links with public transport.

These critical and constructive visions require joint and voluntary. Some emblematic areas of activities and projects and pioneers worldwide inspired us to draw our primary objectives: Eco-industrial park of Devens, Industrial Ecosystem Development Project, Kalundborg Eco-Industrial Park, Burnside Park, Parc de la Plaine de l'Ain,...

The industry and commerce agree to rethink their models and adapt to the needs of their development in the interest of the company as a whole:

- economic sustainability ,
- its staff,
- its environment.

"The approach is the development of the area of activity in a voluntary sustainable development context ."

Project stakeholders

PROgroup GEIE

Function : Other

Consulting engineers throughout integrated construction services.

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Construction21 company page :

<http://www.progroup.eu>

QUALITY OF LIFE

Quality of life / density

The social component aims to create services, facilitate access to the area and improve employees' working conditions while promoting the positive effects on the territory.

Social diversity

The collaboration between partners of the activity zone has already a positive effect with the realization of power purchase contracts at preferential rates, opening restaurants, mobility solutions, a website and events such as EcoparcFun and EcoparcRun and the power consumption optimization.

ECONOMIC DEVELOPMENT

Local development

Thanks to its unique concept, the Windhof business park is having a particularly rapid development, with already a wide variety of companies from the ICT services and industry operating from this location.

In terms of local services, we note the presence of shopping malls, hotels, restaurants, gas stations, day care centers and schools that provide interesting complementary offers.

The first axis is to ensure economic commercial success of the park and promote the economic development of established companies. Regarding the environment, it is to prevent environmental impacts of park facilities and help businesses to do the same.

TRANSPORT

Mobility strategy

- Located near the Belgian border (4 km) and ideally placed along the A6 serving Belgium, less than 10 minutes from Luxembourg- City , Germany and France , Windhof enjoys an exceptional accessibility.
- A few minutes from the main poles of mobility and neighborhoods of "Grande region", Luxembourg City being only 10 minutes from the site and 20 minutes from the Findel airport.
- In terms of public transport, bus lines 222 , 248, 249 and 250 from Luxembourg, regularly serve the area , while two active railway stations, present at less than 2 km (Capellen and Kleinbettingen) , round up this offer.

RESOURCES

Waste management

First of all they investigated the total amount of waste generated on site and the quality of the materials. In 3 different areas the waste streams are well segregated in order to increase to the maximum the quality of the materials. By doing so there is a way to generate a small income from this material flow, instead of paying for it.

In addition they have implemented a separate on site waste collection system for high quality paper. This paper quality can be returned to a paper manufacturer and the loop could be closed in such a way. They are financing this additional effort by combining this with an additional service: preservation of confidentiality. The process put in place makes sure that the confidentiality is reserved until the paper has been shredded on site. This is an illustration that you can add a positive effect to a positive effect.

ENERGY/CLIMATE

Energy sobriety

In a first instance the partners decided to have a competitive bidding process for the supply of 'green' electricity. By putting together all the purchasing power they were able to reduce the total cost and to be supplied with electricity produced exclusively via renewable resources. In a second step a best practice office buildings have been built, integrating all possible renewable energies together in a revolutionary concept: geothermic, solar photovoltaic, solar thermal, wind, and biomass. The biomass is actually provided by another member that has a certain amount of wooden pallets as left over. In addition in several buildings the use of energy was monitored, in order to find the best ways to save electrical energy, so that they can share best practices. In addition a quick scan method has been applied on site in order to get an overview of the total potential for renewable energies on site.

Energy mix

3.851.727 kWh / year of electricity production and 985 456 kWh / year of hot water

Solar photovoltaic:

- Ecopark 898,910 kWh electric / year
- Other elec 1,273,485 kWh / year
- Cactus 1,679,332 kWh electric / year

Solar thermal:

- Ecopark 229,984
- other 325 818
- Cactus 429,654

Total electricity needs of the project area /year

Total electricity needs of the project area /year : 4 214 490,00 kWh

SOLUTIONS

Appareils de mesure : Smart Analyzer

Description :

This project aims to analyze several electrical consumers of a building. A device placed upstream of the electrical installation of the building analyzes the electrical flows. By measuring the current and the voltage at the main switchboard, and a combined frequency analysis in a signature recognition algorithm (disturbance) of the electrical equipment, it is possible to break the load curve to obtain the ratio of the main families of equipment in the building (lighting , chiller , resistive ...) in the overall consumption. The boxes were installed in Alto and Solarwind buildings.

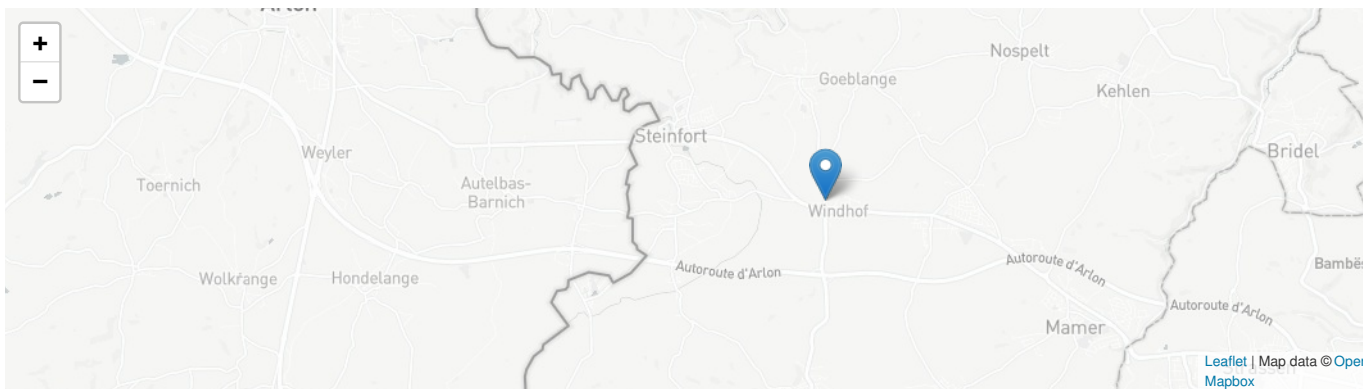
" We can easily identify consumption peaks and view dysfunctions and improvements to be made on some devices . The data collected by the device are visible at any time via a web link . We can analyze the results using statistical and graphics (by period, consumer ...). For example, it calculates the number of electric radiator placed by tenants in the winter to provide optimizations in times of operation and regulation. "

Benoît De Simone, Property Manager, Schuler Immo

- Renewable energies
- SmartGrids

<http://www.groupe-schuler.lu>

Company :



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