

## 1. Crossed Perspectives



# Eco-districts: the future of the city?

Between Marleen Kaptein (Architecte)  
And Bruno Bessis (Ingénieure)

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A Dutch expert in urban development, who founded one of her country's leading eco-district projects, discusses the future of eco-districts with a French specialist in sustainable development. Could such areas be the key to the future of urban life?

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## 01. Are eco-districts able to reduce the energy-intensive and polluting forms of mobility found in our major conurbations?



Marleen Kaptein

The word 'eco-district' suggests implementing integrated design strategies in urban planning, often on a small scale. Upscaling eco-districts to the conurbation level seems quite ambitious; it requires cooperation and a long-term commitment at different scales that include local authorities, companies and not-for-profit organizations.

Existing suburbs could be improved by reducing the distance between home, work, schools and recreational activities by redeveloping (empty) office buildings and out-of-date housing districts. The aim here is to create multifunctional areas that combine studios, apartments, workshops, offices for the self-employed, cafés, green zones and (roof) gardens. This means creating an infrastructure that makes it easy to use bicycles for commuting and offers good public transport.

Finally, governments must commit to supporting the development and technical innovation of low-energy transport, like hydrogen-powered cars and buses. Electric cars will not be sufficient in the long term.



B. B

Eco-districts clearly mean changing certain practices. They likewise simultaneously apply both technological and organizational innovation, notably relative to mobility, in a practical way. The basic design of eco-districts can certainly reinforce mobilities, for instance, by providing areas to safely lock up bikes, revisiting the question of individual parking spaces and making it easy to access nearby districts and employment areas.



Bruno Bessis

While there is still room to experiment with new techniques, eco-districts are already multiplying in the French territory, both in France itself and overseas, and are a real catalyst for more sustainable urban living.

Eco-districts are about introducing new ways of doing things and developing more virtuous behavioural patterns. This fundamental characteristic of the Eco-quartier brand, should also be the basis for public policy on the citywide scale. Eco-districts are a veritable living environment in which new services and facilities can be tested and

eventually rolled-out at the citywide scale (mobility centres, shared parking arrangements, co-working areas, etc.) – thereby reducing energy-intensive and polluting mobilities.



M. K

I agree with this idea of using pilot projects as living examples to then be rolled-out on a larger scale. Although more than 1,200 groups from all over the world have visited EVA-Lanxmeer, only a few municipalities (like France's *éco-quartier du Basroch* in Grande-Synthe) have recognized the benefit of an integrated approach. In The Netherlands, the fact that commercial developers have dominated the past 15 years has not helped innovation.

## **02. To what extent can eco-districts be independent of major centralized networks (transport, water, electricity and distribution)?**



Marleen Kaptein

Every site offers different opportunities for reducing dependency on centralised networks. In EVA-Lanxmeer we were allowed to build around the protection zone of a drinking water company.

As a joint project with the municipality of Culemborg, we aimed to maximise the use of natural resources, improve biodiversity and develop 'closed loops', for example, to preserve the natural cycle of rainwater. In addition to solar panels and photovoltaic cells for hot water and electricity, a low-energy heating system was installed in 2002 that uses the heat from pumped drinking water. The system has been owned by a local energy company founded by residents since 2009. Rainwater is captured in ponds and wadis, while 'grey' wastewater from homes and offices is purified in local helophyte filters. The Culemborg sewage system is only used for toilet waste.



B. B

This example is a perfect illustration of why it's imperative to look at eco-district projects in their context, in other words to consider the local resources available and to manage them in a way that takes into account their specific characteristics so that everything is designed to be complementary.



Bruno Bessis

Rather than distancing themselves from such services, eco-districts should look towards developing networks that are complementary. Optimising the use of existing local resources and networks helps to establish eco-districts in the surrounding area.

At the same time, an eco-district should also seek to develop a degree of autonomy in terms of its energy supply, by using recycling or natural resources to achieve a certain production capacity. That said, the balance is subtle.



M. K

Indeed, every region presents opportunities for optimising the use of local resources. However, it also depends on the creativity and capacity of people who live or work in a district. Here, networks of professional citizens are taking interesting initiatives. Crowd funding has become a very popular to achieve shared goals.

### **03. To succeed, do eco-districts just need technical solutions, or do they require a complete transformation of people's lifestyles and socio-economic relations?**



Marleen Kaptein

Asking people to change their lifestyles works best when you create practical solutions to environmental problems in the daily habitat. It's a natural way to 'perpetually educate'. Children who grow up in such an environment know that 'energy comes from the sun', that you can catch frogs and salamanders in rainwater ponds and pick fruit while playing outside in green areas. Schools use the 'Fair Trade' city farm in EVA-Lanxmeer, where children learn what is needed to produce food and are proud to grow their own pumpkins.

They also enjoy playing around a redeveloped riverbed that has become a popular spot for swimming in summer and skating in winter.



B. B

Public participation is a key feature of the Eco-quartier policy the French government is pursuing, so that local residents are actively involved in shaping their surroundings and are the focus of the project.

Educating and supporting local residents is vital if they are to become familiar with the technological innovations that are sometimes needed to create an eco-district. In addition to this, making children aware of what living in an eco-district entails from an early age helps them to embrace both the built environment and the open spaces around them. Building awareness in children aware is also a way of reaching out to adults.



Bruno Bessis

Both technical solutions and changes in people's lifestyles are necessary. Experience has shown that technical innovations that are not understood or accepted will not deliver the desired results.

However, putting either of these dimensions into action involves considering the local context of the eco-district. While a rural eco-district are an opportunity to look more closely at socio-economic relations, it is unreasonable to expect it to offer the range of technical solutions possible in a densely-populated urban area.



M. K

Again, I can only agree. You need examples in real living environments to motivate people and gain their cooperation. It's been proven to work! However, this still doesn't answer the question of how we can obtain these results on an urban area scale. The Dutch Government is cutting public spending but has not yet found a way to facilitate initiatives by other parties. However there will always be new opportunities.



## Marleen Kaptein

### Architecte

In 1994, Marleen Kaptein and a group of landscape architects, urban planners, energy experts and civil engineers set up the EVA Foundation to create a pilot project for ecological urban development. The EVA project was subsequently hosted by the city of Culemborg, which provided the land and financing. A home construction company, the Province of Gelderland, energy and water companies, and (future) residents were also involved. The aim was to make the project results available for higher education, the building industry and other municipalities.



## Bruno Bessis

### Ingénieure

Bruno Bessis, along with Franck Fauchaux, is responsible for developing the 'EcoQuartier' initiative of France's Ministry for Housing, Regional Equality and Rural Affairs. They helped launch of the official EcoQuartier campaign in December 2012 and are leading figures in both a national association for eco-districts, which brings together local authorities involved in sustainable development, and a scientific committee devoted to the issue of sustainability in towns and cities.

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