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## Case Study 8

### France → Grenoble: Eco-Quarter 'De Bonne'

June 2018

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Draft Version 2.1

#### Eco Quarter ,De Bonne': Passive Buildings



[http://www.energy-cities.eu/IMG/pdf/37\\_from\\_buildings\\_to\\_smart\\_cities\\_grenoble\\_xavier-normand.pdf](http://www.energy-cities.eu/IMG/pdf/37_from_buildings_to_smart_cities_grenoble_xavier-normand.pdf)



## CASE STUDIES

# France → Grenoble: Eco-Quarter 'De Bonne'

**Problem to resolve:** Global warming through CO2 emissions, Search for Landmark

**Means:** Eco Quarter, Place Branding



**Secondary Tool:**

**Background.** The eco-district ("eco-quartier") de Bonne got its name from the late 19th century military barracks, the Caserne de Bonne, which occupied the site until 1994. This small neighbourhood, in between the Grands Boulevards and the historic centre, is noteworthy for its cutting edge ecological features, which follow the French green building codes of the HQE [Haute qualité environnementale (French) or High Quality Environment]. This special development area was France's first eco-district. The conversion of a former military brownfield site into a mixed-use district comprising offices, housing, a student residence and a hotel. The project broke ground in 2003 and in 2009, it received the National Grand Prize for Ecological Neighbourhoods in France awarded by the country's Ecology, Energy, and Sustainable Development Minister. It wants to demonstrate solutions to several problems of urban living and growing cities: Solar heating systems has been designed to fulfil half of the area's hot water needs. Solar panels provide electricity for the commercial and residential buildings. The buildings' shapes are also compact to reduce urban sprawl.

**De Bonne: Passive Buildings**



[http://www.casaclima.com/ar\\_9406\\_\\_PROGETTI-Riqualficazioni-jean-paul-viguiet--grenoble--complezzo-uso-misto-Grenoble-il-complezzo-ad-uso-misto-di-Viguiet.html](http://www.casaclima.com/ar_9406__PROGETTI-Riqualficazioni-jean-paul-viguiet--grenoble--complezzo-uso-misto-Grenoble-il-complezzo-ad-uso-misto-di-Viguiet.html)

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With 850 apartments—40 percent of which are social housing for low-income families—the Ecological Neighbourhood is set to become one of Grenoble's most popular residential areas. The De Bonne eco-district has been planned with a comprehensive viewpoint of buildings, road networks, public parks and the orientation of the blocks in mind. Unlike other well established eco-districts in Europe and elsewhere, which were initiated based on community demand, this project was initiated from the top-down with the aim of reducing electrici-

ty, heating, promoting resource efficiency, as well as improving community awareness.<sup>1</sup> All buildings had either green roofs or photovoltaic cells and solar collectors to satisfy 50% of the hot water demand; all building materials were 100% ecology proof. However, after occupation it turned out that the estimated energy demand of (42.5 kWh/m<sup>2</sup>/year) was overrun by 5 to 70%, most likely due to wrong calculations at the outset.

#### De Bonne: Passive Buildings



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#### De Bonne: Passive Buildings



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**Environmental targets.** The environmental targets of this district are as follows:

- **Energy.** Reduction of energy consumption. The buildings – among other elements of the city - will follow very strict requirements for power consumption per square metre. The eco-district makes use of solar energy. Grenoble is member of the Energy Cities network.
- **Transport.** De Bonne is limiting private car utilization, and inciting the use of alternative modes, like public transport, cycling, and walking. It promotes the use of bicycles through bicycle paths, the presence of secure bicycle parking. Pedestrian routes allow to circulate safely. Bus stops are available throughout the eco-district. There have been considerations to prohibit private cars, as during done in 'car-free' neighbourhoods. A critical review has stated, however, that essential bicycle parking and concrete cut-outs for trees seem to have been forgotten. Streets appeared less friendly to pedestrian uses. Vehicles seem to predominate the district streets, even with the narrow roads and one-way traffic.
- **Water.** The aim is to reduce water consumption. Stormwater is recovered and used to irrigate green spaces, to clean public roads or usage in toilets.
- **Solid waste management.** Collection target of waste is 100%. Green waste shall be composted, and composts can be used for gardens and green spaces.
- **Outdoor spaces.** The eco-district fosters biodiversity. It supports diversification of local fauna and flora.<sup>1</sup>

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Further Reading:

<sup>1</sup> [http://www.durable.com/actualite/article\\_l-eco-quartier-de-grenoble-recompense\\_368](http://www.durable.com/actualite/article_l-eco-quartier-de-grenoble-recompense_368); and <http://www.ecoquartier-strasbourg.net/index.php/transition/quest-ce-quun-eco-quartier/quelques-exemples/ecoquartier-zac-de-bonne-grenoble.html>;  
<http://ecoquartiergare-trevoux.over-blog.com/article-l-exemple-de-bonne-en-france-98031281.html>