

Vauban: an emblematic eco-district

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Citizen forum: quartier innovant et durable

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Introduction

- The Vauban district
 - One of the most talked about and visited eco-districts
 - Located in Freiburg im Breisgau
 - Southwest Germany
 - The sunniest and warmest city
 - 230,000 residents (2015)
 - Employment linked primarily to services, the university and public service
 - Solar energy research
 - Production of photovoltaic panels
 - Car-free downtown area since the 1960s
 - Heavy use of streetcars, bicycles and walking
 - Highest housing costs in the country
 - Anti-nuclear mobilizations (1970-1980)
 - Green party stronghold: mayor (2002-2018)



Photos: R. Morin

Introduction (cont'd.)

- The Vauban district
 - Former site of a military base (38 ha)
 - Occupied by French military forces as of 1945, then known as the “Quartier Vauban”
 - Evacuated in 1991, after the fall of the Berlin Wall (1989) and the reunification of Germany
 - Bought by the German Government in 1992 and then sold to the City for 20 million euros
 - 2000 housing units and 5600 residents (2015)
 - Project characterized by
 - Participatory process
 - Construction-buying groups (*Baugruppen*)
 - Renewable energies
 - Priority to active transportation
 - Sought-after functional and social mix



Source: <https://www.freiburg.de/pb/208764.html>

Vauban: a participatory process (cont'd.) _____

- Contributions of the Forum Vauban
 - Organization of citizen participation
 - Work groups: energy, transportation, mobility, architecture, participation
 - Information: ecological architecture, energy savings...
 - Integration into the development concept already providing for the functional and social mix, active transportation and renewable energies
 - Absence of private parking
 - Conservation of the forest stand
 - Transformation of a barrack into a community centre
 - Priority sale of land to construction-buying groups (*Baugruppen*)
- Closure of the Forum in 2003, replaced in 2005 by the Vauban District Association



Vauban and the *Baugruppen*

- *Baugruppen*: groups of 10 to 50 households
 - Approved by the City according to a points system drawn up with the Forum Vauban and giving preference to:
 - Ecological constructions (low energy consumption)
 - Absence of cars
 - Specific populations (families with children, retirees, etc.)
 - Purchase by each group of one lot to be built
 - Collective decision-making: architecture, energy modes, common equipment, calls for tenders
 - Accompaniment by a mediator and an architect
 - Social relations and cost-sharing (savings of 20 to 25%, making up for construction cost overruns)
 - Modes of ownership: co-ownership (+) and co-op (-)
 - 70 *Baugruppen* (2015): major part of the dense residential development of the site (70% of the 41 ha)



Vauban and renewable energies

- Approval points system and purchase contracts → low-energy-consumption buildings
 - Low-consumption houses according to Freiburg norms (65 kWh/m² versus 200-300 kWh/m² in Germany)
 - Passive houses (277): very low consumption (15 kWh/m²)
 - Solar orientation, very good insulation, green roof
 - Internal ventilation and cogeneration system
 - Positive houses: production of more energy than is consumed
 - Surplus transferred into the public distribution network
 - Located in the “Solar Settlement” (58 houses)
 - Two- or three-storey wooden constructions with micro-gardens, back yards and photovoltaic panel roofs
- Heating and electricity from the public distribution network
 - Cogeneration plant with gas engine
 - Woodchip system and gas boiler
- Rainwater management
 - Infiltration of rainwater into the soil
 - Retention channels and green roofs for surpluses
 - Collection in the tanks of some buildings
- Lush vegetation → coolness without air conditioners



Vauban: priority to active transportation

- “District of short distances”
 - Walking and bicycle: preferred modes of transportation
 - To the detriment of cars
 - Low ownership rate (183/1000 residents in 2015)
 - Absence of private parking spaces
 - Two large pay parking lots for residents
 - Parking possible on main street for visitors
 - Space saving of 20% of total district
 - Speed: 30 km on main streets; 5 km on secondary roads
 - Secondary roads without sidewalks
 - Priority to pedestrians and bicycles
 - Play and meeting areas
- Access to the centre of Freiburg (4 km) by tramway and bus
- Car-sharing service



Vauban: functional and social mix

- A district of short distances → multifunctional
 - 2000 housing units + school, childcare centres, shopping centre, grocery store, community centre, organic market, parks
 - 600 jobs: shops, services, handicrafts
- Objective + point system → social mix
 - However, strong homogenization
 - Middle-class households with children, of German origin, co-owners
 - High land and construction costs
 - *Baugruppen* bringing together similar people
 - Few one- or two-room units for single people
 - Still, a few projects for other types of households
 - SUSI coop: low-income households (45 units)
 - Genova coop: seniors and people with handicaps (75 units)



Conclusion

- Vauban, an unusual situation
 - Sunny city with ecological traditions
 - Military land to be redeveloped
 - Strong social mobilization
- Vauban, an innovative eco-district
 - Citizen participation
 - Allotment of land (*Baugruppen*)
 - Renewable energies
 - Absence of private parking spaces
 - Functional mix
- Vauban, a rather homogenous district
- Vauban, a reproducible experience?



*Thanks
for your
attention*

