“Quartier Vauban”
Sustainable District in Freiburg, Germany
Disclaimer

Findings, interpretation and conclusions expressed in this document are based on the information gained by the author and from the contributors.

GIZ does not guarantee the accuracy or completeness of information in this document and cannot be held responsible for any errors, omissions or losses, which emerge from its use.

Copyright

This publication may be reproduced in whole or in part in any form for educational or non-profit purposes without special permission from the copyright holder, whenever provided acknowledgement of the source is made. The GIZ would appreciate receiving a copy of any publication that uses this GIZ publication as a source. No use of this publication may be made for resale or for any other commercial purpose whatsoever.
Quartier Vauban

**Key Facts**

- Population: 5,000
- Housing units: 2,000
- Total area: 41 ha
- Jobs on-site: 600
- Density: 122 persons / ha
- Construction start: 1998

Distance from Freiburg’s city centre: 3 km

Brownfield redevelopment

Bottom-up planning approach including potential residents

Celebrated as a model “Sustainable district”

Source: ITDP, 2011

Photo: Meilla, 2006
Quartier Vauban

Implemented Vision

- Compact district: short distances
- Alternative energy and transport concepts
  - Ecological-oriented energy use (local heating concept)
  - Low car strategies/concepts
- High liveability
  - Green spaces
  - Family-friendly
  - Social diversity
- Prioritised allocation of land: private clients and cooperatives, self-help models over investors
Quartier Vauban

Key Aspects

- Housing
- Public Spaces
- Transport
Quartier Vauban

Houses

Implementation of an ecological local heating concept, with **low-energy** construction methods

- Housing units: 2,000
- Net housing density: 95 per ha
- All housing units are low-energy constructions
- Multiple, mainly small building cooperatives

Source: ITDP, 2011
Most buildings are based on zero-energy and energy-plus construction.
Quartier Vauban

One central parking garage at the edge of the settlement
Quartier Vauban

A low-energy usage of 65 kWh per square meter per year is achieved by multi-story attached buildings with passive solar design and district heating systems.

The use of solar technologies is widespread.

Source: Green City Freiburg, 2011
Public places and free spaces have been planned and designed as green as possible.

Water conservation through collecting rainwater and use indoors, green roofs, pervious pavements, unpaved tramways, and drainage sloughs.
Residents benefit from a clean, fresh and flavoursome local climate, ...

Green spaces contribute to urban cooling, the opposite effect of urban heat-radiating by hard surface.
Quartier Vauban

Green Public Spaces

... a beautiful urban landscape ...

65% of the residents who moved to Quartier Vauban came from elsewhere in Freiburg
Quartier Vauban’s inhabitants are predominantly walkers and cyclists...

... and recreation areas (for walking ...)
Quartier Vauban

Green Public Spaces

Residential blocks are separated by green spaces.

... resting ...
Quartier Vauban

Green Public Spaces

This family-friendly district includes play areas for children.

... and playing)

The high availability of green spaces reduce the need to travel to access recreation areas.
Quartier Vauban has a low level of car ownership and promotes non-motorised and public transport.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of cars per 1,000 people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>566</td>
</tr>
<tr>
<td>Freiburg</td>
<td>374</td>
</tr>
<tr>
<td>Quartier Vauban</td>
<td>160</td>
</tr>
</tbody>
</table>

Sources: WB, 2007; Schiller et al., 2010; ITDP, 2011
Quartier Vauban

Sustainable Transport

Design strategies and policies were implemented to:

1. Restrict car use
2. Promote non-motorised transport (walking, bicycle use)
3. Promote public transport

The objective of a short distance district required compact land use planning, favouring non-motorised modes of transport
Quartier Vauban

Sustainable Transport

In 2002, 39% of Quartier Vauban’s households had carsharing membership (as opposed to only 0.1% nationwide in Germany)

In 2002, 40% of the households in Quartier Vauban did not own a car

Car accessibility to residential streets only for picking up and dropping

Physical barriers restrict access for car users

Transport safety is improved by applying traffic calming measures (e.g. 30 km/h car speed limitation)

Source: ITDP, 2011
Sustainable Transport

- Quartier Vauban’s streets are devoted to people
- Road priority is given to other road users over cars
- Car traffic is kept at a low level
- Walking and playing areas are common
- Restrict car use
**Quartier Vauban**

**Sustainable Transport**

- Car parking spaces per residence: <0.5
- Parking is not permitted on the U-shaped streets
- Parking-free residential streets
- Residents have to purchase a parking space, which costs **16,000€** plus a monthly service charge (or prove that they do not own a car)

Quartier Vauban supports sustainable transport. Parking is provided following this principle.

Source: ITDP, 2011
Sustainable Transport

The bicycle and pedestrian-friendly environment is encouraged and supported by a mix of methods.

Bicycle parking facilities are widely available.

Car-owning and car-free households use the bicycle for 61% and 91% of their trips, respectively.

In 2002, 34% of the commuter trips were done by bike.

Promote non-motorised transport.

Source: ITDP, 2011
Quartier Vauban

**Sustainable Transport**

- **Car free streets** at Quartier Vauban
- **Non-motorised modal share: 64%**
- **Promote non-motorised transport**
- Accessibility is improved through design measures and a network of dedicated streets (e.g. boulevard for pedestrians and cyclists)
- Direct access to all areas is only possible by non-motorised modes to prevent through traffic, noise, air pollution and improve safety
Quartier Vauban

Sustainable Transport

Public transport connects Vauban with Freiburg’s city centre

Source: ITDP, 2011
There is integration of modes of transport

The ‘RegioMobilCard’ promotes mobility services by offering significant discounts (e.g. 20% on carsharing usage fees)

Source: ITDP, 2011
Quartier Vauban

Sustainable Transport

Along Vaubanallee, trams run on a grassed central reservation to reduce noise and improve the urban image.

Public transport between Vauban and Freiburg’s city centre encompasses trams...

Source: ITDP, 2011
In Vauban, 56% of car-free households own at least one ‘RegioKarte’ transit pass for the region, whereas only 47% of car-owning households own such a pass.
Sustainable Transport

Mixed land use enables shopping trips by sustainable modes of transport

Daily grocery shopping takes place within Vauban reflecting the availability of local facilities and the functioning of the short distance concept to reduce traffic.
Quartier Vauban

Sustainable Transport
41% of car-owners use a bicycle more than they did before living in Quartier Vauban.

The provision of local services and jobs, proximity to the city center, extensive non-motorised transport infrastructure and good, low-cost regional public transport services contributed to Quartier Vauban’s sustainable success.
More than half of car-free households were persuaded to move to Quartier Vauban and sell their own car because of: “the unique combination of carrots and sticks offered by the district”

81% of the members of car-free households previously owned a car

57% of the members of car-free households gave up their car just before moving to Vauban

Quartier Vauban’s modal share for all trips:
- Bicycle/walking: 64 %
- Public transport: 19 %
- Car: 16 %

Sources: Green City Freiburg, 2011; ITDP, 2011
„We [the people] make the world as we like it!“