

Vauban, Freiburg



Overview

Situated in the university city of Freiburg, Germany, the suburb of Vauban is a showcase of sustainable urban renewal. Built on a 38 hectare brownfield site, previously a military barracks, the precinct now contains over 2,000 dwellings and a mixture of land uses supporting around 5,000 residents and 600 workers. Following a period of intense public pressure the landowner, Freiburg city council, made a conscious decision to manage the sale and development of the site to produce a precinct that maximised positive social, environmental and economic outcomes. This has been achieved through a wide variety of initiatives, including:

- Designation of a proportion of sites for development by community-led co-housing groups.
- Requirement of a significant component of social and affordable housing in all developments.
- High minimum energy efficiency standards, and a strong uptake of the Passivhaus standard.
- Designation of the majority of the suburb as car-free, with parking provided in centralised garages rather than as part of individual buildings or developments.
- Establishment of key organisations such as the community forum and the association for car-free living.

Critical to the success of the project has been the involvement of a diverse range of stakeholders throughout the process, demonstrating a significant shift from a standard linear development process. With oversight from the city council, and community

input through not-for-profit group Forum Vauban, innovative entities such as a local energy retailer which manages the precinct energy system, and the association for car-free living which is responsible for the centralised garages, were key to the project becoming a reality.

Sustainability features

Raising the bar for energy efficiency

Despite Germany's national standards for building energy efficiency already being comparatively high, the bar was raised further at Vauban, with all buildings required to meet a minimum standard of 65 kWh/sqm/year. Additionally, a significant proportion of buildings went well beyond this requirement to meet the Passivhaus standard (15 kWh/sqm/year).

Around two thirds of the site's energy requirements are provided by a local gas and wood-chip fired co-generation plant, which generates electricity and hot water for the district heating network.

Car-free living

The project began with a clear vision of minimising the role the private vehicle would play in day to day life. To support this, it was recognised that a number of important shifts were required. Firstly, attractive and convenient alternatives were needed from very early in the project's life, and as a result a new tram route connecting the site to the centre of Freiburg was built. This route is within easy walking distance of all dwellings in the precinct, and was operational before most buildings were completed, to ensure positive travel behaviours would be formed early on. Walking and cycling are

prioritised across the precinct, and many streets are designated shared spaces with very low speed limits for cars. A car-share scheme is run across the precinct, and members also access a discount for public transport.

The second major shift was to locate residential parking facilities away from dwellings. This meant that residents had to make a conscious decision to purchase a car space, rather than it simply being a standard component of purchasing a home. This has led to a dramatic reduction in car ownership and car use for residents in the precinct, and a significant cost saving for those choosing to not purchase a car space.

Government support

The most significant form of government support or intervention at Vauban was the decision by the city council to manage the sale and development of the land in a way that prioritised social and environmental outcomes. By creating a masterplan for the site and strong set of controls for development, the council ensured that development would successfully deliver the clear vision that had been set.

Implications for planners

Creating the right environment for sustainable outcomes

Vauban demonstrates the role local government planners can play in creating the right environment for innovative, sustainable buildings and infrastructure to be delivered. Using a key point of leverage, ownership of the site, the city council developed a strong vision for the project and established a range of clear parameters for how development would occur. This ensured that the requirements of developers and builders was clear from the outset, and encouraged private developers to innovate in order to meet these requirements.

A consultative process can lead to better outcomes for all

The process of community consultation for significant urban development projects can be challenging and, at times, unproductive. While community involvement in Vauban began in an unorthodox fashion, essentially with a period of activism, the resultant community organisation Forum Vauban has made a positive contribution to both the planning process and the ongoing operation of the precinct. This demonstrates that carefully managed and genuine community consultation and input can lead to improved outcomes within large-scale urban development projects.

Connection to Clean Energy Future package

Vauban is an example of the type of property development likely to become increasingly common, as sustainable approaches become more broadly accepted and integrated into industry practice. The Clean Energy Future Package has the potential to influence this change.



Carbon price mechanism (CPM)

The CPM is creating economy-wide change. As the drivers of this policy are recognised by the property and construction industry, models of development like those implemented at Vauban, which reduce the use of energy-intensive materials and improve ongoing energy efficiency, will become increasingly appealing.



Renewable and low carbon energy (RLCE)

Vauban demonstrates the potential for on-site low and zero carbon energy to meet a significant proportion of a precinct's energy needs. The support mechanisms contained in the RLCE component of the package have the potential to support the establishment of similar sustainable energy systems as part of development in Australia.



Energy efficiency (EE)

Vauban demonstrates a step-change in residential building energy efficiency, with a very high minimum standard and a large proportion of buildings going well beyond this. The CEF package includes support for improved efficiency of community and local government buildings, which can be key elements of precinct-scale development projects. The package also includes measures to improve the efficiency of transmission and distribution networks, which distributed generation approaches can contribute to.

Further reading

- Forum Vauban website: <http://www.forum-vauban.de/tasks.shtml>
- Vauban precinct website: <http://www.vauban.de/info/abstract.html>