

## **“The new district of Freiburg-Rieselfeld: a case study of successful, sustainable urban development”**

Two new residential areas are currently under development in Freiburg: Rieselfeld and Quartier Vauban. They are a response to an enormous demand for housing in the late 1980s and early 1990s.

The new Rieselfeld district, situated in the western part of Freiburg and providing about 4200 residential units for approximately 10,000 to 11,000 inhabitants, is one of the largest new development projects in the state of Baden-Württemberg. The urban planning concept underlying it evolved on the basis of the first-prize winning contribution to an ideas competition in urban development and landscape planning. Its implementation was begun in 1994 and will be completed in a few years.

The development of the Rieselfeld district is taking place on an area of 70 hectares, situated in the eastern part of a former 320 hectare sewage farm which served the southwestern part of Freiburg for more than 100 years.\* After extensive ground surveys were done and necessary steps such as soil removal were taken, the area fulfilled the conditions for residential construction.

### **Town planning guidelines**

The following **political guidelines** underlie the town planning **concept**:

- Construction of an urban district of high population density (with a floor-space index greater than 1) with the majority of buildings (> 90%) made up of multistory apartment houses and multiple dwelling units of up to five stories.
- A flexible urban design principle which allows for current developments and provides the possibility to adapt planning. The development scheme was drawn up in four installments, with intervals of two years between them – this is the principle of “adaptive planning”.
- Specifically incorporating the concerns of women and families, as well as of handicapped and elderly people.
- Overcoming the separation of living and working space through the integration of mixed and industrial construction areas (objective: 1000 jobs).
- Creating a balance of structures and housing forms. For example, mixing privately financed and subsidized housing construction, or mixing real estate for owner occupation and rental housing.

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\* In fact, the very word 'Rieselfeld' means 'sewage farm' in English, but it sounds much more elegant in German than the translation would suggest.

- Diverse construction forms due to the small size of building lots and the diversity of structural building types in order to reach different target groups – the whole ranging from a duplex to a five-story apartment block.
- Future-oriented traffic systems that give priority to public transport and to foot and bicycle traffic.
- Well-integrated public and private infrastructures from the very beginning.
- Orientation toward ecological objectives such as low-energy construction, district heating networks fed by a combined heat and power plant, integration of solar energy, a concept for rain water use, and the primacy of the streetcar line. Upgrading of the adjacent area to the west (adjustment areas according to the Federal Building Code) to nature reserve status complete with an educational hike and marked trails in 1995. Since 2001 it has been part of the European sanctuary system NATURA 2000 (fauna, flora, habitat and European bird sanctuary).
- High quality of private and public green spaces, and of leisure options.
- In spite of divided plots, shared courtyards in the blocks with multi-story apartments to enhance the quality of residence. Overcoming unnecessary physical barriers between lots through a joint design, and realization of open-air recreational areas within blocks.

### **The urban building concept**

The outcome of the town planning competition in the years 1991/1992 has been consistently implemented during the Rieselfeld development. The main element is the streetcar axis in central Rieselfeldallee forming the district's backbone. In the actual center, a northern-oriented "green wedge" serves as the district park. The central infrastructural facilities include a middle and high school, an elementary school, sports centers, a district meeting center, and a church center. The green wedge's location should redirect most leisure and relaxation seekers toward the northern-bordering lowlands of Käsbach and Dietenbach - and thereby relieve and protect the west-bordering nature reserve.

Dense building block structures of about 70 x 130 meters length are found directly on Rieselfeldallee; the density lessens towards the outer edge. A concise housing-arc marks the passage to Besançonallee. In the third and fourth parts of the construction section, larger terraced-housing areas were originally the smallest housing unit; a few duplex houses were introduced in a later step. Directly across from the Haid industrial area lies a smaller area for both industrial and mixed residential-industrial construction. Along Rieselfeldallee, as the principal axis of town planning, considerable areas are allotted for ground-level commerce facilities, gastronomy, services etc. Because of their direct dependency on demand and thus of population development, these settlements represented some of the greatest challenges in developing the project further. This was the reason why available plots along the Rieselfeldallee were and are developed only toward the end of the project.

Appropriate width of streets, various town squares and more than 20 generous communal courtyards which upgrade the rearward plot areas to truly attractive leisure areas in the district make up for the high density of the building blocks.

One essential condition for the successful marketing of the project was met by the division of blocks into small lots, i.e. one block is not normally sold entirely to one investor, but is parceled out between five to ten investors. The great variety of different building types is particularly important here: densely built blocks directly on Rieselfeldallee, ribbon development, town houses, duplex houses, terraced houses and the housing arc. An effort was made to offer different building types in each of the different blocks. The four-story town houses have each included two maisonette apartments as a way of offering housing forms for private ownership since the first two stages of development. They are extremely popular.

This urban building structure demands an orthogonal street grid and forms the basis of the traffic concept, which comprises as its main elements:

- Priority for the streetcar, pedestrians, and cyclists.
- Easy access to the public transport for all residents through three stops.
- A general speed limit of 30 km per hour, a right-before-left rule of priority in all places, several "play streets" in which children at play have priority.
- Three main traffic inlets to the general area.

The Rieselfeldallee consists of two one way streets running in opposite directions, separated by the streetcar tracks. Bicycle traffic is explicitly allowed to move against the common direction of travel.

### **The ecological concept**

**Ecological guidelines** have played a major role from the beginning. The **energy scheme** is marked by the geographical orientation of, and distance between, the structures, and the obligation to use low-energy building with a maximum level of energy consumption of 65 kWh per square meter a year. The implementation took place during a learning process of several years which included the administration, architects, engineers and builders. It followed the principle of "**communication, not penalization**", which is now spreading far beyond Rieselfeld. Further characteristics are the binding obligation to connect all structures to the district heating network fed by a combined heat and power plant in Weingarten, and the use of renewable types of energy such as solar energy, wood pellet heating, and heat pumps. A structure whose heat pumps provide a complete supply of heat for that structure can be exempted from the obligation to be connected to the public utility.

In the mid 1990s the new district became a **pilot project of the research area "Pollution Minimization in Urban Planning"** which was completed in 1998. It was proven theoretically that in comparison with an ordinary building area, by means of higher building density, local heat supply with co-generation, energy saving measures and improved public transport, a CO2 reduction

of almost 50% could be achieved. During the past years, the findings of several German pilot projects in this research area have become part of everyday development planning.

The aspects of **climate, air, and noise** were considered in the planning process by, for example, preserving the surrounding forest strips to serve as visual cover. The aeration with north-south wind was taken into account, and the housing arc in the first planning phase serves as a noise shield from Besancon Allee.

**The water scheme** provides for separate collection of rainwater. After a biological purification process in a soil filter facility it is recirculated into the wetland biotope in the nature reserve “Freiburger Rieselfeld”. Parallel to that, ground water is supplemented by rainwater irrigation over green spaces in the building area, which, in the four partial development plans, are declared as areas that cannot be developed either above ground or underground.

The **ground scheme** includes as its main characteristics the minimization of ground sealing, both in the private and public sector, and the removal of polluted soils throughout the area. Spatially inclusive and comprehensive ground samples were taken before and after removal of 0,5 to 0,8 meters of the upper soil layer to ensure pollution-free subsoil. The nature reserve in western Rieselfeld, at 250 hectares, is one of the largest in the state. The majority of the adjustment measures that were prescribed by law have already been implemented there. This unique free space will be secured in the future through systematic fostering and maintenance. There will be a signposted nature trail to help visitors explore "their" nature reserve area. A volunteer working group of Rieselfeld inhabitants is dedicated to nature protection. In addition, several of them have been appointed as nature protection rangers to sensitize people on site to nature protection.

To round off the ecological concept, a **combined planting scheme**, adaptable to each individual green area, will connect the block courtyards and a number of high-quality green spaces segmenting the district. Parallel to the partial development plans, three urban green space plans were drawn up. The obligation to hand in plans for open space design with the building application ensure the implementation of urban green space plans on a plot level. Planning for the “Hirschmat-ten Sports and Leisure Area” that will border the new Rieselfeld district on its north as well under- way. It will comprise an artificial lawn, several sports fields and a building with a fitness room, changing rooms and sanitary facilities. The local “Sport vor Ort” (“Sports on site”) asso- ciation will operate the facility. The planning, too, was developed with close cooperation between political figures, administrators and citizens. . Here, close to the Rieselfeld district, sports facilities both for schools and for sports enthusiasts among the general public have been created.

Again, through the construction of this area, leisure-time activities will be guided toward Rieselfeld’s northern half, thus taking some of the pressure off the nature reserve in the west of Rieselfeld.

### **Social and cultural life in the district**

From the earliest stages of planning, equal attention has been paid to the district's social and cul- tural life as well as to technical and ecological aspects, marketing, and urban building. The Ries- elfeld project group was and is determined to work very hard on making Rieselfeld a prime ad-

dress. This was necessary to make the newly available residential estate competitive on the Freiburg market - even though more than 90% of the newly built real estate is in multistory apartment buildings and multiple dwelling units. Through this it was possible to minimize financial risk for the City of Freiburg, which had set up public infrastructural facilities very early on. The development of the building process is, to this day, being accompanied by an unprecedented amount of public interest and involvement.

The social infrastructure in Rieselfeld today includes Kepler Comprehensive Secondary School and its Sepp-Glaser-Gymnasium; the Clara Grunwald Primary School, the Rudolf Steiner School, a kindergarten called Taka-Tuka-Land, the children's day care centers "Rieselfeld" and "Wilde 13", another, "Arche Noah", that is run by the Caritas charity; a sports-kindergarten operated by Freiburger Turnerschaft 1844 e.V., two outdoor kindergartens, a private sports club, a district meeting center for youth projects that includes a "Mediothek", a media center for children and teenagers, the Mara-Magdalena ecumenical church center, and the fire station. At the beginning of May 2006, the new two-part gymnasium next to the Clara Grunwald Primary School was put into service. It also will be lent to clubs and the township of Rieselfeld. The Clara Grunwald Primary School has been the largest primary school in Baden-Württemberg since September 2007. In order to meet the peak demand of 8 classes, the second extension of the Clara Grunwald Primary School was inaugurated at the end of 2007 in the form of an additional building which can be assigned to other uses or can be sold if school enrollment decreases. The expansion of the Kepler Secondary School to an all-day school with four tracks was put into service in October 2007. The senior residence "Pro Seniore" complements this infrastructure. The construction of a sports hall for the Rieselfeld Rudolf Steiner School is in preparation.

Thus, the facilities available in the new district are tailored to residents' needs, and are supplemented by further offerings for children and teenagers. The City and the public have important partners in matters of social and cultural life: two church parishes, the Rieselfeld residents' association and its committees, the club "Sport vor Ort" (SVO), the exemplary district work of K.I.O.S.K. as well as the Freiburger Turnerschaft 1844 e.V. After just a few years, Rieselfeld now has an amazing social and cultural diversity. The residents produce a district newspaper which is distributed to all households and published its forty-eighth issue in June 2008. In addition, the calendar of events "Litfaß" appears once a month and is also distributed to all households. In the local trade association "Rieselmesse e.V." tradespeople from the district organized themselves to pool and express their interests. Annual events show the spectrum of the services offered.

The decision of the City of Freiburg in 1996 to take up the proposal of the Freiburg Protestant University of Applied Sciences set a direction: in addition to rapid need-based development of the public infrastructure, it called for so called neighborhood work to be carried out in parallel to the progress of construction, and thus to promote and support the development of social and civic life from the very beginning. The point of contact for practice-oriented research at the college was charged with this district work for a period of six years. Basic financing was provided by the escrow account Rieselfeld.

Aside from the coherent overall development concept, this successful and satisfying development has been based largely on the residents' strong identification with their district, and on the resulting positive public image of Rieselfeld. In late 2003 the district association K.I.O.S.K. e.V.,

which grew out of residents' social activity, assumed sponsorship of the district meeting center "Glashaus", which also houses the child and youth media resource center as a branch of the city library. This is an outstanding example of residents taking charge of their district. The Rieselfeld project group has encouraged public engagement since the earliest stages of planning. All this points to a heightened sensitivity of residents to their environment.

The annual "Rieselfeldmeile", a fun run that now has almost 2000 participants, also contributes to building the Rieselfeld image; it has become popular with locals as well as with people from the entire region. In 2009 the Rieselfeldmeile is again being organized by the local physiotherapy and running center P.u.L.Z. as it has been for each of its past twelve occurrences.

## **Marketing Strategy**

Marketing of real estate started in 1993 and has been both vigorous and successful.

Initially, planning and marketing were aimed at subsidized low-cost housing, privately financed rental housing investment projects, and apartments and family houses for private ownership. At the end of the nineties, however, state support for residential construction was changed from supporting rental housing to supporting ownership, and tax advantages for investors were cut, bringing about substantial changes in the business environment of real estate, particularly for multistory apartment house construction.

The project group reacted by intensifying investor acquisition for the construction of real estate for private ownership as well as for projects of joint building groups. In addition, a more flexible marketing strategy was developed which includes services for industrial building. As a result, demand continues to be excellent in the areas of both smaller investors' projects and private and industrial purchasing groups. Besides numerous small and larger investors' projects, more than 100 purchasing groups have formed (also in the construction of multiple dwelling units and multistory apartment buildings), and there are more in the works. Marketing continues to be successful, despite more than 90% of all construction being in the area of multiple dwelling units and multistory apartment houses. Very flexible investment handling by cost-free option financing with generous amortization periods has been an important factor contributing to this positive trend. This makes better structural control of demands possible, with the objective of positioning the right project in the right place. The objective of marketing structures instead of properties has been achieved to a great extent.

Other favorable factors include the fact that, through its proximity to the Haid industrial area, Rieselfeld is an advantageous location. Moreover, a large number of jobs as well as the intentional creation of the service sector in Rieselfeld itself.

## **Project Organization**

The project is not being carried out by external developers, but by a project group which is part of the city administration, but operates outside of the regular administrative hierarchy. They collaborate with Kommunalentwicklung LEG (KE LEG), a municipal service provider from Stutt-

gart. The City of Freiburg and KE LEG have appointed a joint project management team to lead the Rieselfeld Project Group.

At the head of project development and implementation, the project group functions as the central control unit for the project. The core team is supported by specialists from the city departments for planning and for real estate and housing. An important component during the development phase was the Rieselfeld City Council group which to date has met 70 times. In their meetings, with representatives of both the local citizen association and of K.I.O.S.K. participating, relevant projects and developments were discussed openly and constructively without immediate pressure to make decisions. This fundamentally contributed to the wide acceptance of the project both in the political realm and in the City district itself.

### **Project Financing**

This new area of the city finances itself completely through the sales of the city's own plots. Finances are handled by a trust outside of the city budget and - on a small scale - by subsidies such as those for the building of the schools and the fire-station as well as from the Building-Priority-Program of the federal state of Baden-Württemberg.

That means also that the project is especially dependent on marketing success, both in its magnitude and in its effects over time. Varied works in areas from real estate management, joint-financing, planning, and project management, to marketing and public relations, must all be generated by the trust assets. This includes also the personal costs of the core team as well as all of the costs of planning. In the area of public infrastructure, investment costs are financed over trust, follow-up costs being financed on the budget. The handling of the trust is settled through KE LEG GmbH. The account in trust will be closed on June 30, 2010. The funds for the implementation of activities which have been begun but have not yet been completed will be secured in the form of earmarked reserves.

### **The current state of development and perspectives**

Early in 2010 there were more than 9.200 inhabitants living in about 3.500 apartments. There has been a great demand for units of multi-story dwellings. This means that almost all available building plots, as well as multi-purpose plots (i.e. shops and housing) are being sold on option, are in the planning stage, or are already under construction. At present there is a demand for housing plots in spite of the fact that there are no corresponding plots available. The residential and business unit located at Geschwister-Scholl-Platz 1 (part of the first planning phase) includes a discounter and was completed in September 2006. The idea of integrating a supermarket into Rieselfeld is taking shape. Due to the current discussions about methods of awarding contracts for municipal properties with 'building obligations', the project was offered for tender Europe-wide. The municipal council made its decision on awarding the contract at the end of October 2008. Construction will be started in the first quarter of 2010.

All along the central avenue of Rieselfeld, more and more integrated business and residential units are coming into being and with them, more possibilities of trading and offering services. Consequently, the urbane character of that central axis is becoming complete.

Early in 2010 about 7 projects with about 230 apartments and numerous commercial units are under construction. Further projects for about 380 apartments are in the planning phase. The planning of the “Gebäudespitz” project at the district’s entrance, which is significant in regard to both urban planning and architecture has entered a concrete phase after successful acquisition efforts by the project management. The development of Rieselfeld should be complete by the end of 2011.

The positive image, comprehensive and demand-oriented enhanced infrastructure, and diverse and active public life in the district are important reasons for young families as well as senior citizens to choose Rieselfeld as their home, whether as renters or as home-owners – even though individual construction sites will be part of the townscape for another two to three years to come. Moreover, the Rieselfeld project group is strongly and systematic drawing on suggestions from the public for future development stages, and encourages residents' social engagement. A strong partnership between residents and the City has evolved, which has stood the test of conflict very well. Conflicts of interests and goals are unavoidable in a new district, and in such cases the welfare of all should be put above that of individuals.

The basic principle that has emerged is: "**more activity, less administration**".

The Rieselfeld project succeeds in keeping families within the city, and attracts families from surrounding rural areas back to the city. Rieselfeld has asserted itself on the real estate and housing market of Freiburg. Important goals of the City of Freiburg in the areas of urban development, residential building, and environmental policy are being realized in the spirit of sustainability.

Rieselfeld has indeed become a desirable address, and one can reasonably call it a successful example of sustainable district development.

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