

### Supplementary New Buildings in Existing Housing Estates

Supplementary new construction in existing housing estates has become interesting for building firms and local authority districts. In the western half of Germany, there are numerous finished projects and, respectively, a wealth of experience. In the eastern half of Germany as well - especially in the large number of tenement block settlements existing here - a certain number of supplementary new buildings have been completed in the last few years. A whole number of further projects are either being planned or are in construction.

It is often the case that supplementary development in existing housing estates results from an housing shortage and the search for development area reserves. However, it would be false to regard these as being the actual reasons. The multitude and the variety of the projects of supplementary development and the interest of the cities and the building firms for this topic would not be sufficiently explained by this alone. A whole string of further reasons exist.

One essential aspect is the urban development and structural shortage of large housing estates in the East and in the West. The aspiration to achieve numerous improvements in quality has been and remains the most important reason for the majority of projects in the tenement block settlements in the states of former East Germany. In addition to the improvement of the surrounding conditions of the housing estates and the extensive redevelopment of buildings, which was usually the start of the revaluation of these estates, the possibilities offered by supplementary new construction measures are also being discovered to a greater extent. These measures can contribute to rectifying or modifying existing deficiencies.

In this way, the supplementary new construction makes it possible to supplement in a targeted manner the often one-sided offer of housing in the housing estates by providing specific offers, for example housing which cater for older people or for people with special needs, which are often lacking in many housing estates, or by providing housing which are suitable for families in some housing estates. Additionally, in eastern Germany, it is a question of creating living space of a higher quality to the point of constructing owner-occupied housing and family homes, in order to retain the good social structure of most settlements which has existed up until now.

Supplementary new construction therefore offers a whole series of opportunities, extending way beyond the borders of simply providing living space from a quantitative point of view. This is further enhanced by the fact that many

housing estates offer extremely good preconditions for such supplements, due to the fact that the development and occupant density is low. This is true of the majority of housing estates in eastern Germany, but also of many western German housing estates originating from the fifties and sixties.

- ▶ Supplementary new construction saves space and costs: existing building land reserves can be used and the development expenditure for the new housing is generally very low.
- ▶ The existing infrastructure, which, in some housing estates, is no longer being used to full capacity, particularly schools and kindergartens, can receive, once again, better use or the supply of the housing estates with shops and services can reach an higher level. Public transport can also often be structured in a more efficient manner.
- ▶ Many occupants feel very close bonds to their housing estates. However, the housing sometimes no longer matches the shift in the conditions and needs of their lives, or the family sizes. With an extension of the supply of housing, these occupants can be provided with the opportunity of remaining in familiar surroundings after moving house.
- ▶ New buildings especially offer certain opportunities of controlling a good social mixture and a stable age structure of the occupants. The extra costs for creating housing which caters for the needs of older people, which are becoming increasingly required, are much lower in new buildings than they would be within the framework of the modernisation of existing buildings.
- ▶ The involvement of the building contractors for the new construction of housing and the extensive improvements arising from this for housing estates, result in a gain in image, not only for the contractors themselves, but also for their tenants.
- ▶ The often neglected structure of the housing estates, not least of the area of perception and experience of the occupants travelling on foot or by bicycle, can be improved considerably by the construction of new buildings. Well placed and sensitively matched forms of architecture can have an important aura, revaluing the old stock of buildings. The shortage of the historical dimension - the exaggerated homogenous style of the housing estates and the buildings contained therein, resulting from their simultaneous creation - is rectified by the new urban development and structural attempts.

- ▶ In order to ensure the long-term ability to lease the housing in all locations, it is necessary for the housing estates to create a distinctive image for themselves in the sense of providing for the wishes of the tenants. This must be tackled in an especially long-term sense. The trends differ in this context: some wish to live in more rural surroundings, other favour an urban framework. A large proportion of the instruments required for this creation of a distinctive image belongs to the sector of urban planning. However large proportions of the implementation must be provided for by the building sector. Above all, supplementary new constructions will be able to provide the existing housing estates with urban qualities. In this context, it will be important for the survival of the housing estates that they regard themselves as being an instrument of urban development.

There are therefore numerous factors which speak for the supplementary new construction in existing housing estates. The experiences of housing construction firms and other contractors and participants with these projects are worthy of being passed on.

Using more than 30 examples, the research report describes, analyses and, as far as this is possible, generalises which individual experiences were gained, which problems occurred and how these were dealt with. With regards to future projects, this can convey both positive and useful experiences, as well as contribute to avoiding the repetition of unnecessary mistakes.

The examples presented demonstrate that the supplementary new construction in housing estates takes on many varied forms and supplements, revalues and enriches both the housing estates and the houses themselves in an harmonious manner. Building contractors and architects, cities and municipalities, new tenants and residents regard the measures as having been successful, at least in retrospect. The revaluation of the residential surroundings and the re-structuring of the parking facilities have often contributed to the new building being accepted.

The documentation section of the research report provides, in order to highlight the examples, project data, initial situation, the objective and special experiences. The examples are grouped together according to the nature of the projects:

- Construction of new storeys
- Extensions
- Independent new buildings
- Combined measures
- Housing estate extensions

The evaluation of the results and experiences took place according to a close examination of a cross section of the essential aspects and partial tasks. Of these, three chapters deal with the objectives and the initial resolutions, a further five chapters deal with the implementation of the same. These cross-section chapters are summarised briefly in the following text.

### Structural and Urban Development Solutions

The challenge of urban development during supplementary projects is in finding a successful solution for the combination between the old and the new, in referring to the existing whilst simultaneously creating new qualities and balancing out deficiencies.

Supplementary constructions can break open the often monotonous and disproportionate structures and lend the buildings and rooms new qualities. Even external disturbances can be alleviated. The improvement of the exterior appearance of the housing estate supersedes by far the actual and individual measures implemented. It is recommendable to base the planning on urban development framework plans, if larger housing estates are to be re-developed or supplemented in a manner exceeding any individual measures. Should no urban development framework plan exist, then preparatory urban development examinations for certain areas are often implemented.

### Housing and Residents

To a large extent, the population and household structure in housing estates is dependant on the mixture of housing and the age of the housing estate. This leads to unbalanced proportions in the age structure, which will prevent the steady capacity utilisation of the infrastructure over a longer period of time. Additionally, several of the housing estates presented are not numbered amongst the preferred residential areas (income structure, proportions of foreign residents and emigrants). In these areas, the supplementary new construction can be applied as a control instrument.

The difficult question can be raised for all projects whether the residents can accept the measures or not. The building contractors are essentially in agreement that any possible losses for the residents must be compensated. In this context, the modernisation of the stock of buildings and the re-structuring of the residential surroundings play an important role. Leaving aside a few rare exceptions, in the examples presented, the inhabitants profit in certain ways from the structural supplement and do not only suffer disadvantages.

It becomes very clear that a punctual information regarding the project as a whole and the possible consequences for the residents plays a decisive role in the acceptance and the success of a project. Good public relations and, above all, the inclusion of the directly affected residents should not only help to avoid trouble, rather the residents themselves can also contribute to the success of the project by providing their own suggestions and convey to the building contractors and the planners their own view of the priorities. The building contractor should give serious attention to objections and fears and, additionally, should keep the disturbance during the period of building as low as possible.

### Residential Surroundings and Parking Facilities

Nowadays, considerable value is attached to the quality of the residential surroundings. Generally speaking, this means for the supplementary new construction that valuable green areas and existing residential qualities should be preserved, or the loss of the same should be fully compensated. The chances for this are good in existing housing estates, due to the fact that the majority are marked by generous free expanses.

There is a lot to catch up on in a certain proportion of the housing estates with regards to the structure of the residential surroundings. Additionally, the requirements placed in the residential surroundings have changed: ecological concepts are growing in importance, free expanses which had previously been accessible for all, but hardly ever used, are being allocated to the ground floor apartments as private, rented gardens and new concepts of waste disposal by collecting recycling materials and composting require the creation of appropriate collection points.

Parking facilities and the structuring of the residential surroundings should be integral components of an overall measure. In this context, a compromise should always be found between the more economical solution with ground level parking spaces and the relief of the residential surroundings from the stationary traffic by providing underground car parks. For these reasons, the larger western German projects arranged at least a proportion of the parking spaces in underground car parks. It is less common for this to occur in eastern Germany. The leeway required for supplementary new constructions often only exists if the required parking facilities can be provided under reasonable conditions.

### Planning Procedures and Concept Development

A thorough planning is important, especially for supplementary new constructions. The phase of building

should not start prematurely. The striving to reduce costs in the planning and preparatory phase can lead to a considerable increase in costs during the building phase. This is especially true for a thorough examination of the building land and, when adding storeys, for the structural engineering of the building.

When searching for the best solution, competitions generally provide an high gain in quality: different draft designs provide a good basis for the decision-making. However, there are sometimes misgivings linked to competitions, due to the fact that they generate costs and prolong the period of planning.

### Planning and Building Laws and Sites

Almost without exception, supplementary new constructions are authorised on the basis of § 34 of the Planning and Building Code. The hope for a speedy authorisation procedure which is linked to this and the quick realisation of a construction project remains often unfulfilled in eastern Germany. § 34 of the Planning and Building Code actually presupposes that no further clarification is required for the urban development frameworking of a building project. However, the fact remains that this is the exception for larger projects in eastern Germany, whereas these problems are hardly of relevance at all in the states of western Germany.

The majority of supplementary new constructions are implemented on undeveloped plots of land or parts of the same. However, the predominantly expansive free areas in existing housing estates often lead to the potential for supplementary constructions being overestimated. Additionally, in eastern Germany, it is often the case that the plots of land, defined at a later date, do not have a suitable cut.

### Development

It is only rarely necessary to build new roads for the traffic. However, it is more frequent that the pedestrian pavements are re-designed in connection with the measures in the residential surroundings. Without exception, the problem of the validation of parking facilities arises during all supplementary measures: the same demands are placed in independent new constructions, extensions and renovations as is the case for other new buildings. Exceptions are sometimes possible during the addition of new storeys or the development of the attic area. Generally, it is not necessary to validate any new parking facilities in the course of modernisation measures.

The existing supply and disposal pipes and mains are predominantly of sufficient dimensions for the new apart-

ments to be connected. However, a particular problem for supplementary new constructions is posed in eastern Germany: no differentiation was made here between the marked-out routes in the technical infrastructure between private and public areas. Additionally, the pipelines had not been correctly mapped in many projects. If, after the plots of land have been defined, these pipes are located on private plots, then the building contractor must have them moved, a measure which is linked to high costs.

### Building Site Organisation and Implementation of Building

The installation of a building site in existing housing estates does require more effort than in development areas, but it remains more economical to organise than, for example, in city centre locations. However, it is necessary to plan with considerable care in inhabited areas: disturbances caused by noise, dust, damage to the building stock and dirtying must be kept as low as possible and the accessibility of the apartments must be guaranteed throughout the period of building.

More extensive building projects are generally implemented in a succession of several building periods. This can be sensible in the interests of an optimum organisation of the course of the building. Even the authorisation of the start of building can be accelerated in this way and, under certain conditions, the disturbance of the residents can be reduced.

There are special features involved in the implementation of building when carrying out extensions or the construction of new storeys. In this context, extensions in eastern German tenement block estates require extensive laying of foundations for the building. The construction of new storeys presupposes that the existing structural components are able to carry the additional loads. However, it was possible to achieve good solutions in this area by using lightweight constructions with suitable load bearing systems. In projects of this nature, water damage in the top-storey apartments occurs on a repeated basis. The use of prefabrication can shorten the phase of building considerably.

### Looking after Tenants

The necessity to look after the residents grows in a direct proportion to the extent of the disturbance they are required to suffer. For these purposes, it is sensible to hold regular consultations. However, this is often insufficient. It is then sensible to look after the residents in a more intensive manner. Even if a wealth of organisational details must be dealt with or if tenants with a special need

for help must be looked after, it eases the implementation of the building to a great extent if social planning offices or tenant care societies are entrusted with this task. In this context, it is not simply a question of dealing with needs in a competent manner, but also of the important role of the fair mediator and, not least, of contributing to a trouble-free course of building.

### Costs and Financing

The building costs for supplementary new constructions are within the usual scales. Even the 'supplement-specific' additional costs are generally so low that they are hardly noticeable in cost comparisons. However, it is possible to make considerable savings in the building site and development costs.

Supplementary measures are particularly economical if they are combined with modernisation or maintenance work which would have had to have been implemented anyway: if the roof of a building must be renewed anyway, one should combine the renewal of the roof with the construction of new storeys. In this way, it is possible to transfer the maintenance costs to costs for the creation of new living space.

It is only the often unavoidable re-laying of the pipelines in eastern Germany which cast doubts on entire projects. However, even in these cases, it can definitely be profitable to develop corners and gaps, if this leads to a considerable revaluation of the urban development structures, a desirable differentiation of the supply of housing and a securing of the infrastructure.

It is not rare for the high costs involved with the provision of parking facilities to cast doubt on the feasibility of a project. Due to the fact that the costs for underground car parks are so high, thus meaning that the actual rent, i.e. purchasing prices would not be accepted, these are generally financed using mixed calculations. The uncovered costs are transferred to the apartments, thus meaning that these become more expensive, even for tenants without a car. However, this also affects to the same extent projects in development areas.

The vast majority of the examples presented were subsidised with public funding. For some of the projects, a means of subsidisation was selected which is also open to medium-income households, in order to supplement the supply of housing in the housing estates with living space of a higher quality. Only a few of the measures were financed freely and these were also measures which were not in a very close connection to the existing development.

The existing subvention instruments and programmes provided by the Federal and State Governments have essentially proven themselves to be suitable for the requirements of the supplementary projects.

However, the opportunities of revaluing existing housing estates by implementing supplementary new constructions is limited by the financing capacity. In this context, the capacities of many construction firms in eastern Germany remain greatly engrossed by their necessity to redevelop and modernise their stocks of buildings.

It also appears sometimes questionable whether investments in problematic locations are even worthwhile. Some housing estates, in East and West, are currently in a bad condition. This sometimes concerns the social situation in the housing estates. These housing estates are then affected by migration to an even greater extent. This results in a downward spiral, which makes the already bad image of the housing estate sink even further. Some housing estates in eastern Germany are becoming apparent, in which, in the short or long term, it will no longer be economical to maintain the residential structures.

However, in many housing estates, by using supplementary measures or, in problem locations, by reducing the numbers of buildings, it is possible to set a clear signal that the intentions for the location are serious and that sufficient importance is attached to the location to justify involvement. In this sense, the supplementary new construction is also a form of increasing and securing the value of the stock. To refrain from rectifying structural deficiencies means to allow for a speedy growth in detrimental repercussions and a destabilisation of the social and residential economic aspects.