

CREATING GREEN AND OPEN SPACES IN HOUSING CONSTRUCTION WHEN RESOURCES ARE SCARCE

Social, urban and ecological trends and costs – a summary

Increasingly, high quality green and open spaces are considered to be important even in dense high-rise developments.

Green and open spaces are coming under more and more pressure due to higher construction costs and land prices for residential building, the strong demand for housing resulting from the growing population in Vienna, and the densification that is currently being pursued of residential building on inner-city sites and in areas where the infrastructure has already been developed.

Taking into account these heightened economic and general ecological requirements, the objective of this study was to discuss the attributes, framework conditions and methods of high-rise residential building and housing-related urban development in Vienna in relation to the costs of planning green and open spaces.

On the basis of interviews with around 20 experts and stakeholders in Viennese housing as well as closer examination of three case studies dealing with subsidised residential developments and the evaluation of relevant research on the subject, it was possible to draw conclusions on potential savings and their limits and relate them to attributes and procedural conditions.

As important aspects of the everyday life of the inhabitants of the city and its ecological system, in essence green and open spaces obey a different objective and temporal logic to that of buildings. Often they only demonstrate certain attributes and deficiencies over the course of the years. Much of the “substance” (trees, shrubs, etc.) develops only gradually and is subject to a constant process of change. It is also sensitive to a wide range of influences, including the type of use and upkeep. Within the context of mindsets and methods that still cater strongly to “building”, the challenge consists in developing even more suitable foundations for the planning-related and instrumental integration of green and open spaces.

Green and open spaces in the planning process

Despite the high level of importance that is now accorded to planning green and open spaces in subsidised housing construction in Vienna, all of the interviews show that within the overall urban development process up to the completion of the buildings they are often involved at too late a stage and dismissed again too soon. When it comes to the relative power of building contractors, architects and landscape planners, the latter still occupy the weakest position in the current planning structure.

A “missing link” between the different levels in the planning process - that of urban development – has been highlighted. At the urban development level, many projects are already drawn up in great detail, going so far as to include floor plans. On the other hand, guidelines, development principles and important urban development targets are mostly only drawn up for larger projects – as was the case for the very extensively detailed development of “Aspern Vienna’s Urban Lakeside”.

At present, cooperative planning processes are being implemented in various different project areas. These new processes are still in the trial phase, but offer a good way of involving different stakeholders (administrators, planners, experts, citizens, building contractors etc.) in a relatively equal manner at an early stage in the development of new urban districts. In the experience of the experts, such approaches also enable coordination problems in the process to be minimised.

Continuous support of the planning and implementation process by open space planners at all levels of project development could make a considerable contribution to general cost reduction in the urban development context.

Green on the building site

As was the case with the urban development level, it was ascertained that on a project-specific basis too, in a multitude of cases the introduction of green and open space planning on individual construction sites was firstly introduced “too late” in the planning process, and secondly that it ended “too soon”. This can also lead to coordination problems on the building site right to the point of implementation, as the planners are no longer sufficiently involved in the detailing, tender process, decisions regarding retrospective savings or in controlling the implementation (supervision etc.). Making savings in the wrong places can have serious consequences for the overall quality of the green and open spaces. The relatively low proportion of costs for green and open space in the overall building and running costs (only 1.5 to 3%) cannot vindicate such counterproductive approaches.

Upkeep

Upkeep is critical for the development of green and open spaces. Savings in the construction and design of green and open spaces, the selection of supposedly cheaper elements, poor execution and inadequate building supervision lead not just to poor quality in terms of possible uses and durability, but also to higher costs for upkeep. Inadequate expertise and a lack of information on the part of maintenance personnel, as well as a lack of understanding on the part of the residents regarding the choice of species and the design concept often have serious negative and sometimes costly consequences. A good maintenance concept, well-trained maintenance personnel, advice on maintenance from the landscape designers in the first few years together with information for and - depending on the project - involvement of the residents in the upkeep and development of the spaces can contribute to ensuring the best possible and most economical development of the land.

Ecological development

Ecological developments in terms of roof greening, rainwater soakaway systems, CO₂ reduction in connection with the green volume on sites, optimum building site organisation and the intelligent use and combining of detailed technical “smart city” solutions make an overall contribution to the reduction in building and maintenance costs and thus to some extent to the reduction in running costs for the residents too.

Green “in spite of” scarce resources

Careful and adequate investment in the planning process, in construction and in upkeep leads overall, and especially over the long term, to savings, not least in running and maintenance costs. As the execution of green and open spaces falls at the end of the building process, they are especially susceptible to late modifications and cutbacks.

Consistently it was ascertained from the various stakeholders and experts that good basic equipment in open spaces costs around €100/m² and that it is only possible to get by at a level of €70/m² if the continuous area of open space is sufficiently large. The basic equipment includes paths, trees, other planting, playground equipment, furnishings, open space drainage and illumination at low level.

According to the largely unanimous view and experience of all of the stakeholders and experts, there is no - or only an extremely low - potential for making savings in the case of establishment and maintenance costs for green and open spaces. In view of the satisfaction and local recreation possibilities for the residents, making savings in open spaces is considered to be rather counterproductive.