Building for people and animals: Animal-Aided Design in the Schumacher Quartier

The Earth is increasingly being shaped by cities. According to UN estimates, by 2050 the populations living in urban centers worldwide will grow by 2.5 billion people. But where does nature fit in with this growth in large cities? A close look shows the following: Nature is already right in the midst of our cities - from moths to bats! In future this will mean consciously shaping and using urban nature to preserve and enrich species diversity. In urban planning the issue of biodiversity is still a completely new one, and with Animal-Aided Design it is being specifically integrated into the Schumacher Quartier.

Animal-Aided Design is a proprietary term of the landscape design company bgmr Landschaftsarchitekten with Polinna Hauck GbR - Studio Animal-Aided Design. It is a planning method in which open spaces and buildings are designed in such a way that the needs of specific animal species are met. At the same time, the residents of the Quartier are able to rediscover nature. To watch a squirrel scrambling up a tree or to hear the song of the skylark in the evening - experiences like these convey a very special feeling of the quality of life in the very midst of the city.

14 target species for the Schumacher Quartier

Experts have identified 14 promising target species for the Schumacher Quartier. Living conditions appropriate to these species are being created for them in the adjacent Landscape Park on the site of the former airport.

- 2 species of mammal: European red squirrel, serotine bat
- 6 bird species: nightingale, crested lark, starling, house sparrow, swift, kestrel
- 1 amphibian: green toad
- 5 species of insect: swallowtail butterfly, brown argus butterfly, privet hawk-moth, short-fringed mining bee, bow-winged grasshopper

Consistent with biodiversity, it is to be expected that more species will become established in the Quartier in addition to those targeted. The Animal-Aided Design planning method was developed by the ecologist Prof. Dr. Wolfgang Weisser of Technical University of Munich and the landscape architect Dr. Thomas E. Hauck of the University of Kassel. These scientists describe their approach as “Building for people and animals”.

Animal life cycles as the main focus

Unlike with earlier urban planning methods, in Animal-Aided Design the full life cycle of particular animal species is analyzed. For instance, up until now nest boxes have been placed or bushes planted in individual construction projects in the hope that birds of any kind would become established in the Quartier. However, depending on the species and the season of the year our feathered city dwellers also need, for example, very specific plant and insect species for their food sources. Then again, young birds, depending on their stage of development, need food that is different from that of adult birds. In its planning of open spaces and buildings, Animal-Aided Design attempts to take into consideration all requirements in the life cycle of animals.

In order to have a broad a variety of species in the Schumacher Quartier as, Tegel Projekt GmbH 2018 had commissioned an expert appraisal with Polinna Hauck GbR - Studio Animal-Aided Design. This was published in February 2019. It investigated the possibilities for Animal-Aided Design in the Quartier, with over 5,000 homes for more than 10,000 people. In total the area under consideration, including the Quartier Park and the adjacent Landscape Park, covers 85 hectares. Weisser and Hauck, who initiated the concept for this novel planning method, were also involved in the appraisal together with other associates.

The target species were selected through an elaborate process. Firstly, the project partners identified from available mappings hundreds of species that already live on the Tegel airfield and in the adjoining natural areas such as the Jungfernheide. These include as many as 63 bird species, 9 reptiles and amphibians, and more than 500 species of insect, from wild bees to a most diverse variety of butterflies.

In addition to the natural areas already existing, the experts also carefully examined future layout options in the Schumacher Quartier. In doing so, they found several factors that favor species diversity in the Quartier. Spacious open areas such as the Quartierspark are just one example of these. Above all, planning the Quartier as a water-sensitive and climate-friendly area offers much potential for biodiversity. Plants on greened facades and on roofs, as well as on rainwater retention areas, create additional habitat for a whole range of species.

Avoiding possible conflicts from the outset

Animal-Aided Design also takes into account the relationship between people and animals. Many people will perceive the calls of birds such as starlings and swifts to be enriching only if the birds are not nesting on the walls of their houses. This is why the planners suggested that the ideal locations for nesting aids are the facades and eaves of the untenanted mobility hubs.

The planners first identified a list of 33 animal species that might make their home in the Schumacher Quartier. In October 2018 this was discussed with local actors from nature conservation and from administration. With the aid of the additional information the 14 target species for the Quartier and the Landscape Park were then selected.

Important findings for science

The appraisal identifies numerous measures to enable the target species to become established in the Schumacher Quartier. Places for birds to rest, nest and roost can be integrated into building facades. The experts make detailed suggestions for green roof design to promote biodiversity. For plants in public and communal areas of the Quartier, the appraisal recommends a whole catalog of species that provide habitat for insects and that were not selected simply on the basis of being considered “low maintenance”.

The Schumacher Quartier provides an important experimental area for Animal-Aided Design, a planning method still in its infancy. The scientists involved expect important insights into determining how successfully new species can be established in residential districts.