

# Ecologically sustainable real estate: The "Green Building Site of the Future" shows how it works!

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As part of the BIGG Change Conference 2022 at the GREENTECH Festival, the "Green Building Site of the Future" shows which technological innovations are already available to significantly reduce the ecological footprint of building projects and also achieve the climate protection targets of the European Union within the real estate industry.

Some 30 enterprises have joined together for this "building site" to make it possible to experience the vision of a unique, sustainable residential project. Here the visitors are guided through the various phases of construction until the completion of a fully functional model apartment. Their concept will be defined essentially by eight characteristics:

## 1. Building materials

All materials that are used at the building site have been chosen according to clear ESG guidelines, are comprehensively C2C compatible and have been produced by correspondingly certified enterprises. The use of (recycling) concrete will be minimised by use of high performance concrete to reduce the support structure profiles.

## 2. Handling resources

Moreover not only is recycling concrete used but also recycling carpets. In addition overarching waste management assures avoidance of refuse during the construction phase.

## 3. Plants and water use

Underground garage roofs and terrace spaces are planted intensively, while roofs are planted extensively. Thus deliberate living space for insects and small animals is created. Beyond that beehives as well as nesting places for birds will be integrated into the project along with the creation of urban gardening spaces for tenants. Groundwater and rainwater collected with the retention roof and stored will be used to irrigate the garden.



# 4. Energy management

Along with geothermal and air heating pumps, heat generation is also performed using photovoltaic plants on the facades and balcony railings as well as the roof. The electricity thus generated can be used in the building itself or even for e-mobility.

# 5. Reduction of ancillary rental costs

The technological equipment follows the standard "low tech is high tech" and thus generates savings in production, operation and maintenance. The tenant's consumption costs will be billed on the basis of space share and number of residents or apartment number allocation, whereby cost intensive calibration, reading and billing procedures for classical efficiency and low energy buildings are unnecessary.

## 6. Walls

The use of especially narrow, sustainably produced wood-frame outer walls in modular construction optimises the proportion of building shell to usable space. The diffusion-open external wall construction also contributes to the room atmosphere control and to prevent mildew. Particularly narrow inner walls provide the same use value with smaller room size.

## 7. Baths

Pre-fabricated baths are used to save construction time. Shower channels also permit significant reduction in floor screed. Cool start fixtures reduce water consumption. Separate shaft systems for cold and hot water supply avoid energy loss and reduce the amount of insolation needed.

# 8. Supply channels

For transport routes and supply channels for construction materials, shortening and simplification premises apply, relying on the regionality principle and the interconnectivity of one's own materials suppliers.