

Certainly not a Wallflower – the Green Façade on the New Drees & Sommer Office Building



The green façade on Drees & Sommer's new office building at its Stuttgart headquarters covers an area of more than 100 square meters.

VIDEO: [Ecological and alive: green façade on new OWP12 office building](#)

Stuttgart, Germany, September 27, 2021. Planting greenery not only on roofs but also on façades has a positive effect on the climate of the immediate surroundings and on biodiversity, especially in our cities. The building does not heat up as much, insects settle at the location and the plant walls filter pollutants and insulate noise. Another plus point: the greenery creates a feel-good atmosphere. Drees & Sommer SE, the planning and consulting company specializing in construction and real estate, uses its new OWP12 office building to demonstrate how a planted façade even works on the north side of a building. It is currently building an innovative showcase property for its own use at its headquarters in the German city of Stuttgart.

Covering an area of more than 100 square meters, the green façade on the new office building in Stuttgart's Vaihingen district extends over three stories to a height of 12 meters. 'In many cities – including Stuttgart –, the greening of façades will be a requirement in future development plans.

Through our new building, we not only want to set a good example, but also to be involved in developing the basis for implementing these requirements. We are testing it on our own building as a key element in this development,' explained Thomas Berner, who heads the WP12 project at Drees & Sommer.

Observing Stringent Fire-Safety Requirements for High-Rise Building Construction

Instead of a ground-based system, Drees & Sommer is using a wall-mounted geomembrane/substrate system, over 95 percent of which consists of mineral materials. 'The plants grow in a container with substrate attached directly to the façade. Geomembrane as a material is important to meet the strict fire-safety requirements in high-rise construction. So we used a special geomembrane made of a basalt-glass mixture, which has the property of being non-combustible. The panels we use are also easy to place in front of finished façades, and they are comparatively lightweight,' said Thomas Berner.

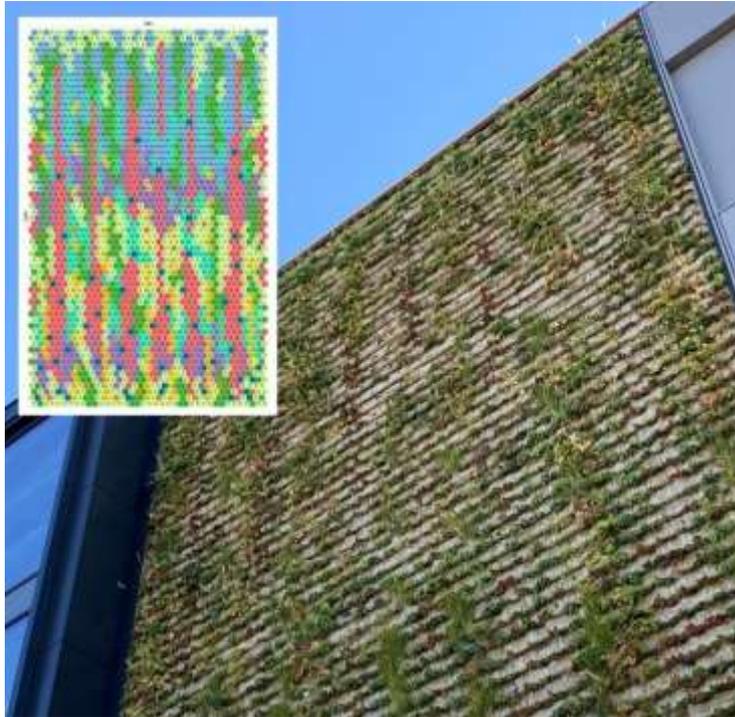
Biologist Kilian Lingen of Vertiko GmbH, who supervised the greenery design for the new office façade, adds: 'Apart from the plants and the drip pipe, the system used at Drees & Sommer consists of non-combustible building materials. We tested it at Vertiko in 2020 and conducted a large-scale fire test. It has been shown that the system cools the façade due to its water content. As a result, temperatures in the back ventilation space remain well below the levels that you get with a metal-only façade.'

Well-Thought Out Mix of Plants Ensures Varied Appearance

Instead of a monotonous green area, the OWP12 façade will have a lively and dynamic appearance throughout the year once the growing phase has finished. 'Together with Drees & Sommer, we developed a planting plan for the OWP 12 building. It includes eleven different plants and six different colors. Purely summer-green plants, evergreens and the flowering phenology provide a varied appearance,' pointed out Kilian Lingen. The various species include Chinese goat's beard, bergenia Oeschberg with beautiful autumn colors, and the (purple) alumroot called heuchera villosa.

Sufficient Sun and Enough Water

Although the wall of the OWP12 office building is a north-facing façade, the concern that the plants would not get enough sun is unfounded, the biologist continued. 'What we need is a certain amount of photosynthetically active radiation. This varies depending on the plant species. With the right choice of plants, it is also



present to a sufficient extent in the north. It is also important to be able to

An overall appearance was developed with the aid of a planting plan. After the growing phase, the appearance is always lively and dynamic throughout the year. ©Drees & Sommer SE

water the plants when there is not enough rain,' explained Kilian Lingen.

The green façade of OWP 12 is supplied with rainwater. This is collected in three cisterns on the roof of the building and distributed via a gravity gradient. 'For exceptionally hot periods, a top-up from the freshwater system is provided, with automatic control,' commented Drees & Sommer's project leader Thomas Berner.

Costs Now Manageable

If the greening is done well, then a property is very likely to see a steady increase in value in the future, according to Thomas Berner, although it is difficult to put a figure on this across the board. He also believes that the cost itself is no longer an argument against installing a green façade. 'If you break down the costs into substructure, including insulation and planting, and the technology required, such as automatic watering and rainwater storage, we are at 150 euros per square meter for the planting and around 100 euros per square meter for the technology.'

The cost of the substructure is from 300 to 500 euros per square meter, depending on the structure and the insulation required. So the cost will no longer be a crucial counterargument.'

OWP12 – Designed as a Net Plus Energy Building

Photovoltaic systems on the roof and on the south-facing façade, a newly developed, highly insulating façade construction, geothermal energy via geothermal boreholes, and a greened north-facing façade: when Drees & Sommer moves into its new offices in Stuttgart's Vaihingen district, employees will work in a plus energy building that generates more energy than it consumes in operation. It will also comply as far as possible with the Cradle to Cradle requirement for recyclability. This means that it meets all the sustainability requirements that are expected in the future. This also applies to modularization and digital processes and services.

The four-story building with a gross floor area (GFA) of around 7,000 square meters is costing EUR 22 million. It features a large conference section and zones for employees such as a terrace, a cafeteria and a staff restaurant on the first floor.

OWP12 INNOVATION JOURNEY

In an OWP12 Innovation Journey, Drees & Sommer is inviting all those interested to find out about the innovations at the Obere Waldplätze 12 construction site, presented as a virtual program. On March 24, the technical building services module was presented, and on April 22 it was the turn of the modular façade. On June 29, the topic 'Cost-effective Processes' dealt with use of the digital methods BIM and LCM. On July 15, the focus was on the Cradle to Cradle approach to buildings and sustainable start-ups. On September 22, the topic was the greened façade. The session on November 23 will highlight building operations, digital processes and services, and automation. Anyone wishing to take part is welcome to register with presse@dreso.com to receive all the access data.

Follow the link for further detailed information on the building and video links to past events.

[New office building construction: Obere Waldplätze 12, Stuttgart \(dreso.com\)](https://www.dreso.com)

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