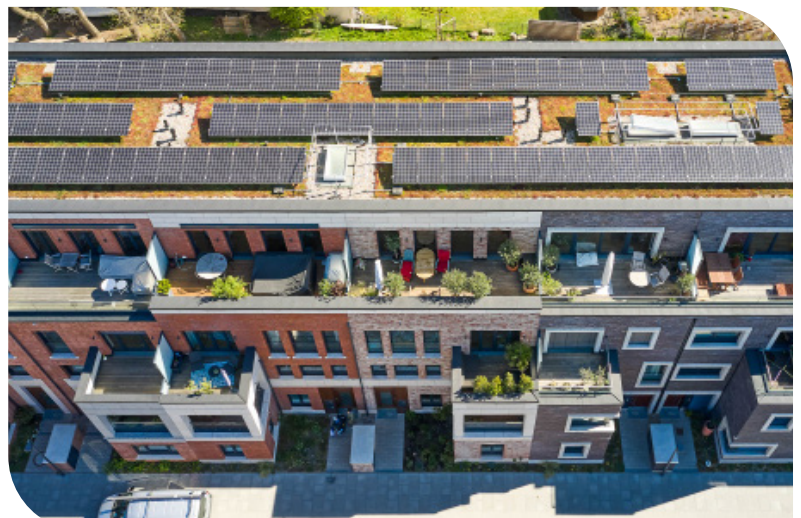


# Green living space meets renewable energy -

## Solar green roofs as a building block for sustainable urban development

Solar green roofs represent a fascinating and future-focused collaboration between sustainable architecture and renewable energy generation, which is becoming increasingly important in both urban and rural areas.

This innovative technology combines the benefits of green roofs, which help to regulate temperatures, improve air quality and provide habitats for urban wildlife, with the environmentally friendly generation of electricity from photovoltaic modules



The combination of green roofs and photovoltaics is more than just a green addition to conventional buildings. It is an integrated solution that improves the quality of life, reduces energy costs and at the same time makes a valuable contribution to environmental protection.

By installing a solar green roof, a building becomes an active part of the energy transition by both contributing to the reduction of the urban heat island effect and producing clean, renewable electricity.

### **UP-TO-DATE !**

Fire protection on solar green roofs:

Exclusive research results from Optigrün show that green roofs in combination with PV systems do not represent a fire load, but - quite the opposite - protect the roof.

## Advantages & synergy effects through solar green roofs



### SUSTAINABLE ENERGY GENERATION

By utilising solar energy to generate electricity, a solar green roof contributes to reducing the CO<sub>2</sub> footprint and helps to protect the environment



### IMPROVED ENERGY EFFICIENCY

Solar green roofs improve the energy efficiency of a building by supporting thermal insulation and reducing energy consumption.



### SERVICE LIFE & FIRE PROTECTION

The solar modules and greenery protect the roof from the weather and extend its service life. In addition, solar green roofs demonstrably protect the roof structure from the effects of fire.



### CITY BUILDING ADVANTAGES

Solar green roofs help to reduce urban heat islands, improve air quality and create ecological living spaces.

## The structure of a solar green roof

1

The bottom layer of a solar green roof is a separating, protective and storage fleece that primarily protects the roof waterproofing from damage.

2

Above this, a drainage and storage element provides water retention with a large water reservoir for optimised water distribution.

3

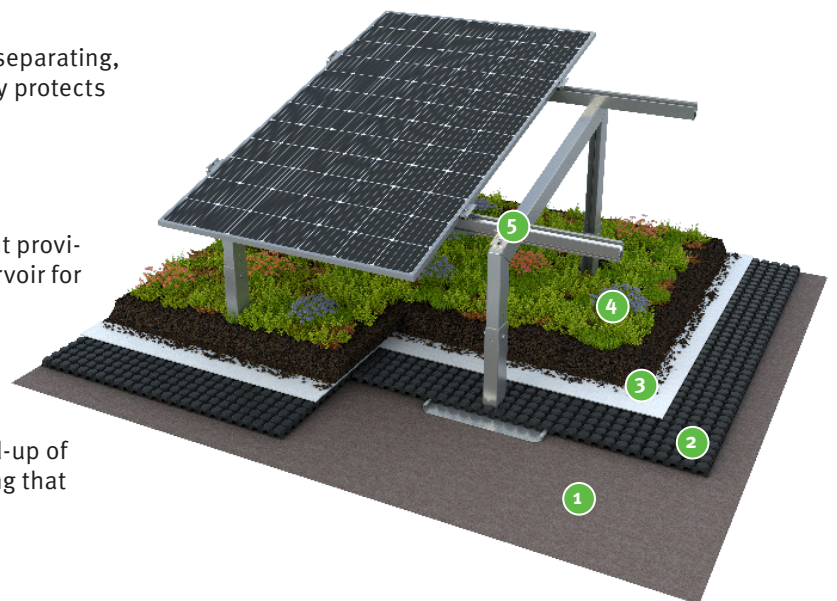
A filter fleece effectively prevents the build-up of fine particles in the drainage layer, ensuring that water permeability remains high

4

A substrate with a good air void volume and high water storage capacity, together with the vegetation, ensures that the greenery covers the entire area.

5

A solar mounting is integrated into the green roof system to which the photovoltaic modules are attached. This is securely attached to the roof by the system's load.



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