

13th Newsletter of the UFZ Green Roof Research



February 04, 2023



Research green roof

at the Helmholtz Centre for Environmental Research – UFZ



Europäische Union

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This construction measure is co-financed by tax funds on the basis of the budget passed by the members of the Saxon state parliament.

Research partners:



UNIVERSITÄT
LEIPZIG



Practice partners:



Ingenieurbüro Blumberg



Stadt Leipzig
Amt für Umweltschutz

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4th Leipzig Green Roof Academy

On 14 November 2022, the award ceremony of the 4th Leipzig Green Roof Academy took place in the Ratsplenarsaal of the New City Hall of the City of Leipzig. Seven students from different disciplines worked in three groups to develop concepts for a green roof system on the future primary school building and the adjacent sports hall in Anger-Crottendorf and presented them at the award ceremony.



Photo: Lucie Moeller, UFZ

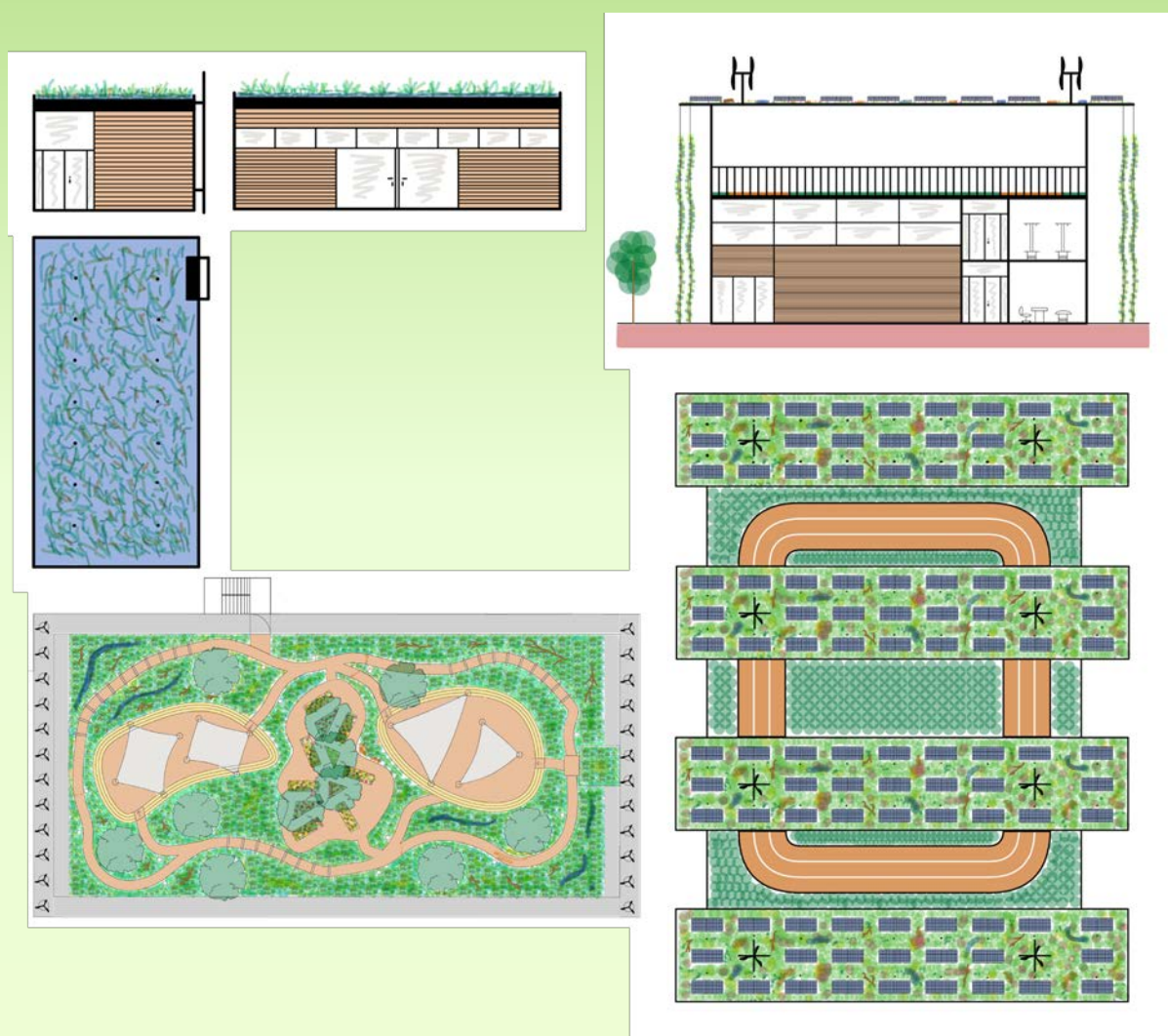
We would like to express our sincere thanks to the practice partners (ZinCo, OptiGrün and Leipziger Wasserwerke) for their active support in the form of an advisory role for the students during the creation of their designs and their contribution in the form of prize money. We would also like to thank the Friends and Sponsors of the UFZ e.V. for their uncomplicated support in transferring the prize money to the winners. A big thank you also goes to the Office for Environmental Protection of the City of Leipzig for their support in organising the Academy.

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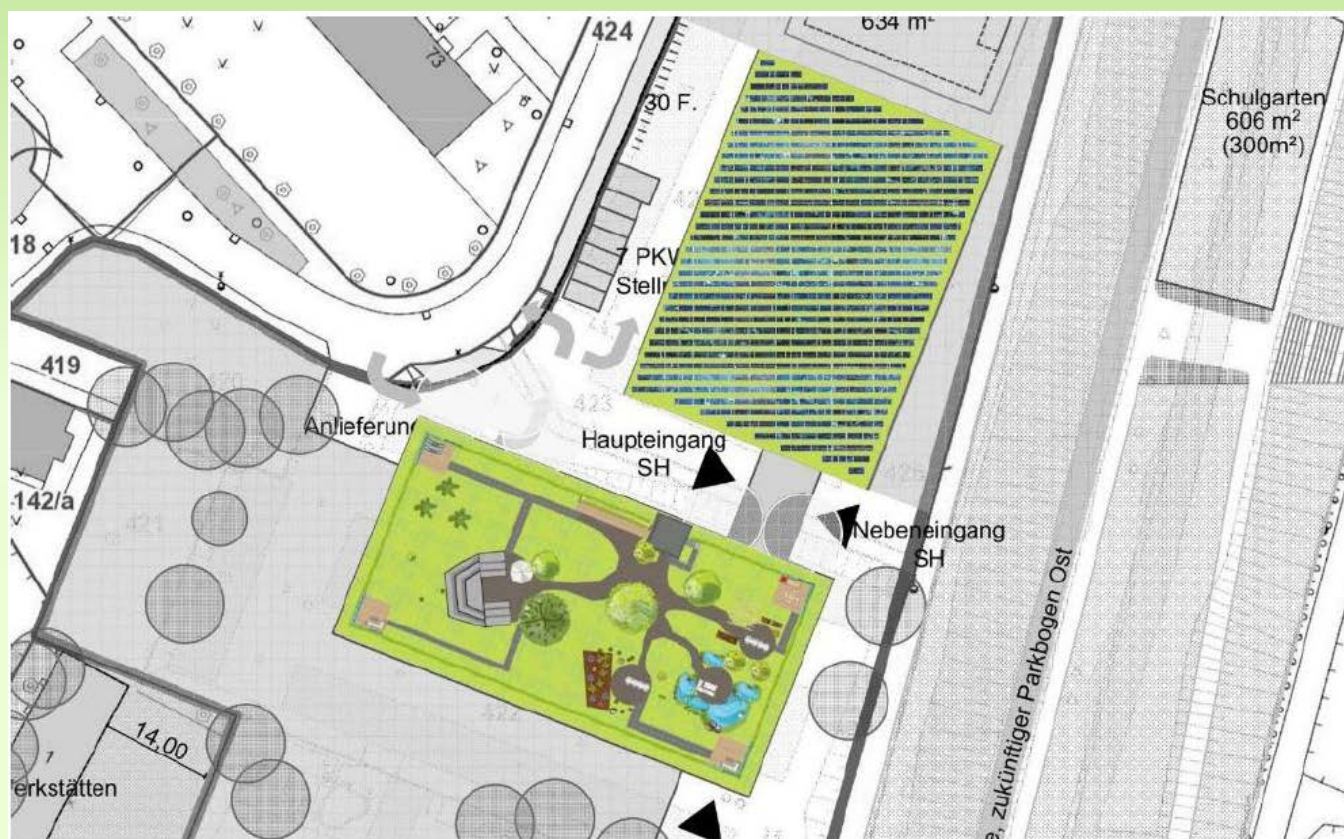
First prize went to a team of students **Morten Stricker** (HTWK Leipzig) and **Katharina Looke** and **Chris Dorendorf** (Anhalt University of Applied Sciences), whose concept was particularly convincing. The green roof was beautifully adapted to the disused suburban railway line right next to the planned school by orienting the path system to a rail network. In addition, the use of the green roof on the school building was planned for pupils: the children get a weather-protected green classroom with the possibility of studying the biodiversity on the individual segments of the green roof with different plant species. The students have also thought about using the roof area to generate electricity and have carried out the corresponding calculations. The team also received full marks for creativity. The jury was impressed by the successful and well thought-out concept.

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Second place won **Marlene Dern** (Anhalt University of Applied Sciences) and **Tom Sobotta** (HTWK Leipzig). Based on the idea of a green roof landscape for the use of a green classroom, a variety of different plants, bushes and trees were planned. In various beds, the green roofs can be experienced with all senses through targeted planting. Consideration was also given to generating electricity with the help of solar and wind energy. As a special feature, the inclusive approach to accessing the roof and the idea of the two-storey construction of the roof above the sports hall should be mentioned. The design takes into account walking and seeing limitations of the pupils and integrates the related concept requirements. To integrate it into the surroundings with the former S-Bahn line, part of the path on the school roof is built as a barefoot path in the design of a railway track. Overall, this concept was convincing due to its target group specification, clarity and scientificity in water balancing not only for rainwater, but also for the reuse of grey water from sanitary facilities in the sports hall.

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Third place went to **Ludwig Morgenstern** (HTWK Leipzig) and **Benjamin Weinrich** (TU Berlin). Their concept included aspects of biodiversity as well as rainwater retention, power generation and even nutrition. These aspects were also addressed in learning areas on the green roof. The students were quite creative in the design: the green roof exit was to be designed in the form of an observation tower with binoculars, and a horseshoe-shaped, half-open atrium was created on the green roof of the primary school, complete with insect hotels. The technical orientation of the two students is clearly evident in their concept description: a lot of space is given to the generation of electricity by photovoltaic modules - from the calculation of the installed total output of approx. 20 kWp and presentation of the PV output over the course of the year to the integration into the grid of the Leipziger Stadtwerke company. DINs were used for the path structures and escape routes, and the minimum load-bearing capacity for the sports hall roof of max. 300 tonnes was specified. The students convinced the jury with the precision of their calculations and the presentation of their idea.