

Secumat® Green

Erosion control on a slope

Project name
Budapest Spike Hall, Budapest, Hungary

Client
Extreme Park Kft, Tatabánya, Hungary

Product
Secumat® Green Coco N 400 20x30





Fig. 1: Slope before coir net installation and planting



Fig. 2: Slope after planting including irrigation system

The Spike Hall is a modern, spectacular, versatile sports centre that hosts cultural events, concerts, and exhibitions. This sports facility is located in the XIth district of Budapest near the Danube River. The complex was inaugurated in the year 2014. The building is characterised by 84 glass pyramid „spike“ skylights, each six metres high, installed in the centre of the steel roof structure, allowing natural light into the hall over an area of 42 × 18 metres. This building is of great interest to the public; it is a visual focus for the people and serves as a meeting point in their free time.

Challenge

The building is unique because it was built partially below ground level and covered with earth all around. The building thus resembles a hill, and the slope is, therefore, a central part of the building. For that reason, it had to be protected against surface erosion which will delay surface run-off and stability of the soil surface.

If vegetation swards dehydrate during dry periods or if they soak during heavy precipitation, technical protection must take over the function of erosion control.

Furthermore, it is necessary to implement the slope visually in the design idea by greening the slope sides and thus being naturally friendly in a very short time.

Solution

In 2022, the hill around the building was renovated. The work started with the removal of old vegetation and turf. In the next step, the ground surfaces were tidied up, and the completed earthwork was covered with a temporary erosion control net. The construction company chose the Secumat[®] biodegradable erosion control system from Naue, which can temporarily protect the soil and helps plant structures to establish quickly.

The biodegradable Secumat[®] Green system is the solution to protect the slope surface against the kinetic force of the raindrops and supports the vegetation to establish. Secumat[®] Green Coco N is a biodegradable coir net. It is the fitting solution because it is visually appealing, biodegradable, offers space for the plants and protects against rainfall erosion. The coir net has variable and sliding meshes, ideal for advancing plant growth. The product was easy to handle and enabled quick and secure installation.

After the protection system was installed with an irrigation system on the slope surfaces, the slopes were planted. The earthworks started at the end of January 2022, and planting was completed by March 2022. Now, the public sports arena building is green and erosion protected.

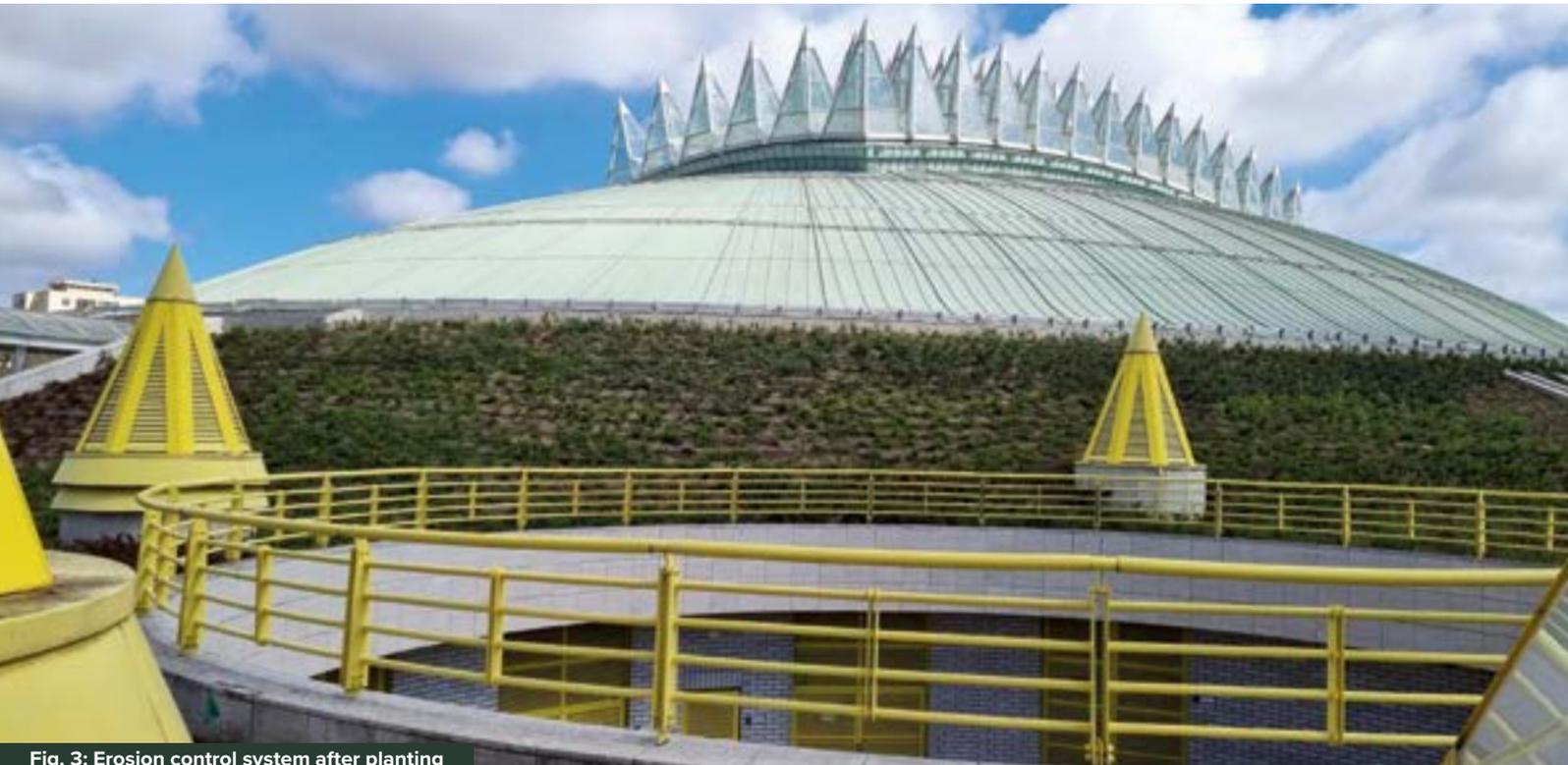


Fig. 3: Erosion control system after planting