

Project Report



This aerial photograph shows very well how the building seems to be pushed below the lawn like a wedge...

Conception

The library of the University of Technology in Delft was designed as an extension of the surrounding landscape. Like a wedge the building seems to be pushed below the lawn area, which is often used by the students for sitting or sunbathing during summer time.

Unfortunately, after little more than ten years of use, significant deficiencies appeared at the roof and it had to be subjected to an overall refurbishment. So a pressure-resistant thermal insulation made of foam glass was installed as well

as a new bituminous waterproofing with a top layer of root resistant EPDM.

Also, the green roof build-up was chosen in such a way that it resists even the highest mechanical demands; therefore it is based on the solid drainage and protection layer Elastodrain® EL 202.

The roof area is now made fully usable again and even in case somebody tries "digging" or skiing or sleighing in winter time - against orders -, the 13° sloped roof will remain perfectly protected.

Project Data

Area: ca. 5.500 m²

Reconstruction: 2009

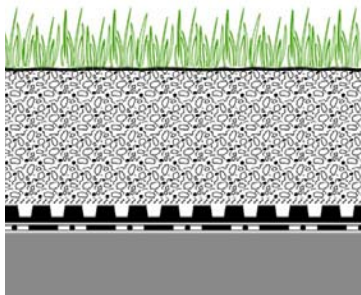
Architect/Design:
Mecanoo architecten, Delft

Contractor:
Van der Tol B.V., Amsterdam and
Mastum Daksystemen B.V., De Meern

System Build-up:
"Lawn" with Elastodrain® EL 202 and a
permanently installed irrigation system

Coordinates:
52°0'9.56"N 4°22'32.31"E

System Build-up



- Plant layer "Lawn"
- System Substrate "Lawn", ca. 100–120 mm
- Filter Sheet TG
- Elastodrain® EL 202
- Roof construction with root resistant waterproofing



The sometimes snowy roof of the Delft University Library ...



... is used for sun bathing during summer months not only by students.

Development



Elastodrain® EL 202, which the system build-up is based on, was covered by a system filter and then by the system substrate. In this case only 100 to 120 mm of substrate had to be enough for the lawn to achieve a reduction in weight compared to the initial build-up with 200 mm of substrate depth. In hindsight this initial solution turned out to be too heavy for the roof construction.