

Green roofs - Town Hall

Status	Implemented in 2009
Location	The Netherlands, Gelderland, City of Nijmegen
Spatial info	Building; Inner city / city centre
Measure type(s)	Green roofs; Water retention; Increase energy efficiency; Urban texture
Contact	www.waterbewust.nl/groendakmetsubsidie.html



Description and Aim

On three parts of the roof of the city hall green roofs have been installed. These green roofs consist of sedum plants in the greater part of the roof and higher plants around these roofs in separated constructions.

The aim of this project is to prevent the roof from extensive heating in summer and to capture rainwater.

Adaptation to climate change

The direct impact is less heat both in the roof as well as below the roof inside the building. Another direct impact is the (partly) storage and slowing down of (heavy) rainfall run-off.

Problems addressed:

Heat wave, heavy precipitation / flooding

Receptor(s):

Built environment

Experiences

Functionality:

Saving energy by cooling, capturing fine dust and CO₂ from the air, storage of excessive storm water. Cooling the building.

Less rainwater in the combined sewer system.

Green roofs are more expensive to install but they will last twice as long as 'black' roofs. Other benefits are not directly economical. The benefits are therefore higher than the costs.

It is important to plan the process of implementation very good. On roof 1 first the green roof and later on the security measures were installed. So the layers of the green roof had to be removed temporarily on different spots in order to install the fixing points of the security measures. The process was improved, first installing the security measures and then the green roof, with the following roofs.

It is also important to hire an external maintenance organisation, because this needs specific expertise.

Further synergies/benefits:

A lot of the civil servants work in the rooms overlooking the green roofs and therefore staff can benefit from a nicer working ambience

Costs:

First green roof: € 22.500,- (550 m²). Sedum was planted (with plugs).

Second green roof: € 30.000 (540 m²). A construction with plants was used.

Third green roof: 2 parts together 400m²; the costs were € 23.000,- (only the green roof part). Small units with Sedum are clicked together.

Funding:

International and local. International: Future Cities.

Municipal: Funding from the programme "Green Allure Innercity"

Stakeholder involvement:

City council and the civil servants.

Acceptance:

The projects are presented on the Nijmegen website.

Obstacles/restrictions:

On the roofs also devices (rail) are needed for cleaning the windows, and security measures had to be taken for the people who are carrying out the maintenance.