



## Installation of a green roof on the kindergarten in Czaślaw using technology imported from Switzerland

Submitted by PNEC



## Project in a nutshell

### → objectives:

- improving energy characteristics of the kindergarten building;
- creating a demonstration site that could be used to promote the green roofs/walls technology and to teach children and youth how to set up a garden on the roof, how to maintain it, what benefits it can bring, etc.
- contributing to the achievement of the aims fixed in the Rachiechowice's Sustainable Energy Action Plan.

→ **technology:** Swiss technology which is cheap and simple

→ **type of roof:** extensive green roof based on sedum plants

→ **financing:** municipality's own budget + contribution from Bauder company who presented the municipality with the hydroisolation material



## Kindergarten – technical characteristics

- typical building from the sixties (good for the demonstration & replicability effect)
- building after thermal retrofitting
- roof dimensions (horizontal projection): 27 m x 9 m
- roof inclination: 10°
- roof with framing erected directly on the existing flat roof (beams' dimensions: 10 cm x 10 cm; rafters' dimensions: 7 cm x 14 cm)
- trapezoidal roofing sheet
- mineral wool insulation



Source: municipality of Raciechowice



## Methodology

The initiative was implemented in the following steps:

- taking decision on the installation of the green roof
- technical expertise of the condition of the roof
- designing the garden on the roof
- installation of necessary hydroisolation
- installation of the layer of straw and layer of substrate
- planting the sedum plants
- monitoring of the roof and its wide promotion



Source: municipality of Raciechowice

[WWW.MAYORSINACTION.EU](http://WWW.MAYORSINACTION.EU)  
[#MAYORSINACTION](https://twitter.com/MAYORSINACTION)



## Actors of the process

- **Municipality of Raciechowice** - taking decision on the installation of a green roof on the municipal building (kindergarten), securing necessary financing, supervising the works;
- **Przedsiębiorstwo Usług Komunalnych Raciechowice sp. z o.o.** (municipal entity responsible for providing municipal services) - carrying out the investment;
- **ZHAW** (experienced Swiss partner) - designing the green roof and checking if it was done correctly;
- **Private contractors** - providing necessary material & helping with its installation;
- **Local community, including teachers and pupils from Raciechowice's educational centers** - visiting the roof and using it to increase their environmental awareness and knowledge of the green roofs' technologies.



## Main outputs

- Improving thermal characteristics of the building:
  - decreasing energy consumption by **0,21 MWh/year** (1,2% of the total heat demand of the building)
  - decreasing corresponding CO<sub>2</sub> emission by approx. **0,06 MgCO<sub>2</sub>/year**
- Retaining rain water
- Absorbing carbon dioxide
- Compensating for the green space taken by the building
- Increasing environmental awareness of the citizens and helping in environmental education of children and youths



Source: municipality of Raciechowice



## THANK YOU!

To learn more about the best practice presented  
contact Polish partner – PNEC

[biuro@pniec.org.pl](mailto:biuro@pniec.org.pl)

