

- Peer review meeting, City of Bydgoszcz, 11 April 2022 r.
- Rainwater utilisation via rooftop rainwater harvesting serving rain gardens in Bydgoszcz

  Pilot investment rain garden at at Museum of Waterworks, 424 Gdańska Street, Bydgoszcz
- CWC City Water Circles, Mariusz Zarzycki

# **LOCATION**









# **CONSULTATION**









#### **FORMER SOLUTION**









#### **TECHNICAL DATA AND CONDITIONS**





roof area - 265 m2 , assumed precipitation - 35,5 mm rainwater yield - 9,4 m<sup>3</sup>

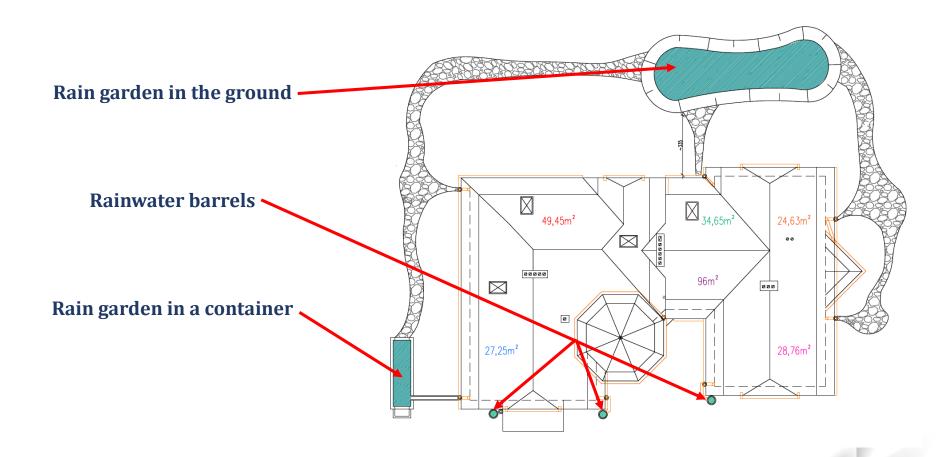
well absorbent ground - fine sand groundwater level - 10m BGL



#### **CONCEPT**





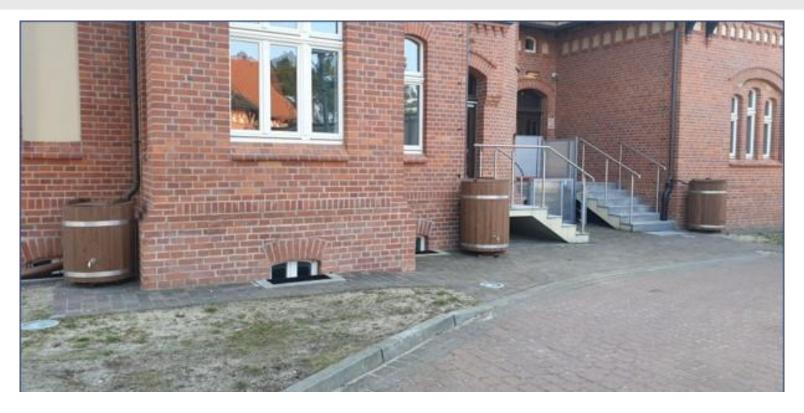




#### **BARRELS**







# 3 barrels Total capacity of 1m<sup>3</sup>



#### RAIN GARDEN IN THE CONTAINER







Sealed container with capacity of 1m<sup>3</sup>



#### RAIN GARDEN IN THE CONTAINER









#### RAIN GARDEN IN THE GROUND







a two-zone rain garden in the ground with a total area of 20.5 m<sup>2</sup> and a capacity of 6.2 m<sup>3</sup>



#### RAIN GARDEN IN THE GROUND









#### **PLANTS**













# 30 species of plants incl. knotweed, iris, cattail, comfrey



# **PLANTS**









# **PLANTS**









# **SCHOOL TOURS**









#### THEMATIC CLASSES









#### THEMATIC CLASSES









#### **BENEFITS**







- relieving the rainwater drainage system during heavy rains
- interesting and aesthetic space arrangement
- educational and demonstration function



- groundwater restoration
- rainwater treatment
- reducing urban heat islands
- improvement of biodiversity



- lower cost of watering lawns
- lower fees for rainwater



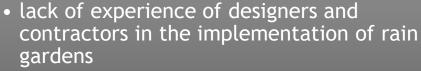
#### **OBSTACLES**







• no uniform guidelines for calculating the amount of rain and the required capacity of rain gardens



• only 1 contractor applied for inquiry

