

## Drainage & Flood Prevention

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## HOBAS® XXL Tank DN 3600 Protects Dąbrowa Górnicza Against Floods

In the view of environmental influences and the expansion of urban areas, the issue of flood prevention becomes a key task for urban infrastructure. HOBAS Tanks have become a widely accepted remedy for this problem – such as a 2,410 m<sup>3</sup> large retention system DN 3600 that has been installed in Poland in 2014.

Dąbrowa Górnicza counts among the cities in Poland which, owing to EU fundings, is carrying out a number of large-scale investments, among others in the field of water and wastewater management. A recent example is the modernization of the local stormwater drainage system and the construction of a HOBAS Retention System. The main reasons for the urgent implementation of this project were the poor technical condition of the network and the insufficient capacity of the existing stormwater sewer during heavy rain. To prevent floods, the investor opted for a complete rehabilitation of the sewage and stormwater system. In the event of heavy rainfalls, the excess water shall be discharged into a stormwater retention tank and then gradually pumped out. The very limited space on site ruled out the alternative option of a second sewer.

To suit the local requirements at the junction of Ulica Przemysłowa street and Ulica Majakowskiego street in the best possible way, HOBAS Experts designed the underground storage tank with a capacity of 2,410 m<sup>3</sup>.

The reservoir is built of four 62 m rows of HOBAS GRP Pipes DN 3600, shafts, as well as bends with in- and outlet pipes and



channels. The individual elements were jointed with HOBAS FW Couplings (FWC) and two assembly couplings were selected to close the reservoir. Thanks to the HOBAS GRP Pipes' small outside diameter in relation to the inside diameter, the installation area could be reduced considerably – a factor which, given the location of the building site at the crossroad, proved very beneficial. A ventilation system with PVC pipes was laminated to the GRP Pipes by the HOBAS Experts.

The project also includes a pumping station with two pumps to discharge the rainwater accumulated in the tank. The two pumps are an integral part of the tank and located in a shaft DN 2000. They operate periodically, depending on the precipitation intensity. Assuming a performance of the pumping station of 30 l/sec, it takes about 22 hours to drain the tank. The installation of the tank was finished after merely one month at the end of June 2014.

The described storage system is part of a new stormwater drainage system which is currently being built from HOBAS Pipes DN 400-1400, PN 1, SN 10000. The installation of the sewers commenced in February 2014 and will continue until the end of 2014. HOBAS Poland produced the required GRP pipes, fittings, and shafts. Due to the large size of the fittings, the deliveries took place at night.



Mr. Rafal Zwoliński of the Dąbrowa Górnicza investment department was delighted with HOBAS: "The implementation of the retention system was initially very difficult because of the limited space in the city center. Furthermore, we employed pipes with a diameter of 3600 mm, which we had not used so far. Now we have reached the final stage of the project and are very pleased – both with the material deliveries that were carried out in accordance with the schedule and the support the contractor received from HOBAS Experts regarding planning and installation."

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Year of installation

**2014**

Installation time

**Tank: 1 month,**

**Sewer system: 10 months**

Total length of pipe

**1.7 km**

Capacity

**2,410 m<sup>3</sup> (4 x 62 m)**

Diameter

**Tank: DN 3600,**

**Sewer system: DN 400-1400**

Pressure class

**PN 1**

Stiffness class

**SN 10000**

Application

**Retention system,  
sewer system**

Installation method

**Open trench**

Client

**City of Dąbrowa Górnicza**

Contractor/

Subcontractor

**EUROVIA/Dewelokum;**

**WADMAR**

Advantages

**Space-saving installation  
in the city center, corrosion  
resistance, tailor-made  
fittings, on-time delivery,  
fast installation, support  
by HOBAS Experts on site**