

## HOBAS® for a Change

# Venlo, NL, Relies on Durability and Flexibility of HOBAS SewerLine Pipe Systems



The municipality of Venlo counts more than 100,000 inhabitants and is as region in which economy and nature meet and strengthen each other the beating heart of North Limburg. Apart from being the trade gateway to Germany, Venlo features highway A73 and A67, the river Maas and a ECT (Europe Container Terminal) cargo hub which make the region's transportation capabilities trimodal. It therefore comes as no surprise that the municipality is continuously investing in urban renewals and expansion and under constant change to suit demands.

Numerous projects conducted at various locations required major adaptations regarding infrastructure, respectively the sewage systems which had to be adjusted and expanded accordingly.

A long service life, at least 80 years of durability, flexibility regarding the installation and possible future modifications as well as a simple and rapid assembly have been and still are the main prerequisites to pipe systems under prevailing circumstances. The municipality has thoroughly compared several available products and has been choosing, amongst others, the highly durable HOBAS CC-GRP Sewerline® Systems.

HOBAS has been standing for high quality and innovations for more than half a century and around the world. Its centrifugally cast glass fiber reinforced plastics products can be flexibly applied as they are easily connected to existing sewers and can be just as easily extended or modified once they have been installed. Due to many benefits Venlo has resorted to HOBAS over and over again since their first experiences with the product in 2003. Over the past years various sewer and storage extension projects as well as newly established sewer pipelines in the city center and industrial park have been realized with the high quality HOBAS CC-GRP SewerLine® Systems.

### City Center

Typically for densely populated areas the space at the construction sites in the city center is very limited. Cables and existing pipes pose a challenge. In addition, the high level of groundwater cannot be lowered too much as this would lead to ground settlement and harm trees, effecting extra costs. The HOBAS Pipe System's flexibility and its quick assembly, however, helps keeping the impact on the surroundings to a minimum.

All of the city center's wastewater is gathered in a main collector beneath Professor Gelissensingel (street). It has been newly established and extended with 90 m of HOBAS DN 1800, SN 5000 SewerLine Pipe in 2004. The line parallels the main storage for the municipality's entire network. When the sewer level rises too much, as in cases of heavy rainfall, the overflow runs into the main storage. Its purpose is to reduce the amount of contaminated sludge flowing into the river Maas whenever there is an overflow. Once the water level decreases the storage is pumped off and the sewage is conveyed through the main collector to a wastewater plant.

The Koninginneplein in front of the train station is currently under construction to improve the traffic flow and increase safety. Once the new tunnel beneath the roundabout between the roads Burgemeester van Rijnsingel and Koninginnesingel has been completed, it will ease the traffic and will also provide a calmer view to Juliana Park and downtown for visitors arriving by train. The sewer system was here adapted and extended to create extra storage to ultimately relieve the main collector at the Professor Gelissensingel street. 750 meters of a total of 1.1 km of HOBAS SewerLine DN 2000, SN 10000 (including shafts) have already been installed in 2008; the rest is accomplished in March 2011.

The city's district Maaswaard has been reconstructed and now lends Venlo a completely new face south of the bridge over the river Maas. Due to this urban expansion and redevelopment project and alongside the construction of municipal offices, a new sewage system was here established with extra storage capacity. A total of 362 m HOBAS SewerLine DN 800 – DN 1000 – DN 1800, SN 5000 was finalized in 2009.

The shopping area of Maasboulevard that stretches 26,000 m<sup>2</sup> was redeveloped and the Oude Markt square as well as all the streets in this area have been renewed. This called for more parking lots and more living space so that the new city garage Stadswaker was upgraded with 550 extra spaces, and 200 new apartments were erected along the river Maas. 310 meters of HOBAS SewerLine of various diameters (DN 300 – 400, DN 500 – 600 – DN 800, SN 5000) were utilized to adequately extend and adapt the existing system by 2010.



Year of construction  
**2003 - ongoing**  
 Total length of pipeline  
**6.3 km**  
 Diameter  
**DN 250 - DN 2000**  
 Pressure class  
**PN 1**  
 Stiffness class  
**SN 5000, SN 10000**  
 Installation method  
**Open trench**

Application  
**SewerLine®**  
 Client  
**Municipality of Venlo**  
 Advantages  
**Long service life, system can be easily modified and extended, adaptable to existing structures, flexible application**



### Commercial Area

The ideal location and situation of Venlo naturally attracts many companies and the municipality of Venlo has busily enlarged its commercial area to meet the great demand. Recently realized commercial areas include Groot Boller, Trade Poort Oost en West and the auction site Zon Fresh Park. And Venlo continues to develop: Two of the latest projects underway are Trade Port Noord and the business area Flo-riade 2012/GreenPark Venlo<sup>1</sup>. The latter is an innovative commercial area which has adopted the cradle to cradle program meaning that biological and technological cycles are used to improve the consumer quality for the user, to avoid health risks and ultimately create both economic and ecological benefits.

To sustain the natural recirculation of the environment, stormwater is not collected in the commercial area. Only a gravity sewer was installed between 2006 and 2010 to convey the area's waste water over 5 km to Venlo's treatment plant. Also this line was realized with HOBAS SewerLine Pipe Systems utilizing various pipe diameters (DN 250, DN 400, DN 500, DN 600, DN 700, DN 800, DN 1000) as well as 60 Shafts. These were installed every 80 m in order to be able to adjoin present and future building-connections and to allow inspecting these connections for faults and for monitoring pollutants. The groundwater level was once again an issue – its extraction for construction works had to be minimized to avoid ground settlement and to protect trees – and the easily joined products once again proved their worth. Since the sewer had to be realized as gravity line, the pipeline was laid in 4 to 6 m depth achieving a decline of 6 m over the full 5-km-long route. The pipeline design incorporated as few as possible bends. This and the smooth inner surfaces of HOBAS Pipes ensure an optimal flow and minimize the risk of blockages.

The all in all 6.9 km DN 250 – DN 2000 HOBAS CC-GRP SewerLine Systems that have been installed since 2003 are an excellent example for the multifaceted use of this product line. The municipality of Venlo can count on its durable and almost maintenance-free pipe system for decades. It can also be sure to have a sustainable system that is easily modified and extended whenever the need arises.

Fmd: [hobas.benelux@hobas.com](mailto:hobas.benelux@hobas.com)



<sup>1</sup> For more information visit [www.venlo.nl](http://www.venlo.nl)