

Visit of the waterworks Mühlenbusch

In our search for sustainability (and a life as sustainable as possible), we Erasmus students from the Norbert-Gymnasium Knechtsteden were allowed to take a guided tour through the local waterworks in the Mühlenbusch. Two gentlemen from evd, our water supplier, or from the waterworks itself, which is operated by the district works Grevenbroich, accompanied us, explained, showed and were available for questions.

We started at the control room. Here the master craftsman responsible for water treatment explained to us the flow diagrams, which show the flow of water from water extraction to delivery to households. The path of the water is protected by many safety precautions. Later we were allowed to visit the entire waterworks. We learned that our water is treated from groundwater. The rainwater seeped into the ground has already cleaned the water for the first time. A special feature of the extraction of drinking water from groundwater is a relatively high water hardness, i.e. water with a high lime content. The high lime content is health-conscious. However, this lime attacks various technical devices, so that a long time ago it was decided to carry out a softening of the water already centrally in the waterworks. This is done with fine sand, which binds the lime and thus extracts it from the water. Our water is softened by the most modern water softening techniques. The remaining sand lime mixture is by no means waste. Rather, it is used as (organic) fertilizer in agriculture.

Our drinking water is also treated very well in other respects, meets the high quality standards, is therefore one of the best controlled foods and is sometimes even superior to mineral waters in terms of health. Thus, the environmental inspections also remained unobjectionable (the last one took place in 2018).

The "waste water" produced during the cleaning process is collected and kept in a large basin during the day so that pure water remains after the "slag" has settled and is led into two infiltration ponds with a wet biotope. Here fish and turtles feel at home. The sedimented slag consists of iron and manganese, substances which have dissolved from the soil layers when the rainwater seeps away, and which are now used again as fertiliser in agriculture.

Previously, at the start of water treatment, water was drawn from 14 groundwater wells, treated and stored in four pure water tanks with a capacity of 11,000 cubic metres. It supplies the people in Dormagen with around 3.1 million cubic metres of water each year. This quantity is needed to meet the water requirement of 125 litres per capita per day. The possible subsidy is laid down in contracts and fixed for 25 years. Nevertheless, it is possible to exceed the limits, e.g. due to an extremely hot summer. Such an overrun became necessary in one of the last two summers. Such facts make it very clear that climate change is already being felt here.

Once again we became aware that we have to be very careful with our water. It is very valuable!

We would like to express our sincere thanks for the interesting guided tour, which included an inspection of the entire waterworks, and for patiently answering the questions from our ranks.