

## Reference case

### Sewage helps Oosterwold flourish and grow

*With decentralized wastewater treatment, sewage in Oosterwold meets important WFD standards*

#### The background

Oosterwold is an innovative residential area located in the polder landscape in the municipality of Almere, near Zeewolde, where a green and sustainable living environment is a priority. Residents have freedom in designing their homes, access roads, lighting, and even wastewater treatment. However, the latter proves to be challenging for residents to achieve. To solve this, the municipality of Almere initiates a water treatment system that aims to extract as many resources and reusable water as possible from the sewage water of 800 households (approximately 2000 population equivalents) for the immediate surrounding area.

#### The question

The goal of the treatment is to purify sewage water to meet the WFD (Water Framework Directive) standards, greywater reuse standards, and contribute to innovation and sustainability. Additionally, it should remove pharmaceutical residues (70% reduction in guide substances STOWA guidelines) and recover resources such as phosphate, ammonium, and cellulose. This way, water can be safely retained in the area and even made available for local agriculture or nature. Van Remmen UV Technology created this treatment system, along with a consortium of expert partners.

#### Our solution

Together with Oosterhof Holman, CirTec, and AkaNova, we developed a decentralized treatment concept that combines various treatment technologies, cellulose recovery, sensor technology, and our proven UV-H<sub>2</sub>O<sub>2</sub> Advanox systems. Through this unique collaboration, with so many different areas of expertise, we were able to develop an innovative installation

that ensures excellent water quality and the reuse of resources and water. The water can even be reused internally to flush toilets and drum filters.

#### What we achieve

The sewage treatment plant ensures safe discharge of sewage into the environment. Additionally, cellulose is recovered and used for the production of, for example, asphalt, park benches, and crowd barriers. The effluent from the treatment plant is passed through our Advanox system to effectively break down and disinfect micro-pollutants. As a result, the water is suitable for reuse in the immediate surroundings. This includes replenishing groundwater to prevent dehydration or irrigating local green areas and the many urban farms in the vicinity. We return the water to nature cleaner than when we took it.

#### Facts

##### Contractor

Oosterwold

##### Location

Oosterwold, The Netherlands

##### Purpose

The purifying of sewage water in Oosterwold

##### Solution

Advanox™ Flex series