



**Desah**

Decentralised Wastewater Solutions

Desah

# Noorderhoek

Our Water Cycle

Sustainable decentralised wastewater treatment  
in Dutch neighbourhood

Desah is part of



# Futureproof neighbourhood

In the residential area of Noorderhoek, in the Frisian city of Sneek, 207 homes are connected to an innovative and sustainable water treatment system.

In the neighborhood, greywater (household wastewater) and blackwater (toilet water, vegetable and fruit waste) are collected separately and processed on-site in the residential area. By separating and treating the wastewater at the source, energy, fertilisers, and water can be recovered.

The black wastewater is collected by vacuum toilets and sewer systems, while the grey wastewater is collected via gravity sewers. Additionally, the kitchens are equipped with a grinder for processing food waste.



## First in the world

This new concept of wastewater treatment, with source-separated wastewater processing, the use of vacuum toilets, and the processing of vegetable and fruit waste, is the first project of its kind in the world. And it has been operational for more than 15 years!

This project included:

- Blackwater digester.
- Food waste digester.
- Recover struvite (fertiliser) from blackwater.
- Recover heat from greywater.
- Concentrated purification to high-quality water.
- Biological greywater treatment.
- Control and automation system.
- Startup of the system
- Management and maintenance of the system.





## Energy recovery

- biogas production (60 - 70 % more than with a traditional WWTP)
- heat recovery from greywater (30% of heat required)
- energy-positive wastewater treatment



## Water saving

- 30 % drinking water savings by using vacuum toilets
- water reuse in the neighbourhood



## Nutrients recovery

- struvite production (3 times more than with traditional WWTP)
- reuse of sludge for agricultural purposes



## And even more...

- effective removal of micro-pollutants such as medicinal residues, endocrine-disrupting substances, and antibiotic-resistant bacteria





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## Desah is part of Noardling

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## Our Water Cycle

From water intake systems to water cooling, from water management to wastewater treatment, hydropower, pumping installations, and award-winning innovations in the field of decentralised wastewater treatment, discover the water cycle here by scanning the QR-code.



The Noardling company is engaged in Futureproof Water Technology. With more than 250 years of experience in moving and treating of water.

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### Noardling brands:



Decentralised Wastewater  
Solutions



Water Screening  
Solutions



Water Treatment  
Solutions