



Solution: Anybus ProfiTrace and Anybus ComBricks  
Country: Netherlands  
Company: Rijnland District Water Control Board

### Benefits:

- Permanent monitoring of your PROFIBUS installation
- Robust, modular, user-friendly design that can be easily integrated into your existing network infrastructure
- Access live network information remotely via a web browser

“The PROFIBUS system is now much more stable and totally free of malfunctions.”

**Paul Schipper**  
Rijnland District Water Control Board

### Maintaining water purity

#### How the ProfiTrace and ComBricks helped Rijnland District Water Control Board ensure clean water

Rijnland District Water Control Board manages over thirty wastewater purification plants, but they faced a shutdown in one system due to a malfunctioning PROFIBUS network. They turned to Procentec (now Anybus) and used the ProfiTrace to identify and fix the problem. To ensure long-term network stability, Rijnland installed a ComBricks module to monitor the network. With the ComBricks, the network is now stable, avoiding unplanned downtimes and ensuring healthy water throughout the region.

#### About Rijnland District Water Control Board

Rijnland District Water Control Board is responsible for protecting lowlands from flooding and ensuring healthy water in ponds, lakes, canals, and ditches across an area of 1,100 square kilometers. With over thirty wastewater purification plants under their management, Rijnland's priority is to purify wastewater and discharge it back into nature in an environmentally responsible way. To achieve this, they need to monitor water levels and ensure that the water does not contain too many nutrients and pollutants.

#### Problem description

However, Rijnland faced several problems with its PROFIBUS network that caused an unplanned stop in one of its wastewater purification systems. “We experienced several PROFIBUS malfunctions in the aeration tank of one of our wastewater purification systems”, explains Paul Schipper, project automation assistant. “The controls of the valves stopped working. The entire system came to a halt, meaning the water could no longer be aerated. We consider sustainability to be very important. Therefore, we purify wastewater in a natural way: by means of bacteria and oxygen. The aeration tank contains various bacteria growing and feeding on the waste in the water, which they convert into harmless matter.

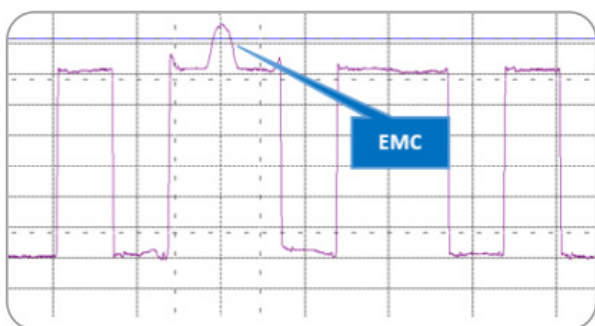


To help the bacteria, we add oxygen to the water. When the system is down, we can no longer aerate the tank, and the bacteria will die. So, failure of the system puts us under a lot of pressure.”

### Finding the cause

Restoring the PROFIBUS network as quickly as possible was the number one priority, as Paul explains. “In this type of situation, it is of vital importance that the malfunction is solved as quickly as possible. That is why we contacted Procentec. One of their engineers came right away and tested the system’s continuity with ProfiTrace 2. From the scope images, it soon became clear that the defect was between two valve controls”.

As we can see in the image below, there was an EMC problem that caused the electronic equipment to fail. This theory was confirmed when the team examined the PROFIBUS cable. “When we arrived at the spot, a corroded PROFIBUS cable appeared to be part of the cause. The cable was affected by weather conditions. It was not suitable for the applied network.”



The interference signals caused by EMC are clearly visible on the scope images of ProfiTrace.

### Safeguarding the network

To prevent future malfunctions, Rijnland installed a ComBricks module to monitor the PROFIBUS network. “We thought better safe than sorry. That is why we bought the ComBricks modules”, explains Paul. “These modules have now been included in our specifications so that we can permanently monitor the PROFIBUS system. ComBricks has been connected to the section that manages the controls of the blower and the power in the aeration tank. Fortunately, we did not have any other malfunctions since then. The PROFIBUS system is now much more stable and totally free of malfunctions. For any future malfunctions, we will now be able to take action at once. Furthermore, we nowadays use the ComBricks modules in new construction projects too. “



Paul Schipper is also very pleased with the service provided: “Procentec is a good partner, because they are always available to us. They actively think along with us regarding the most appropriate solution. We think it is very important that an independent third party is there to help us, so that we are sure that the problem is considered objectively. Through the expert advice and the supply of products, our system is up and running again.”



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