References

Drinking water passing through contaminated area in Thisted



Uponor involvement

OD50 and OD110

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Citizens' safety comes first when water utility sought to protect the municipality's drinking water from toxic chemicals. Citizens' safety was key when a Danish water utility sought to protect the municipality's drinking water from toxic chemicals at a former industrial site with busy traffic. By choosing Uponor Barrier PLUS pipes, the utility company now has a fully plastic barrier pipe system with an expected lifespan of more than 100 years.

When planning a new main water pipeline in Thisted, northern Denmark, utility company Thisted Vand faced a major challenge. The area had a pollution degree rating of 2, indicating a serious risk of toxins getting into the water carried by the new pipes. The company was concerned because toxins from contaminated soil or other risk areas can penetrate standard polyethylene water pipes. This would, of course, present a serious risk to public drinking water.

Project Facts:

Location
Thisted, Denmark

Completion
2020

Building Type
Municipal

Product systems
Potable water

Project Type
Renovation

Partners

Builder: Thisted Vand
Barrier PLUS barrier pipes: Uponor
Infra A/S

A long-term solution once and for all

Thisted Vand has been a customer of Uponor Infra for many years and was already familiar with Uponor Barrier PLUS piping, a pressure pipe system developed specifically for running drinking water through contaminated soil areas.

Jacob Bertelsen, Manager responsible for drinking water, outlines some of the reasons why the company opted for the Barrier PLUS pipe system.

“The main thing for us was that the pipeline should be able to prevent toxic chemicals, bad taste and odours from getting into the drinking water for many years to come,” he says.

The area’s pollution degree rating of 2 dates back to a time when there was a gasworks on the site –aromatic substances can still be traced to that source. Later on it was home to a wood business that impregnated wooden posts, releasing chlorinated solvents that can still be detected in the soil.

But there were also design and construction factors.

“The area where the water pipeline was to be laid had fairly busy traffic, including some heavy vehicles. Therefore, it was vital to establish a sustainable long-term solution once and for all, one that would not cause too many traffic disruptions in the construction phase,” says Bertelsen.

100% plastic – 100% safe

Product Manager Karsten Højlund of Uponor Infra is all too familiar with the reasons behind the contamination concerns.

“For many years, Danish water companies have been asking for pressure pipes with a totally secure plastic barrier inside the barrier layer, as they want to install a solution that’s 100 per cent safe. Like Thisted Vand, others have also expressed concern about the chlorinated solvents in the soil: corrosion can occur when substances like trichloroethylene (TCE) in the soil come into contact with an aluminium barrier.”

With the Barrier PLUS system, Thisted Vand now has a fully plastic barrier pipe system, which also includes PE Barrier Wraps for wrapping the pipes. This eliminates issues related to the potentially harmful effects of TCE.

“The company can rest fully assured that the plastic barrier layer in Barrier PLUS will protect the municipality’s drinking water against contamination from chemicals, crude oils and pesticides in the soil, as well as external environmental factors,” says Karsten Højlund.

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