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References

## Båtstø enters a new age



### Båtstø enters a new age

The village of Båtstø in Hallangen, Norway, is stepping boldly into a new era of green self-sufficiency. More than two hundred of its homes have now been connected to the village's very own brand new communal wastewater treatment plant.

This is picture postcard country. Below, the Oslo Fjord looms dark blue, the mountain face rising starkly from the sea. A thin road winds its way through densely wooded slopes, while far out on the horizon, a lone sea eagle soars over the open sea. A magnificent place to live.

To the civil engineer's eye, though, this breathtaking landscape presents a steep challenge. A few years ago, the residents of Båtstø decided that the time was right to bring some basic mod cons to the village: running water and clean wastewater. The villagers pulled together to get the planning office onto the job. What at first seemed a sheer impossibility gradually began to take shape and to actually look doable.

#### **Project Facts:**

Location Completion

Båtstø, Norway 2009

Vrsta objekta Product systems

Agricultural buildings Sewer, waste water treatment

Project Type

New building

#### Hidden underground

Today, following lengthy planning, permit applications and project tendering phases, the slopes of Båtstø are equipped with a WehoPuts 1020 treatment plant. The plant, fabricated at the factory in Vaasa, Finland is equipped with three large 19-metre long tanks plus a distribution tank and has the capacity to clean the household wastewater from more than two hundred homes in the village. The only thing visible above ground, though, is just a few small aluminium covers.

The two most important criteria for the client were capacity and reliability, but they also valued the fact that the plant blends so well with the sensitive natural landscape of the area. On top of that, the plant produces no odour emissions. When the process works as it should, the only smell produced is a mild damp soil odour.

The large treatment plant was built in Finland and shipped to the plant distributor Ecobio AS in Norway, who took over the practical end of things there. Ecobio also provides the plant maintenance. The plant is also fitted with a remote monitoring system to enable real-time close surveillance of the plant operation.

#### Easy to install

Ecobio is already a known name in Norway. The company imports smaller WehoMini treatment plants from KWH Pipe in Denmark, as well as larger 50–200 person capacity plants from Finland.

The high quality of the product is easy to ensure because the plants are prefabricated in controlled factory conditions. It was also important for the customer that the installation work was quick and straightforward, taking just a few days.

The ease of the treatment plant installation has come as a welcome bonus to the village, especially as the other remaining phases of the project are considerably more demanding.

The project involves the laying, both over ground and in trenches, of more than twenty kilometres of flexible pipe with freeze protection heating cable. In addition, a pumping well is being installed at each household. The project will reach completion in around 12 months, after which the WehoPuts 1020 treatment plant will be able to run at full capacity.

#### A growing interest

The treatment plant delivery to Norway is the biggest plant to date. A slightly smaller plant is located on the other side of the Oslo fjord. Interest in the technology is growing in Norway. There is a clear need for village-scale and small-scale wastewater treatment plants in the Nordic countries. It is expensive to build municipal wastewater systems and long-distance sewage pipes in sparsely populated rural areas with difficult terrain. Demand for similar solutions elsewhere in Europe is also likely to be high. Wastewater phosphorus regulations are a little tighter in Norway than in Finland, but, WehoPuts 1020 easily meets the mark. In Norway, interest in communal wastewater treatment plants is also being boosted by the fact that many municipalities have begun pressuring villages to resolve their wastewater problems – in some cases even under threat of considerable fines.

But way and above the most important factor here, is the Norwegians' community spirit – their ability to pull together. Many residents have an enthusiastic hands-on approach and are ready to get involved in projects and to work for the common good of their village.

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