



▲ The Watermaster gets to work

You've a Finnish summer house on a beautiful lake, but its shore is silted and overgrown so badly the beaches are unusable. Who do you call?

It's a typical and often man-made problem in Finland, which is dotted with small, though usually shallow lakes surrounded by communities that have grown up over the years.

The small town of Hauho in central Finland is a case in point: an old dock – built in the 1950s for the local fire brigade – changed the currents in a nearby bay overlooked by a medieval church and caused siltation that was quickly colonised by a thick mat of marine plants.

A clean-up campaign was launched five years ago, but it's taken that long to put the funding together – half the cash eventually coming from the *Department of Environmental Administration (DEA)*.

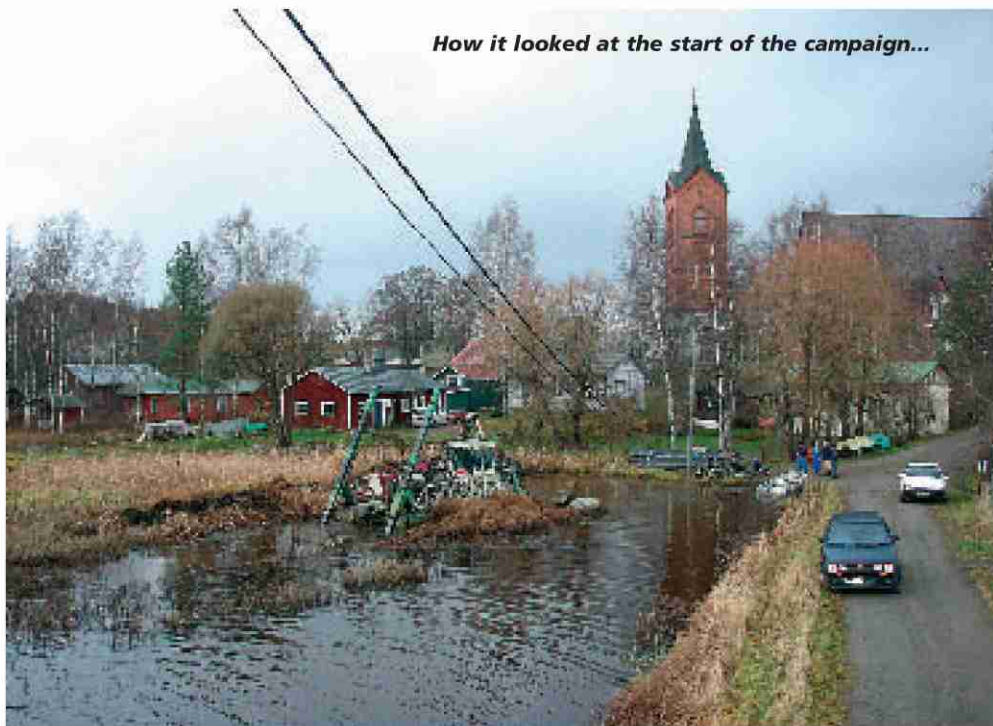
All the community had to do then was find a suitable contractor...

PROBLEMS

Hauho faced potential dredging contractors with a series of difficulties:

- ◆ The bay itself is very shallow
- ◆ Environmental and other restrictions meant it had to be restored to as original a condition as possible because of its historical value
- ◆ Use of a conventional excavator was out of the question because it was impossible to reach and remove the marine growth from the far side of the bay area
- ◆ Because the shore line is so narrow, it was also impossible to bring large machinery to the site – which meant you couldn't assemble the crane needed to lift a conventional dredger into the water
- ◆ And the actual dredging site was too shallow to allow a pontoon-mounted excavator to get to work.

None of that, however, fazed Kari Lassinaro, who was contacted by local community member Tapani Saastamoinen.



How it looked at the start of the campaign...

Walking



▲ Watermaster's rake proved the ideal tool

LOCAL KNOWLEDGE

Mr. Saastamoinen had read about Finland's unique *Watermaster* dredging technology, as used by Kari Lassinaro and today many other contractors, and proposed it as the solution for Hauho's problem.

Built by Säkyä-based *Aquamec*, the versatile *Watermaster* design – and Mr. Lassinaro's machine is a 1990-built *Classic One* – can act as a backhoe, a suction dredger and even a pile driver. Now evolved into the *Classic Three*, it's proved itself in demanding terrain as far afield as Russia, Vietnam, China and Latin America.

Which is why, having surveyed the worksite, contractor Lassinaro had no qualms about his ability to do the job.

Transported to Hauho on a trailer, his

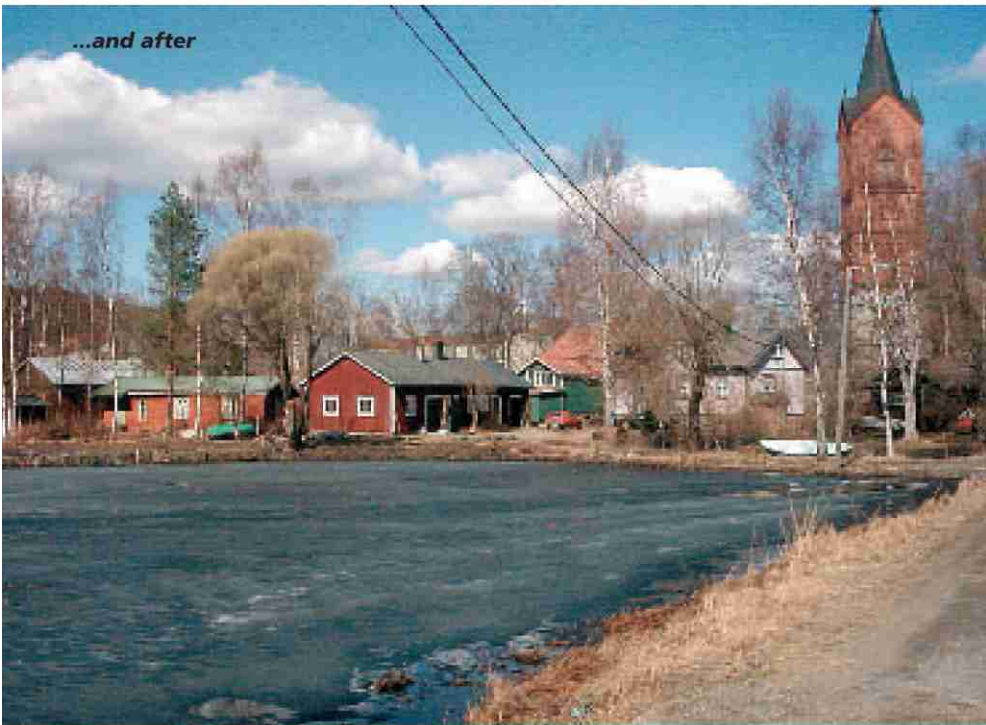
Watermaster simply 'walked' into the water on its spuds, then cruised to the site using its own propeller system.

Suction tools were not suitable because of the large amount of vegetation and lack of a suitable discharge area, so a rake was fitted to remove both the surface vegetation and all its roots: bigger rocks were removed by the machine's backhoe bucket.

The mass of material was lifted onshore, mixed with sand and spread on unused property nearby – which is due to be landscaped.

Tapani Saastamoinen was fascinated to watch the *Watermaster* in action: "It used its spuds and front stabilizers to support itself in the water and in this way the work was carried out as if it was on dry ground."

...and after



▲ Dredged material

The machine also used its spuds to hoist itself forward in the shallow water, so no awkward cables were needed.

“Because it was possible to do the work from the lakeside,” he continued, “our shores were not damaged and the environment was left unharmed. And the lake bottom was shaped just as we wanted, not left uneven.”

FINALLY...

With both client and the DEA impressed by the result, the next stage was to ensure siltation doesn't happen again.

The DEA has issued an order to restore current back to the bay by partly dismantling the old fire dock – allowing nature to do the job in the future.

More info at www.watermaster.fi

On Water