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Surahammars Kommun Teknik AB

The Surahammar experience

Integrated waste management programmes

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Surahammars Kommun



The rural district of Surahammar has a population of about 9 900 people. There are three municipalities in the district, Surahammar, Ramnäs and Virsbo. Surahammar is the biggest with 6 700 residents, Ramnäs 1 700 and Virsbo 1 500 inhabitants.

Surahammar is the chief town of the district.

The district of Surahammar has a history dating back to the fourteenth century. The main industry in all three locations is and has always been the steel industry.



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Surahammars Kommun



- Surahammar is mostly known worldwide for wheels for trains and electrical steel products. The original company Surahammars Bruk AB was taken over by TATA-steel and is now called Cogent Power Ltd.
- Ramnäs Bruk is known worldwide for their top quality chains for offshore safety. They started to produce chains in 1876 and have produced chains for the offshore market since 1968.



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Surahammars Kommun



- Virsbo Bruk is known for their production of plastic pipes and is now owned by the Finnish company Uponor. Another worldwide product is their floor heating system.
- Today Surahammar is also well known in Sweden and in a lot of countries in Europe for the use of Food Waste Disposers.



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- Owned 100 % by Surahammars kommun the main purpose is:
- produce and distribute district heating
- produce and distribute drinking water
- drain and clean waste water
- dispose of waste
- administer municipal buildings, streets and parks



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Background, 1992

An important piece in the puzzle was that the sewage plant in Surahammar was oversized, especially the digester. If we could use the digester to its maximum it was calculated that it could increase gas production from 120 000 m³/year to 200 000 m³/year, with ca 40 000 m³ from food waste.

We needed 600 ton food waste and the question was how to get it to the sewage plant?

An extra bin for food waste and transport by truck and mincing on the sewage plant? OR

FWD and transport of the food waste in a working sewerage system??



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Test project 1993-95

- 1993 Test of FWDs was decided.
- 1993-95 In 1993 we started a test by installing 30-40 FWDs in apartments and villas.
- The sewage system in the nearby area is flushed and filmed. We wanted to know
 - How does the FWD work, technically and for the user?
 - How does the recycling work?
 - What does the user think of the FWD?
- 1995-96 An evaluation is made. It was decided to use a batch feed model instead of continuous feed.
- 1996 The company board of Surahammars KommunalTeknik AB agreed to allow FWDs to be used as an alternative for taking care of food waste



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Information

- We presented the whole idea of recycling to households, property owners, schools, merchants and yes everyone in Surahammar.
- The part regarding information was the really hard part for our organization
- "Bad information = bad result"



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The process

- The City Council of Surahammar decided in February 1997 that FWD was one of the three alternatives in the new waste rates.
- An information card was then sent to the home owners where they could choose the option they wanted.
- For those who chose option 1: installation of FWD, we started to film their sewer systems.
- In September 1997 we started to install the first FWDs. We involved three local plumbing companies to do the installations. In a short time we had about 1 400 FWDs installed.



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Domestic waste options

Household waste option		Cost (conversion)
1	Installed FWD and 140 liters residual bin collection	£289 per year (incl. £68 FWD cost)
2	Compost bin (excl. bin cost) and 140 liters residual bin collection	£258 per year
3	120 liters bin for food waste and 140 liters residual bin collection	£458 per year



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Experiences

- A survey of 1000 households with FWDs was made in late 1998
- 71 % answered
- The majority answered "good" or "very good"
- Very few had negative experiences from their use of FWD



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The mix of the 3 options of out sorting food waste in Surahammars kommun 2013-09-19

➤ Villas 1-2 family	option 1 FWD	1 471	househ.	51,2 %
➤ Villas 1-2 family	option 2 compost	1 343	househ.	46,7 %
➤ Villas 1-2 family	option 3 bin for food waste	61	househ.	2,1 %
➤ Apartments	option 1 FWD	837	househ.	45,9 %
➤ Apartments	option 2 compost	0	househ.	0 %
➤ Apartments	option 3 bin for food waste	988	househ.	54,1 %
➤ Total households	option 1 FWD	2 308	househ.	49,1 %
➤ Total households	option 2 compost	1 343	househ.	28,6 %
➤ Total households	option 3 bin for food waste	1 049	househ.	22,3 %



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FAQ/"Myths"

- "There will be blocks in the sewer system!"
- "There will be an increase of rats!"
- "The maintenance of the sewer system will increase!"
- "The water costs/consumption will increase!"
- "The electrical bill will rise to the sky!"
- "The maintenance of the sewage plant will increase!"
- "We will lose our fingers/cats/dogs/gold rings etc!"
- "They'll force me to install an FWD!"

These are some examples of comments from homeowners, treatment plant personnel, waste managers, environment personnel, etc. – ALL UNFOUNDED



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Gas production, Haga

To increase the gas production was one of the main reasons for taking care of the food waste ourselves.

➤ 1992	120 000 m3
➤ 2001	148 200 m3
➤ 2012	206 300 m3

- 2001-2012 + 58 100 m3, (39,2%)

The gas is used in the sewage plant Haga for heating. (no oil used)
There's an excess of 25 000 m3/year. There will probably be a test later this year of electricity generation



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Questions please?

- Thank you for listening.
- I am sure you have questions?