



Fatbergs - The Problem Growing in Our Sewers

So What is a Fatberg?

A fatberg is a congealed lump of fat, sanitary items, wet wipes, and similar items found in the sewer systems, which do not breakdown. Such deposits are officially referred to by this term by authorities at Thames Water London, UK.

The fat is the primary binding agent for all the non bio degradable debris disposed of into the public sewer systems of the world.

London has the highest concentration of food businesses in the country, produces an estimated 32m–44m litres of used cooking oil every year, much of which is poured down drains, but high concentrations of domestic housing can have a similar impact.

Fatberg examples:

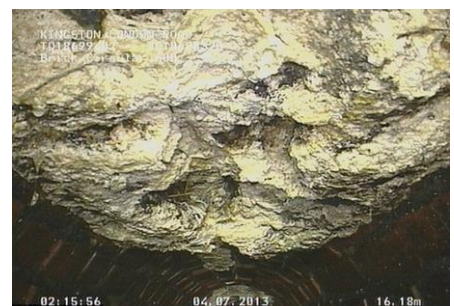
August 6, 2013: A fatberg roughly the size of a bus, consisting of food fat and wet wipes, was discovered in drains under London Road in Kingston upon Thames.

September 1, 2014: A collection of waste, fat, wet wipes, food, tennis balls and wood planks the size of a Boeing 747 aeroplane was discovered and cleared by sanitation workers within a drain beneath a 260-foot section of road in Shepherd's Bush in West London.

April 2015: A 40-metre long fatberg was reported as having been removed from underneath Chelsea. The damage the fatberg had inflicted was estimated to cost £400,000 to repair and will take more than two months

May 2016: A 30m long fatberg river has been found congealed in a sewage pipe under a road in Durham. The pipe collapsed due to fat being poured down residents' drains for several years.

Jan 2016 In Bedfordshire a line of fatbergs clogged a 100m section of sewer. Anglia Water has to ship in specialist remote control robotic equipment from the Netherlands to view and high pressure jet the blockage to help it disperse



What is the Cost to the UK Water Authorities and Ultimately Their Customers?

Thames Water Company dealt with 200,000 blockages in the last five years, with 18,000 homes flooded with sewage. Thames water usually engages powerful suction equipment to break down the blockages and then high power jets to clear the tunnels.

Thames water spends approximately £1 million a month clearing fatbergs, across its region, it says Ealing, Hounslow, Harrow, and Windsor & Maidenhead are blockage hotspots. It is a similar story for other water companies across the UK with Anglian water have had to bring in specialist remote controlled robot devices with a high pressure water jet from Holland to move along the sewers blocked by fats so they would gradually disperse

- There are approximately **366,000** sewer blockages per year in the UK.
- **70%** are due to fats, oil and grease
- The annual cost to combined UK water authorities to deal with these blockages running at an estimated **£80m** per annum

What Is Being Done Today?

Thames Water can advise restaurants and people what you can and can't put down the drain but there are no powers to enforce it.

Thames Water's Alex Saunders, in reference to Oxford said 'We've recently visited about 250 food establishments in and around the city centre to find out how they dispose of fat and oil and maintain any devices they have for collecting it.

'To reduce the blockages it's important we understand why the fat ends up in sewers and whether it's due to financial restraints, for example, or simply a lack of awareness or concern.

However, *Section 111 of the Water Industry Act 1991 says that:*

"it is a criminal offence to discharge into the public sewers any matter which may interfere with the free flow of the sewerage system" – however the problem is growing.

Thames water have launched a campaign encouraging people to apply for disposable tin fat collecting trays which they can pour cooking fat into and then add to their domestic waste as opposed to pouring it into drains.

A spokesperson for Northumbria Water stated, 'Fat can solidify and block. Fat should be disposed of in the correct way; it should be collected and put in a bin or disposed of in the correct place - which is not sewers or drains.' We have been trying to get that message across.

At present all attempts to tackle the problem are either based on reacting to the problem when a critical failure occurs or on direct mail campaigns to the public which appear to be more of a cry to help than giving the assurance that any form of sustainable and planned solution is at hand.

In addition to this we must also ask the question when people have just finished cooking and are about to serve dinner are they really going to risk handling and pouring boiling hot fat into a special tray?

Even if fat is poured into the right container and then the bin - what happened to it after that? Well the answer is it simply goes to landfill so the contamination problem is simply being moved from one area to another.

Are any of these methods effective?

In short the answer is NO plus the public have been warned such problems will hit them in the pocket, with Anglian Water revealing that clearing blockages costs householders and businesses £15million a year in higher water bills.

What Can Be Done to Resolve the Problem in The Future?

In order to reduce the legacy impact of the fat build up in our sewers and to create an environment where this cannot happen again requires a proactive approach.

At GW Environmental Consulting we have developed a range of products that can be applied directly or integrated into everyday cleaning activities to reduce and maybe one day put an end to the problem fats, oils and grease have on the integrity of our sewer systems, the costs passed back to the public and the stress caused by the flooding of homes and streets with sewage as a result of blockages.

Regular dosing with liquids or powders containing the right micro-organisms to degrade the fats, oil and grease is the perfectly natural way to treat wastewater and help keep domestic pipes and public sewers flowing.

The micro-organisms in our products will form a biomass in pipes and fat-traps which then breakdown and remediate the Fats, Oils and Greases in the wastewater so they do not get the chance to conglomerate. Fatbergs and pipe blockages are prevented and the only remaining by product is naturally occurring CO₂ and H₂O.

For homes in hot spot areas a simple sachet can be poured into a sink a few times a week or daily for commercial food retailers. Everyday chemical cleaning agents for floors can be replaced with cleaning agents containing the harmless micro organisms that will attack and break down the fats oil and grease.

Once floors are washed they will not only be cleaner, as the fat is ingested, they will also be returned to their original non slip design making them safer. The real importance however is the dirty waste water in the mop bucket once poured into

the sink will then continue to remediate and eat the fats contained in all pipe and drains leading to the sewer system.

If we can get everyone thinking this way, then the accumulative results will then keep the sewers free from fat.

No handling of hot fat for the public, no moving the problem from the sewers to landfill and no having to send people into the high risk confined spaces of sewers to physically breakdown the fatbergs.

Imagine a world where we can proactively treat the fats and greases that will inevitably enter the sewer system, attacking the problem as soon as it begins to manifest itself – in a natural and environmentally friendly way.

Aside from reducing the £80m spent per annum in battling fat related blockages the additional benefits to the Water Authorities further down include the fact that our products help to:

Reduce Malodours in the local environment, the production of sludge and chemical oxygen demand

Improve - Solids settling, water treatment in cold weather and the overall quality of waste water being treated.

Summary

At GW Environmental Consulting we will be reaching out to all the UK Water Authorities to try and encourage them to adopt a more proactive approach and reduce the staggering costs of keeping the sewers clear of fatbergs.

We also sincerely hope that the public will engage in any pilots or schemes the water authorities may adopt on the back of our proposals to deal with ever increasing contamination in a natural, effective and environmentally friendly way.

For more information or if you would like to arrange for a demonstration of our products, please do not hesitate to contact Graeme Warnell at info@gwenvironmentalconsulting.com or visit our web site at www.gwenvironmentalconsulting.com

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