

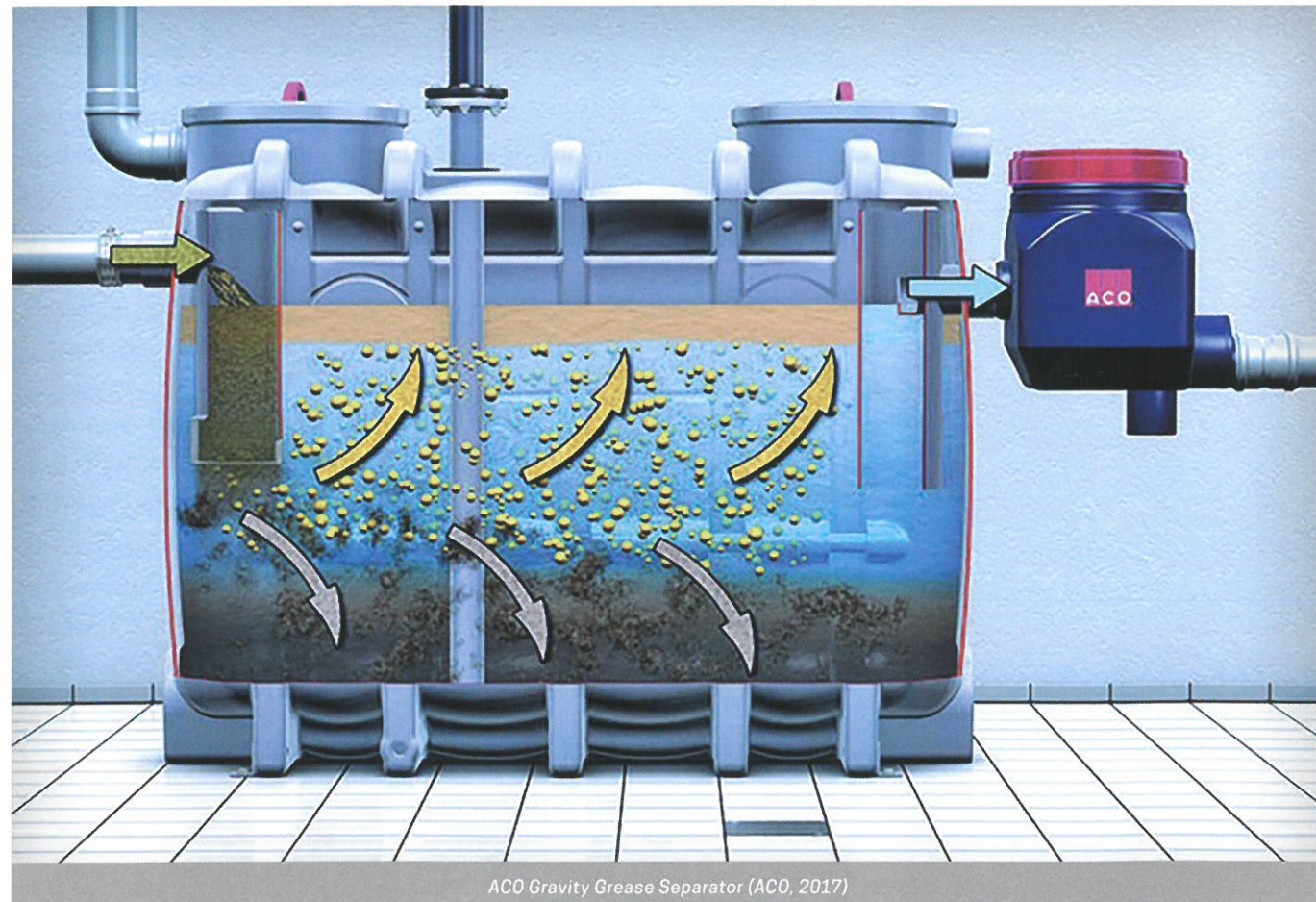
Dealing with the problems of FOGs (Fats, Oils and Greases) entering our sewer system and measures that can be implemented to change the UK dosing systems to removal systems

Grease management: treatment or removal

by Luke Clapp, Tomasz Rosinski and Joshua Gallagher

THE UK EXPERIENCES 366,000 SEWER BLOCKAGES EVERY YEAR flooding more than 3,000 properties through the accumulation of Fats, Oils and Greases (abbreviated to FOGs), all originating from domestic, commercial or industrial premises (Water UK 2017). This in turn costs the UK approximately £15 million to clear; financed mainly by the utility companies.

These costs are then passed onto the consumer in the form of higher bills (CIBSE 2014). Clearly this is a problem that needs to be addressed.



UK Legislation unable to tackle the problem

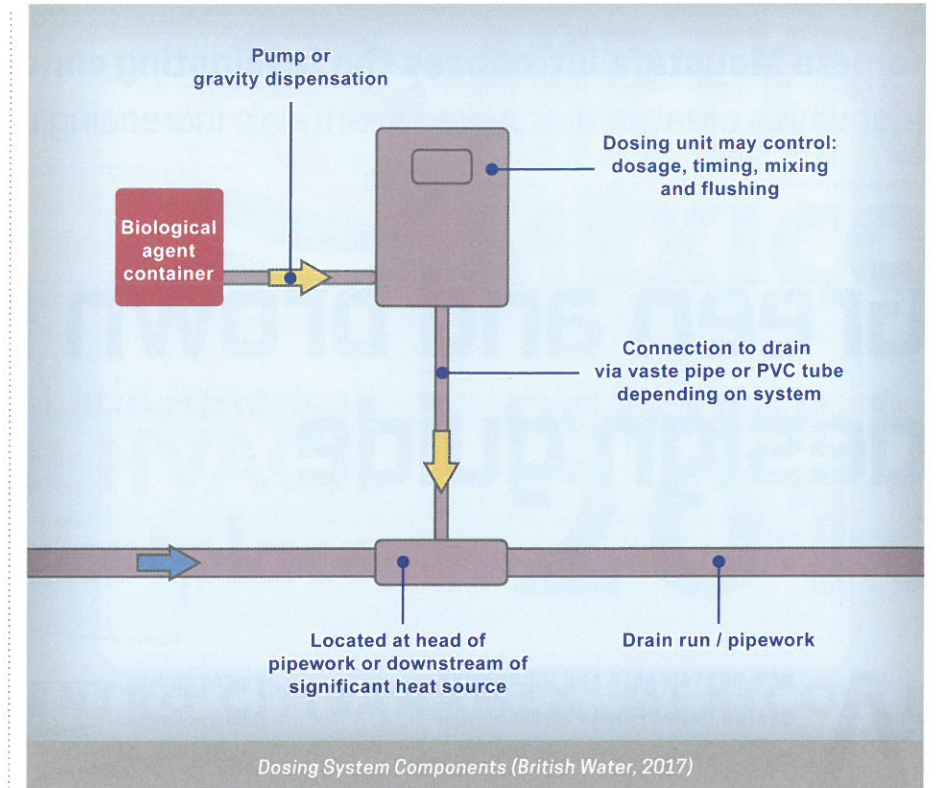
The very vague and ineffectual UK regulations and legislation must bear much responsibility. Approved Document H offers little relief in its content stating "drainage serving kitchens in commercial hot food premises should be fitted with a grease

“When disposed of down kitchen sinks, toilets or drains, the waste congeals to form blockages which can lead to flooding and pollution

separator complying with BS EN 1825-1 and designed in accordance with BS EN 1825-2 or other effective means of grease removal". This has simply encouraged contractors to install dosing systems to push the problem downstream and push the cost onto the utility companies.

The Solutions: Dosage Versus Grease Separation

One example of a dosage system is shown in the illustration above. It is the preferred method amongst UK contractors and retailers to use as it is easy to install and retrofit, space is saved and it is the cheapest option to implement. However, as waste water



moves down the sewer network, FOGs can still regroup and impede water flow. More effective are the grease separation systems exemplified by the ACO Grease Separator (ACO, 2017). FOGs and wastewater are separated within a chamber and the water is cooled sufficiently to allow the FOGs to harden and the wastewater to be pumped away down the discharge sewer pipes devoid of any hardened FOGs. Clearly this is a much more effective system. With an improvement in UK legislation, updated building regulations, establishment of FOG concentrate levels and better enforcement, the £15 million cost of managing FOGs will be reduced significantly.

FOG Treatment Abroad

Clearly the occurrence of FOG blockages has been recognised as a major issue and other countries have been far more proactive in tackling the problem. Canada, Germany and the US have all implemented FOG concentrate limits of between 100 and 300 mg per litre of wastewater (Growdon 2017). These are then regularly sampled and inspected and when limits exceed these, heavy fines are levied on the offending outlet company. As a result their sewer systems are much clearer.



Luke Clapp
PUBLIC HEALTH ENGINEER, HOARE LEA
lukeclapp@hoarelea.com



Tomasz Rosinski
PUBLIC HEALTH TECHNICIAN, HOARE LEA
tomaszrosinski@hoarelea.com



Joshua Gallagher
PUBLIC HEALTH ENGINEER, WSP
joshua.gallagher@wsp.com