



Are You Prepared

to Meet FOG Demand?

What contractors and specifiers need
to know about fats, oils and grease in
commercial kitchens





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Introduction: Why Kitchen Contractors and Specifiers Must Prepare for FOG Demand

Fats, oils and grease (FOG) are found in almost every commercial kitchen. In some cases, they are the direct ingredients essential for food preparation, while other times they are simply the by-products of cooking and disposed of like other waste. Unlike 'conventional' food waste, however, FOG continues to be mismanaged to the point where blockages, flooding and even temporary closure are distinct possibilities.

Allowing FOG to enter drains damages key building services and makes it harder to run a profitable kitchen. But it also poses a health hazard to residents and other businesses nearby. This has understandably caught the attention of both regional water companies and environmental inspectors, who are keen to tackle a growing threat lurking in foodservice establishments. Fines are the most common penalty handed down to offending parties but the last five years have shown FOG-related incidents getting much worse, leaving open the possibility of more serious punishments in already difficult trading conditions.¹ Contractors need to be aware that water companies are increasingly checking for the presence of a grease separator in new build commercial properties. Delays to getting a mains connection can occur if a grease separator is not installed or has been removed from the specification.

Then there's fatbergs, which threaten a sewage system that remains largely unchanged since the Victorian era. Not only are these rock-like formations becoming more common but they are also getting much bigger, suffocating the flow of wastewater below UK towns and cities. In fact, the problem is now so severe that more than £100 million is spent clearing large, obstructive build-ups of coagulated FOG.²

It's clear, then, that contractors and specifiers will need to prepare for increased interest from both kitchen and estates managers, not least because regulatory scrutiny will become more intense as hygiene issues and fatbergs grow in number. It's this idea that forms the basis for ACO's latest guide, which examines how FOG is currently managed and the circumstances that lead to repeat failures.

In September 2021, the business surveyed 500 restaurant owners and managers. This was done to shine a light on a neglected issue that, if left unattended, could damage the reputation of UK hospitality. But research was also carried out to give foodservice professionals the insight they need to anticipate market demand. By publishing the results, ACO can provide better support to contractors and specifiers who are set to be inundated with requests from concerned business owners looking to remain on the right side of the law.

¹ <https://www.bbc.co.uk/news/uk-england-berkshire-56456745>

² <https://www.theguardian.com/money/2019/dec/20/fighting-fatbergs-this-is-now-a-huge-environmental-issue>

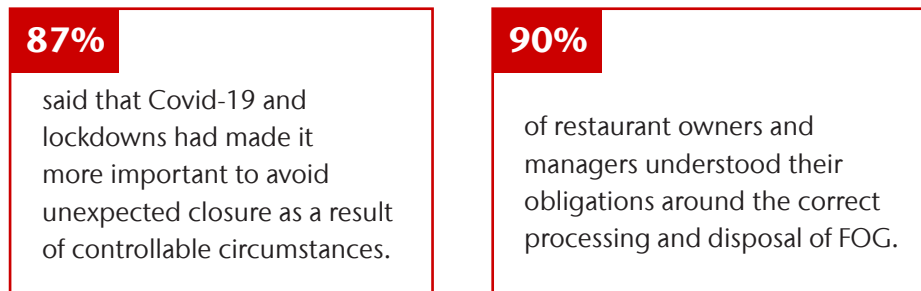


WHAT IS FOG?

FOG STANDS FOR THE DIFFERENT FATS, OILS AND GREASE THAT ACCUMULATE IN THE WASTEWATER OF COMMERCIAL FOODSERVICE KITCHENS. IT'S CREATED WHEN FOOD IS PREPARED AND COOKED, AND REACHES A KITCHEN'S DRAINAGE SYSTEM WHEN PROCESSING EQUIPMENT, UTENSILS AND CROCKERY ARE WASHED. SINKS, DISHWASHERS, COOKING FACILITIES AND FOOD WASTE ALL CONTRIBUTE TO KITCHEN WASTEWATER, OFTEN CONTAINING FOG THAT HAS NOT BEEN MANAGED PROPERLY.

I. Findings

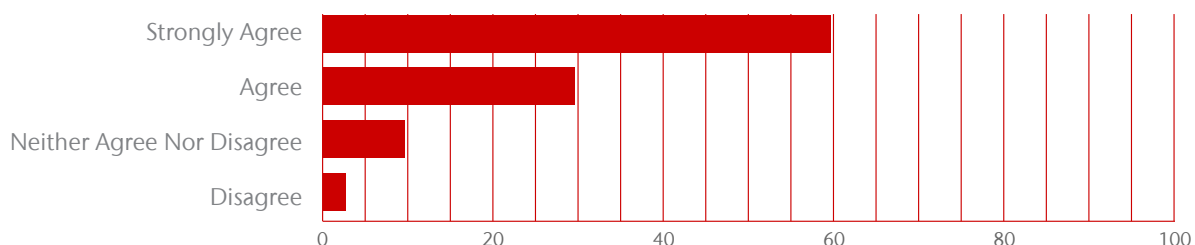
The results show that businesses are increasingly aware of FOG-related threats and the damage they could have on the bottom line.



It's not surprising to find so many businesses keen to minimise hazards where possible given the pandemic's ongoing impact on UK hospitality. According to the latest ONS figures, consumer spending on hospitality started to increase in May 2021 but remains at less than 70% of pre-pandemic levels; a similar picture is seen with the sector's turnover which stands at 25% lower than 2019.³

Tellingly, 86% of respondents to ACO's survey said business owners should be solely accountable for the sanctions faced when caught discharging FOG into public sewers. This finding suggests a disconnect between people's intentions and the reality of day-to-day work in today's busy kitchens. There are countless news stories that detail serious FOG management failures, some of which have led to fines of up to £100,000 and more.⁴

Do you agree with the following statement: Covid-19 and lockdown has made it more important to avoid unexpected closure caused by controllable circumstances, e.g. blocked pipes and unsafe workplaces?

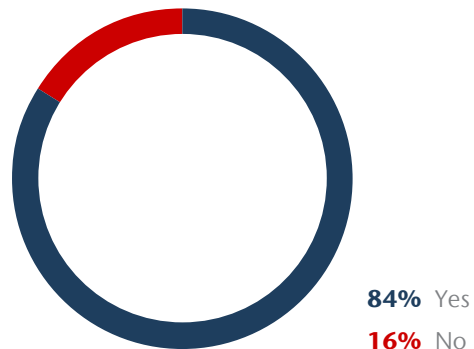


³ <https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/articles/coronavirusanditsimpactonukhospitality/january2020tojune2021>

⁴ <https://www.oxfordmail.co.uk/news/19366285.pub-chain-fined-90k-contributing-fatbergs-oxfordshire/>

Reports are also increasing in number, indicating that many are willing to take the risk and flush large amounts of FOG and food debris down the drain. This idea appears substantiated when referring to the 56% that have experienced a build-up of grease in their kitchen before, as well as the 12.4% of kitchen managers who have temporarily closed shop in order to clear a blockage.

Have you carried out maintenance of your system during the lockdown period?



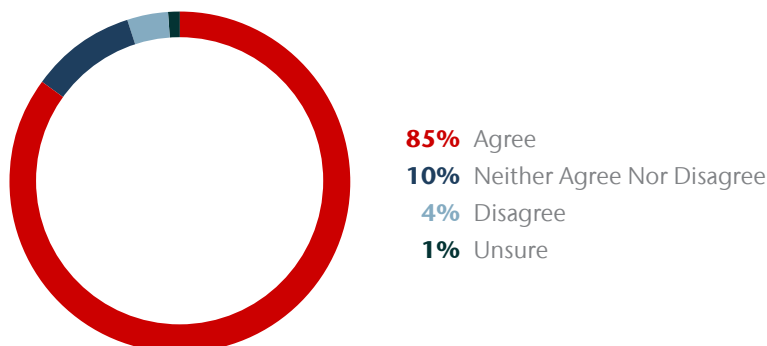
This is not to suggest that all businesses are simply pouring FOG down the drain or working without an approved management system in place. Indeed, some of the more serious penalties now have the power to close even successful restaurants, so it's fair to assume most are trying to remain compliant and oversights have more to do with a lack of understanding around best practice. The fact that 39% admitted they fail to service their grease management system according to manufacturer's guidelines supports this claim.


Other findings, however, paint a different picture. Even with many businesses concerned about the implications of a major FOG-related incident,

16% nevertheless said they had not taken advantage of lockdown and failed to carry out routine maintenance on their systems.

Perhaps worst of all, more than 30% said they have no grease management system in place.

Do you agree with the following statement: Restaurants are solely accountable for the sanctions faced when caught discharging fat and oil into public sewers?





WHY EFFECTIVE FOG MANAGEMENT MATTERS

SUSTAINABILITY IS A HOT TOPIC IN HOSPITALITY. SINGLE-USE PLASTICS, FOOD WASTE AND ENERGY CONSUMPTION HAVE ALL BEEN SUBJECT TO CLOSER ATTENTION IN RECENT YEARS, SO IT'S NOT UNREASONABLE TO IMAGINE FOG RISING UP THE INDUSTRY'S AGENDA IN THE COMING YEARS. THE PROBLEMS ASSOCIATED WITH POOR MANAGEMENT ARE NOW BEING TACKLED HEAD ON BY AUTHORITIES, NOT LEAST BECAUSE IT'S HAVING A NEGATIVE IMPACT ON BUSINESSES OUTSIDE OF THE SECTOR.

II. Solutions

Despite the desire to manage FOG correctly, the results show that many businesses are still willing to gamble on poor practice. Yet this approach will be untenable in the coming years as authorities begin to clamp down on offenders. As technical consultants to the foodservice industry, contractors and specifiers hold the key to better FOG management and can help struggling businesses move away from inefficient or negligent methods.

Sources of FOG

FOG is created in several different ways during food preparation and cooking. The most common sources are deep frying, shallow frying, cooked meats and rotisserie, as well as dishes containing dairy products. It usually enters the waterway through pot washing, rinsing and through the drains when floors are cleaned. Dishwashers can also act as a conduit when they haven't been installed properly or serviced regularly.



Contractors and specifiers need to consider three key stages when determining what type of FOG management system is needed:

Survey – Determine sources of FOG, flows of water and areas where current provision is lacking. For new build properties looking for a mains water connection, a grease separator is essential. Without one, connections can be delayed and cause significant extra expense.

Sizing – Equipment should be sized appropriately for the host kitchen and factor in the different sources of FOG and how they are handled

Ongoing Management – Customers should be aware of different maintenance issues like frequency and dosing rates for different units

Systems

The correct solution will ultimately need to be assessed on a case-by-case basis. Options include Grease Recovery Units (GRUs), which includes hydromechanical and gravity-fed systems. Sizing is crucial and should be calculated based on the volume of grease that's likely to be created during service. For example, it makes little sense to install a hydromechanical grease interceptor if the business is a small café. Likewise, GRUs should be discounted in foodservice kitchens where large volumes of FOG is expected.

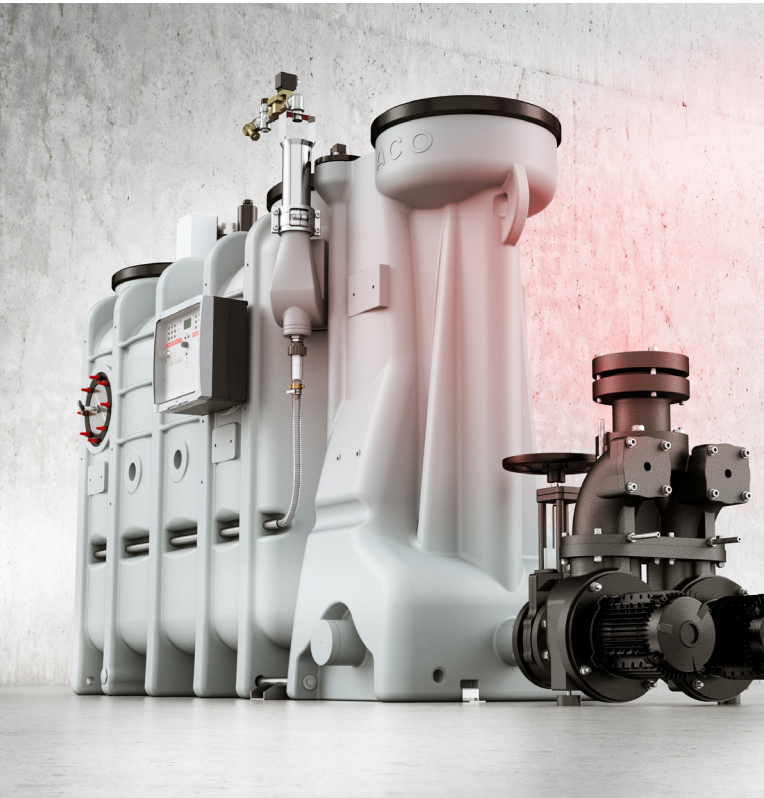
Grease Traps

Grease traps are mainly found under sinks, which use gravity to separate FOG and food waste from wastewater. They are compact with limited capacity, meaning daily maintenance is required to keep running effectively. Grease traps can be combined with biological dosing to increase the maintenance interval.



Grease Recovery Units

This system has two types: active and passive. Active units use rotating wheels or oleophilic drums to skim FOG off the surface. Passive units use water flow to push the FOG into a separate container, and will keep it flowing until the inlet is closed off by the valve. In a passive system, accumulated FOG is heated to ensure it remains in a liquid form so it's easier to discharge from the unit. Many installed devices in the UK are tested to the American Standards, ASME 112.14.4.



Grease Separators

Grease separators can be used for above- and below-ground applications and are the only system with a British Standard – BS EN 1825. They prevent most FOG deposits from entering the sewer, with the separator having to be emptied at least once a month. This can be done either manually or automatically depending on the model. Grease separators are the only unit, according to BS EN 1825, that can be sized on either volume of food produce per day or the hydraulic throughput generated from the type and number of kitchen equipment installed.

Note – while macerators are useful for breaking down waste food and other debris, they are not recommended as a solution by water companies. This is because macerators can emulsify FOG that is captured in the food, and creates suspended solids in the wastewater stream that are difficult to separate.

Conclusion

ACO's research has revealed a market struggling to follow best practice. Some businesses clearly understand their obligations and what's needed to deal with FOG properly, while others are seemingly happy to defer the problem to water companies. Still, the majority are clear that wilful negligence should be punished and responsibility should sit at the door of offending businesses. It's not unreasonable to think some of these problems are down to confusion with equipment, procedures and ongoing maintenance – not to mention a lack of understanding around how effective FOG management can actually save businesses money in the long run.

This presents a clear opportunity for contractors and specifiers. Not only can their expertise guide UK foodservice towards better systems and approaches, but they can also capitalise on growing demand in the sector. Authorities are now looking closer at sources of FOG and this will inevitably drive searches for equipment, particularly as fines and other penalties become more frequent.

For more information, get in touch with the ACO team today at **UK-Grease@aco.co.uk** or phone **01462 810424**. They can provide expert guidance and suggest the right grease management system for your clients' kitchens.

