FEA Guidance Document:-

Effective Management of End of life food waste, including Fats Oils and Grease.

Objective management of 'end of life' food waste and FOG

To ensure that there is a complimentary set of food waste management systems and services to maximise the collection and management of end of life food waste across the breadth of the foodservice industry, whilst promoting key waste hierarchy undertakings of Prevention and Reduction.

The industry comprises 450,000 establishments across the following key sectors:-

Commercial sector (sites): Hotels, Restaurants, Pubs & Bars, Contract Catering, Business & Industry
Non-commercial sector (sites): Healthcare, Education, Public services, Prisons, Armed forces, Sports and Recreation

Foodservice operational structure

The nature and complexities of the styles of operation combined with location and differing business ownership, means that a pragmatic approach to targeting, measuring and acting to reduce food waste is essential. The FEA supports this and is an active contributor to the Courtauld 2025 agreement.

Multiple end of life food waste management opportunities can help to maximise capture rates and operational effectiveness. They do not reduce effectiveness. Some include measurement systems, which allows for detailed on site management.

Managing and capturing the value of food

Equipment and systems that effectively manage and handle food and FOG (fats, oils and grease) waste are:-

- Anaerobic digestion
- Food waste disposal units
- Digesters
- Dewaterers
- In vessel composters
- Grease Traps
- Grease removal units
- Bacterial dosing
- Interceptor tanks – for peelers/chippers
- Vacuum waste systems that macerate and transport to on site storage tank
- In sink strainers/food capture

The ability to maximise the capture and management of end of life food waste can only be achieved when complimentary systems are available for use used across all foodservice operations, as any one system cannot, and will not, achieve this. Technical, environmental, economic and practical issues are essential considerations for the operator, facilitator and the commercial foodservice designer.

Any single systemised [technology] approach will stifle innovation and will reduce food waste management effectiveness in the future. R&D and innovation developments can further demonstrate and enhance operational effectiveness and increase potential prevention and reduction principles in combatting food waste in this sector.

The above technologies demonstrate material recovery and management; their use has been proven that they do not contribute to sewer management issues. Indeed, some technologies directly aid water recovery and organic treatment and recovery at waste water treatment plants. This is especially beneficial where embedded Anaerobic Digestion operations exist.

The range of optional systems provides little by way of feedstock volume loss for the AD collection objective, as these optional application systems are limited in number and scale. There remain uncertainties over the business case for AD and therefore alternative technologies are complimentary in their role and efficacy. Another added value element is that the jobs and R&D benefits work in collaboration with kerbside collection systems for AD operators. This is beneficial to the UK business especially with international business opportunities where the range of products and system choice remains as described previously.

A systematic approach

We recognise that different systems will have differing strengths and weaknesses. Whilst anaerobic digestion and kerbside collection has the greatest ability to effectively manage the majority of commercial food waste in a territory, there are significant limitations that must be recognised. The use of other technologies allows these to compliment AD and are an effective and responsible demonstration of 'problem ownership' by the foodservice operator. Effective separation at source is the key feature of the other technologies listed above. It is reported that c.20% of foodservice food waste collected for AD goes to landfill because of contamination. Carbon footprint due to land miles driven by tankers also needs to be considered. Other technologies manage this volume of waste more efficiently and effectively thereby contributing significantly towards a zero-landfill target.

- Dewaterers reduce the mass of the waste by 70% by mechanically removing and recycling the water content, making the resultant mass more valuable to AD plants. Storage mass reduction reduces collection cycles and costs, and vehicular emissions.

- Digesters produce grey water which is acceptable to water companies and these are effective where heightened hygiene & safety issues are prevalent, and, waste storage and logistics management can be issues. They recycle 70% of water from the waste.

- Sink to sewer disposal, whilst not the most desirable solution it enables separation at source, ensures that food waste can be a contributory element of the part of the sewage treatment process and it allows collection of fertilisers for further use. It adheres to animal by product legislation.

- In vessel composters allow on site use of material for organic purposes (thereby adhering to the animal by products legislation).

- Grease Traps/Grease removal Units and Bacterial dosing, when installed in a complimentary manner to each other, minimise the FOG entering the sewer and in the case of Traps and GRU's allow for collection of FOG.

As an industry we recognise that any process that treats, recovers and / or removes Food Waste and FOG, must ensure that any discharge to sewer, must be compliant with the Water Industry Act 1991 requirements as it is a criminal offence to discharge any *'matter likely to injure the sewer or drain, interfere with the free flow of its contents or to affect prejudicially the treatment and disposal of its contents'.*

The objective should be to promote relevant technology to suit the foodservice site or application requirement. To promote prevention and reduction of food waste and to compliment AD as the primary route to food waste management. Failure to do so will increase landfill volumes whilst not necessarily increasing volumes to AD.

Food safety at the site.
The health of citizens is critical, and the management and storage of food waste is a potential and actual hazard which can compromise the hygienic operation of a facility. Food Safety legislation is a critical and primary obligation before food waste management. Time to process food waste, space availability, handling requirements, hygiene, vermin issues and temperature are all critical factors that have a direct effect on risk assessment for operators.

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