

## **Macerators**

### **Waste macerators – the impact on sewers**

Although macerators provide an easy and convenient means of disposing of food or sanitary waste into drains and sewers, water companies advise that this increases the risk of sewer blockages, sewer flooding, environmental pollution, odours and rodent infestations.

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### **Introduction**

The purpose of macerators is to provide an easy and convenient means of disposing of waste into drains and sewers. Examples of macerators are food waste disposal units and those designed for disposing of sanitary and hygiene products. Typically, they are installed and in use in commercial kitchens, care homes, hospitals, domestic properties and other premises.

### **Impact on sewers**

Water companies advise that disposal in this way increases the risk of sewer blockages, sewer flooding, environmental pollution, odours and rodent infestations. There are also further associated risks to screening plants, the sewage treatment process, disposal of bio-solids and energy costs. Macerators therefore place an extra load on sewerage systems that they were not designed to handle and this can lead to environmental damage.

## **The Purpose of sewers**

In the light of widespread flooding in 2007 and the subsequent Pitt Report that followed, it is also clear that infrastructure, including sewers, needs to be more resilient in times of heavy rainfall. We must therefore make sure that sewers remain fit for purpose by ensuring that inappropriate flows and materials are not put into the sewer network.

## **Environmental concerns**

The National Food Waste Disposal Programme recently examined the sustainability and economics of domestic food waste disposal use. The water industry agrees with its preliminary independent findings that compared to kerbside collections the disposal of food waste to sewers has a higher impact on energy and carbon emissions and may not represent the best environmental option.

## **Macerators and water resources**

It is also clear that Macerators can use additional volumes of high quality drinking water which is wasted. Most people now recognise the importance of water conservation and efficiency in order to protect supplies for our future and the Government has recognised the need for households to reduce water consumption in the latest revision of the Building Regulations and in the Code for Sustainable New Homes. In use, food waste disposers use water in far greater quantities than the food waste they dispose of.

## **Choosing methods of disposal**

Research has shown that the kerbside collection of segregated waste is currently the most viable and sustainable option for UK households. Local authorities are either already collecting waste in this manner or investing to do so in the future. Creating a secondary disposal route for food waste by using sewer systems would require significant additional investment, not only impacting on customers' water bills but also placing them at risk of blockages and flooding whilst encouraging the unnecessary wasting of water.

As a convenience product, macerators enable consumers to dispose of large amounts of waste into sewers with no awareness of the consequences. They do nothing to encourage the reduction of waste and could potentially increase it. The promotion of such activities undermines messages that encourage waste reduction such as WRAP's "Love Food, Hate Waste" campaign. The underlying message from Water UK to consumers must be to use sewers responsibly.

## **Sewers for sewage**

Water UK therefore has serious concerns about products such as macerators that through promoting the inappropriate use of drains and sewers for wastes, are altering public attitude to one of “Out of Sight, Out of Mind”. If left unchecked this will result in public sewer systems that are so overloaded as to be unable to fulfil the public health and drainage roles for which they are intended. The loss of flow capacity and associated risk of flooding caused by the build-up of fat, oil grease and other debris is already a major concern.

Water UK therefore opposes the use of macerators and would like the Government to consider imposing a ban on installations where discharges arrive in public sewers. Given the known impact of fat, oil grease and food waste from certain types of trade premises it would appear particularly appropriate to consider a ban on the commercial use of food waste disposers. It is also apparent that much use is made of macerators for disposing of clinical, hygiene and sanitary products in premises such as hospitals and care homes. This practice may already be unlawful in many cases and consideration of a ban on this type of macerator would also seem appropriate.

Water UK has no objection to the use of macerators specifically designed for installation in toilets where their purpose is to enable normal human waste to be pumped to a more accessible part of the drainage system.

## **Conclusion**

Water UK will work with government and stakeholders to promote coherent, sustainable waste management strategies that support the role of sewerage undertakers. However, we believe that macerators designed to make it convenient to divert food and clinical waste into the public sewers are not compatible with this statement and therefore urge the Government to consider imposing a ban on their use. We also ask local authorities not to promote their use with consumers or developers.

Water UK supports the principle that **‘Sewers are for Sewage’**.

## **Notes**

1. Water and Sewerage Companies in the UK are licensed as Sewerage Undertakers.
2. The term macerator is used to refer to all devices that chop or grind waste for disposal into sink outlets, drains or sewers that is not representative of the normal waste from lavatories or water from washing and bathing.

This includes food waste disposers, sink waste disposers, waste disposal units, waste grinders and sanitary or clinical waste disposers.

3. Some local authorities encourage the use of food macerators in the belief that they are environmentally beneficial by reducing waste to landfill. Developers are also often persuaded to install them in new and refurbished housing projects.
4. Research under the The National Food Waste Disposal Programme has been undertaken by WRc on behalf of DEFRA and UKWIR during 2008. On the basis of the data used it was concluded that the kerbside collection of kitchen food waste was shown to have lower greenhouse gas emissions and lower overall financial costs when compared with the use of food waste disposal units discharging into sewers.
5. Due to the risk of demand outweighing supply the Government requires at least 16% - 20% less use of potable water in future (see Code for Sustainable New Homes, Dept for Communities and Local Government, February 2008).
6. Macerators used in many care homes and hospitals discharge a range of sanitary or clinical items into public sewers including nappies, incontinence pads and disposable bedpans. The waste disposed of this way from these premises should be dealt with in accordance with Statutory Instrument 1992 No. 588, The Controlled Waste Regulations 1992, Environmental Protection Act 1990 and not flushed into public sewer systems. A breach of these Regulations is a criminal offence.
7. The 1976 Dangerous Substances Directive bans the discharge of plastics to the environment as a List 1 substance.
8. Many care homes and hospitals also make use of food waste disposers in their kitchens.
9. The Environment Agency is concerned that as many as one in 20 households has one or more plumbing or drainage connections that discharge to surface water sewers instead of foul sewers. Surface water sewers discharge into rivers, other waterways and the sea. Foul water sewers discharge into sewage treatment works.

The disposal of wastes, including macerated waste, directly or indirectly, into surface water sewers is strictly prohibited.

10. Environmental pollution can result from untreated sewage being discharged into watercourses. Such pollution downgrades the biological, chemical and aesthetic quality of rivers and streams. The natural flora and fauna can be adversely affected and faecal matter, foam, scum, oil and sewage-derived litter are particularly unsightly and odorous. A few species of micro-organisms can rapidly form massive biofilms in organically polluted water collectively referred to as 'sewage fungus'. In extreme cases the pollution can result in extensive fish kills.
  
11. It is not always appreciated that sewer systems were constructed as a public health function to reduce the incidence of potentially fatal waterborne diseases. Furthermore, it could be argued that the construction of these sewer systems, in the middle of the 19th century, did far more to improve the overall health of the nation than any of the more recent medical advances. It is therefore important that sewer systems are allowed to function for their primary purpose. Unfortunately, recently sewerage networks have come under increased pressures due to the inappropriate disposal of all kinds of materials such as Fats, Oils and Greases (FOGs), so called 'flushable products' plus macerated and food wastes which collectively are referred to as '*sewer abuse*'. Furthermore, these threats come at a time when the need for sustainable housing is expected to result in lower water usage. Whilst lower water use is welcomed, one of the negative side effects could be a reduction in the ability of a drain/sewer system to be flushed clean of solids and '*sewer abuse*' items by, for example, high volume WC flushes, and also when the number of misconnections is rising significantly. This situation is unprecedented and already the ability of sewers to perform their primary functions may become compromised as blockages cause flooding and pollution.