

Case study: WasteMaster solves hospital problems caused by food waste



Kettering General Hospital, a major district general hospital serving the areas of Leicestershire and Northamptonshire, is using the WasteMaster on-site food waste conversion system to greatly reduce the environmental impact of its food waste.

Customer overview

Caring for over 371,000 patients a year and with a staff of 3,200, Kettering General Hospital has a major impact on the area, economically, socially and environmentally and takes this responsibility extremely seriously. The hospital has 600 beds and around 1500 meals are served per day to those patients able to eat during their recovery. In delivering large volumes of meals to patients there will always be a quantity of food that is wasted, and whilst every effort is made to manage the volume of this waste, there is still a considerable quantity to be disposed of.

In addition to ensuring the best possible health care for patients and the best working staff working conditions, the hospital management is determined to care for the wider environment and to minimise the hospital's environmental impact.

The Problem

All food waste generated at the hospital is from food preparation and food returns from wards after meal times. This was previously disposed of in the kitchen area through maceration. However, to operate effectively the macerator requires a considerable constant stream of water to process the food waste and flush it down the drain.

Additionally, the drains, not designed to take quantities of macerated food, frequently blocked and as a result maintenance staff were called to unblock these at least once per week. As well as being a waste of water, and costly in staff time, the system also placed a strain on the sewage system, contributing to the build-up of waste blockages.

The hospital's Waste and Sustainability Manager, Robin Packman, was keen to reduce the burden of food waste on both the Environment and financial impacts, especially with hospital budgets under so much pressure.

Pre-installation discussions and delivery to site

Prior to the delivery and installation of the WasteMaster food waste conversion system on the hospital site, WasteMaster specialists met with the hospital to establish the feasibility of installing the system to tackle their food waste disposal challenge and the potential cost efficiencies to be gained.

After positive discussions and assessments of food waste volumes, the WasteMaster food waste management system was installed at the Hospital in July 2017. Being sited outside, the WasteMaster was very easily positioned in an appropriate and convenient area, without the requirement for plumbing or other services, other than a three-phase power supply and an air outlet.

The Technology

The WasteMaster system is an innovative on-site continuous food and organic waste processing and conversion system which uses a unique proprietary technology to accelerate the decomposition of food and organic waste.

WasteMaster converts and reduces the weight and volume of food waste by up to 80 per cent, transforming and re-purposing it into an odourless, compost-like, high calorific-value residue in less than 24 hours, without introducing additives or water and without discharging the end product into sewers or watercourses.



By reducing the volume and changing the composition of the food waste through this conversion process, around 3.2 tonnes of landfill gases are avoided for every two tonnes of food waste fed into the machine and diverted away from landfill. The residual material can be used for applications such as the production of green energy through anaerobic digestion.



WasteMaster Operation

Designed for ease of operation by staff on site, only very minimal training is needed to load the system and as WasteMaster is supplied as a managed service, the food waste processing cycle is remotely monitored continuously to ensure smooth-running performance.



Catering staff were briefed on the rationale of the new food waste processing system to maximise the conversion process, including the importance of segregating packaging from food waste to avoid contamination of the residual material at the end of the process.

Automatic bin loading reduces the health and safety risk still further and the WasteMaster system will both indicate when it is full and will unload automatically when the process has finished. The WasteMaster is controlled through a diagnostics interface which also provides the most accurate figures possible on actual quantities of food waste being produced for reporting purposes.

The Results

Prior to installation of the WasteMaster system, it had been difficult to produce accurate data on food waste volumes from different areas of the hospital. Analysis of the food waste processed on site via the WasteMaster diagnostic reporting system highlighted that the hospital was in fact not producing as much food waste as it thought. Yet initial figures still showed a 35% reduction in costs due to the installation of the WasteMaster food waste conversion system.

As another significant benefit, although the WasteMaster cannot itself reduce the creation of food waste due to varying patient appetites, the system has nevertheless had an impact on reducing food waste at every stage, including creation, by motivating and inspiring hospital staff to consider the Environment.

Along with this, Robin estimates that the WasteMaster system has reduced the hospital's water consumption by 11,650 litres over a three-month period.

The Head of Facilities for Kettering General Hospital, Sue Landon, says: “Staff have reported that the machine is very simple to use, and it has made them far more eco conscious. They are delighted to be involved in reducing food waste fed into drainage systems and landfill.

“Our staff immediately took to the system. Being able to see that food waste was being turned into something useful has really motivated them. It has been an immediate success, preventing the stress of the drains not working due to the additional waste burden on the drainage system and, as an added bonus, seeing something good come out at the other end.

“In the three months that the system has been operational, our hospital has seen a continuous reduction in the weight of its food waste”.

Waste and Sustainability Manager, Robin Packman, is leading a programme of activities to drive awareness of food waste management among hospital catering staff and plans to use the diagnostic interface to measure exactly how much food waste is being produced. He will also use the WasteMaster to process food waste from other areas of the Hospital, reducing costs still further. Robin reports that in one year only, WasteMaster will have reduced the volume of food waste after processing by 50 tonnes and water consumption by 69,888 litres.

As a result of its environmental benefits and performance the WasteMaster system was submitted for a Best Waste Management Product Award and the hospital has committed to continuing to benefit from both the cost and environmental rewards that it delivers.

Green Eco Technologies develops, supplies and manages innovative, safe, efficient and environmentally beneficial, on-site solutions for the conversion and re-purposing of putrescible organic waste into re-usable resources.

For further information about the WasteMaster range and a free on-site assessment of your specific food waste issues, please contact: info@ecoserviceuk.co.uk

WasteMaster



Don't waste your waste!

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