

# Case Study: Central Manchester University Hospitals NHS Trust Food Waste Collection



Case study outlining food waste collection services from Central Manchester University Hospitals NHS Foundation Trust hospital sites

# Food waste collection from Central Manchester University Hospitals NHS Foundation Trust hospital sites

**Central Manchester University Hospitals NHS Foundation Trust was established in 2009. The Trust incorporates Manchester Royal Infirmary (MRI), Manchester Royal Eye Hospital, St Mary's Hospital and Royal Manchester Children's Hospital on the Central Manchester PFI site along with the University Dental Hospital and Trafford Hospitals located elsewhere.**

**Sodexo operates the facilities management contract on behalf of the main PFI contractor Catalyst. The collection of food waste was introduced across the Central Manchester site in 2011 and is currently sub-contracted to Olleco by Sodexo via their waste broker GreenZone. Food waste collected from the sites is treated by anaerobic digestion at Lower Reule Bioenergy's site near Stafford.**

## Background

Prior to the introduction of the food waste collection scheme in 2011 food waste generated at the Central Hospitals site was macerated. Food waste recycling was a key part of the overall recycling and overhaul of waste management systems introduced in 2011 alongside the collection of a wide range of dry mixed recyclables as an element of the overall recycling package. The changes made to the waste management system have resulted in an increase in the recycling rate of general 'domestic type' waste from 25% to 95%.

Food is provided to patients across the hospital sites through a "cook from chilled" model. Packaged food is re-heated on site using a range of facilities including ovens, microwaves, satellite (reheat) kitchens and regeneration trolleys<sup>1</sup>. The range of approaches to reheating and presenting food reflects the facilities available in buildings of different ages and designs across the central site. In some cases this food is

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<sup>1</sup> *In regeneration kitchens / trolleys chilled or frozen foods that have been prepared and packaged elsewhere are heated and the cooking process completed.*

plated from reheated bulk servings and in others food is provided ready plated for reheating. The approach to food waste management is broadly similar throughout the site.

## Key facts

Topic	Fact
Number of beds	Approximately 1,200
Number of hospitals	On Central site with food waste collection: Manchester Royal Infirmary, Saint Mary's Hospital, Manchester Royal Eye Hospital, Royal Manchester Children's Hospital. No food waste collection: The University Dental Hospital of Manchester and Trafford General Hospital are located on separate sites.
Charging mechanism	Charged per tonne
Accepted materials	Food waste and biodegradable liners only
Internal container type	35 litre caddies are used in kitchens
External container type	240 litre wheeled bins
Liner provision	Olleco
Collection frequency	Three times per week
Vehicle type	3.5 tonne RCV
Crew size	Driver only
Annual tonnage	Approximately 120 tonnes
Point of arising	4 hospitals 40 ward kitchens 1 staff canteens 5 restaurants (public facing)
Kilograms per bed per week collected	1.9
Treatment point	Lower Reule Bioenergy, nr. Stafford (Anaerobic digestion)

## Contract management

The management of the food waste collection contract is via a multi-tier arrangement typical of service provision under a PFI contract. Sodexo operates the main facilities contract on behalf of the PFI contractor Catalyst. Sodexo use 'GreenZone' as a broker to source waste collection services which, for food waste, are currently provided by Olleco. Sodexo's performance and the overall outcomes for the waste management system are overseen and monitored by Trust staff.

## Food waste collection operations

Food waste is managed using the following process:

- Food waste arising from wards is placed by domestic staff in 35 litre caddies with biodegradable liners which are located in kitchens.
- Domestic staff then place the filled liners from the caddies in 240 litre bins in local bin stores adjacent to each ward.
- 240 litre containers are removed from the local bin store and replaced with empty 240 litre containers 3 times per week, prior to the collection by the waste contractor. The bins are transported to a central waste storage area by waste management staff. In some instances bins are temporarily moved to intermediate storage areas to reduce the distances involved in individual trips. To reduce manual handling of heavy 240 litre bins, staff have the option to use trolleys and electric tug vehicles to transport multiple bins at a time (Image 1).
- Olleco undertake collections three times per week and wash containers on site at the same time as each collection. The Olleco RCV has a jetwash system installed, however Olleco use the in-situ system in the hospital waste compound to wash the containers as it is considered superior.

**Image 1. Electric hand-tug and bins mounted on trolley**



## Communications

The Sodexo waste manager is responsible for overseeing communications related to the food waste scheme. The main target audience are the staff members that are responsible for running the scheme; namely the domestic staff and waste management staff. All staff involved in the scheme are provided with both initial and an ongoing programme of training; signage and bin stickers are used to remind staff of the accepted materials (Image 2).

**Image 2. Example of bin labelling used**



## Performance

Information regarding the tonnage collected is provided by the contractor although there is not currently a consistent format or reporting schedule agreed with the contractor. Data indicates that, alongside the dry recycling scheme, the food waste scheme has helped to increase the 'domestic' waste recycling rate from 25% to 95%. Data provided by the contractor also provides an estimate of the energy generated by the food waste processed through the anaerobic digestion plant. This information is provided based on a standard assumption of energy per tonne of food waste.

There were some initial issues with contamination following the launch of the scheme while staff familiarised themselves with the new system but this has improved and there is now very little contamination and bins have not been rejected by the contractor due to contamination. Waste management staff on site would reject any badly contaminated food waste to the residual waste stream prior to collection if contamination is too high.

In addition to the increase in recycling achieved by the scheme, it has enabled the Trust to gauge how much food was being wasted. As a result, some processes have been changed, and the amount of food waste generated by the site has dropped significantly.

Indicator	Amount
Tonnes per annum diverted	Approximately 120 tonnes
Kilograms per bed per week diverted	1.9
Incidents of contamination	None

## Potential future improvements

The Trust is generally happy with the performance of the scheme and currently is not planning to make any changes. There are still concerns regarding the suitability of the 240 litre wheeled bins which are felt to be too heavy when full to tip onto their two wheels making them difficult to move. This issue however, has been partially addressed using the trolley and tug system. The Trust is also talking to the contractor about gaining more regular and detailed information regarding scheme performance.



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