



The food industry produces more waste than householders

Up to an estimated 20m tonnes of food waste are sent to landfill each year. Andrew Don reports on how the baking industry is trying to minimise its own environmental damage

Time to bin wasteful habit

Every food-based business has big waste disposal and recycling issues to consider and bakery is no exception.

The food industry is responsible for almost twice as much food waste as householders, according to statistics from environmental advisory body Waste & Resources Action Programme (WRAP), and such waste needs to be handled responsibly.

Philip Simpson, commercial director at PDM Group, which provides environmentally sustainable recycling and process services for the food industry, says: "It's no longer acceptable to send bakery waste to landfill and, as the environment becomes an important business objective, finding sustainable disposal options is top of the agenda."

Landfill is increasingly taboo because it produces greenhouse gases that are hugely harmful to the environment. We are also running out of holes in which to put the waste.

Bakery waste includes meat products, dough that does not come up to spec, broken biscuits, bits of cake, bread, fats, oils, sugar dust, sacks, litter, plastics, paper, cardboard, metals, batteries, office and bakery equipment and pallets.

Simpson says such waste is an important resource and can be used to make a variety of new products. Bakery waste that does not contain meats can be used to produce animal feed, for example, and waste such as sausage

rolls and meat pies can be used to create renewable energy.

Cawleys Waste Management, which handles a wide range of foodstuffs, says waste dough can be routed through anaerobic digestion or in-vessel composting. In anaerobic digestion, organic material is blended and bugs that occur naturally within the environment will start eating the matter, giving off a methane gas material that can be captured and used for power.

With in-vessel composting, the methane that is produced is not captured; it is an option for reducing waste that produces a compostable material.

Tony Goodman, Cawleys' sales director, says waste is also produced by individuals taking wrapped food into work. "This will be prevalent in any commercial bakery business and is collected as mixed general waste," he says.

General office waste is most commonly sent to landfill, or to material recycling facilities. Goodman says there is little in a bakery that cannot be recycled.

"If companies have a real wish to become 'zero landfill' and put in systems at source to segregate and recover the material, a solution can be found to give a 100% recycling route," he says.

"Most bakeries have systems in place for animal feed but they've been a bit lacking in processes to deal with more general waste

on site such as office and industrial waste produced by the activities of factories. It's more difficult for small independent high street bakers and easier when you have volume of any type of material to deal with," Goodman says.

Cawleys estimates savings of 25%-50% can be made within six months, depending on the size of the business.

Hayden's Bakeries, a £23m turnover business supplying patisserie to Waitrose and Marks & Spencer, says managing the waste the company creates and the savings from reducing the creation of waste at source is worth thousands of pounds a week.

The business underwent major changes two years ago when managing director Paul Smith joined. This included work on material control, reducing stocks, a just-in-time ethos and improved planning and forecasting.

Hayden's introduced new manufacturing methods and standardisation, and used data analysis



Cawleys'
Tony Goodman

A recycling facility (left) and launch of the food waste recycling scheme at Food Partners' site in Kilmarnock



and root-cause problem solving, tackling waste at source.

Operations director Stephen Brooks says: "We've set up a waste-stream management area, we recycle cardboard and aluminium. We are recycling a lot of plastic. All our food goes to processing for conversion to feed-stuff, pallets and delivery crates are broken down and we recycle scrap metal."

The business has a dedicated full-time waste control operative and, as a result, has virtually eliminated over-production while achieving high levels of customer service. Overall waste has been reduced and food waste, in particular, has been cut by 40%. "All those waste streams were previously given to landfill," Brooks says.

Baynes, in Fife, makes 'green' waste disposal a priority, with the help of Cyrenians Organics Recycling Enterprise (Core).

Pies fuel the country

Greenergy, which supplies one-fifth of Britain's road fuel, last week began producing biodiesel from food waste. In a partnership with edible oils recycling specialist Brocklesby, unsaleable food products, which would previously have gone to landfill or compost, are now being converted for biofuel and energy production. The company is making biodiesel from high fat solid foods such as pies, sausage rolls and pastry, which typically contain between 25% and 30% oil and fat. The finished biodiesel is then blended in small quantities into the diesel that Greenergy supplies to petrol stations around the country.

General manager George McKay says all cardboard, paper and plastics throughout the business is recycled and it has different bins for each material used. The green ethos covers every aspect of the business, including buying tuna in foil pouches instead of boxes and tins, while it recycles waste-meat products which are fed to hunting hounds.

McKay says the company has reduced its monthly landfill by 90% thanks to a regime put in place by technical manager Eleanor Hutchison.

Hitting landfill targets

United Biscuits announced earlier this year that four of its 14 UK sites had hit its zero-waste-to-landfill target (*British Baker*, 2 February).

The company increased its recycling volume last year by 19%, improved the recycling percentage from 70% the previous year to 95% and decreased landfill volumes by 55%.

Food Partners, part of Adelle Group, a significant player in the chilled 'food for now' market, advocates involving all staff in an approach introduced at the end of last year to ensure nothing from the business is sent to landfill.

The Kilmarnock company, which makes a wide range of traditional sandwiches, filled paninis and wraps, uses what it describes as the latest eco-technology whereby all waste, including food waste is treated as a precious resource and diverted to other uses including creating energy to power homes, fertiliser to return nutrients and condition to the soil, and feed for livestock as part of its Ready, Steady, Green campaign.

The company, which produces £3m of fresh sandwiches each week, recognised its

scale of manufacturing could have a heavy footprint on the planet. Ready, Steady Green diverted nearly 300 tonnes of food waste from landfill and generated 57,000 kWh of electricity from the same waste in the first three months of operation.

Cawleys' WasteSolve carried out an audit and identified different recycling processes according to the type of food at each manufacturing site, and the location of various recycling facilities.

The Waitrose supermarket chain is one of those rolling out the use of Cawleys' commercial collection service to 50 of its stores across the UK within the East Midlands and London.

The business collects its food waste in biodegradable corn starch bags which are placed in 360-litre bins. Food material is taken to a BiogenGreenfinch anaerobic digestion plant. Other material goes through a de-packaging machine. The packaging is shredded and sent to Cawleys' materials recovery facility in Luton, Bedfordshire, which recycles card, paper, plastic, scrap metal and wood.

Greggs' target this year is to divert a further 10% of waste from landfill. The chain extended its waste contract with specialist, waste management company Biffa for another two years in 2010 and continues to work with it on various recycling initiatives.

A spokeswoman says: "We are committed to reducing the amount of waste we send to landfill and are pleased with our progress so far – in 2008 we diverted 20% of waste from landfill, followed by an additional 18% in 2009 and 36% in 2010."

Its recycling initiatives include anaerobic digestion and composting.