

Food Waste

November 2013

Introduction

Food waste weighing 15 million tonnes is thrown away in the UK every year with consequent financial, environmental and ethical implications.

Wales has set reduction targets, similar to other administrations and in line to meet EU waste policy directives, as part of its overarching policy on waste management to enable Wales to live within its environmental limits.

This briefing provides an overview of the different sources of food waste, the financial and environmental costs of the waste produced and current targets and measures to reduce and reuse the waste.

Types of Food Waste

Three types of food waste are defined when calculating the potential for financial and environmental savings through reduction and reuse¹:

- Avoidable – Food and drink that was edible at some point prior to disposal. (4.4 million tonnes annually from households)

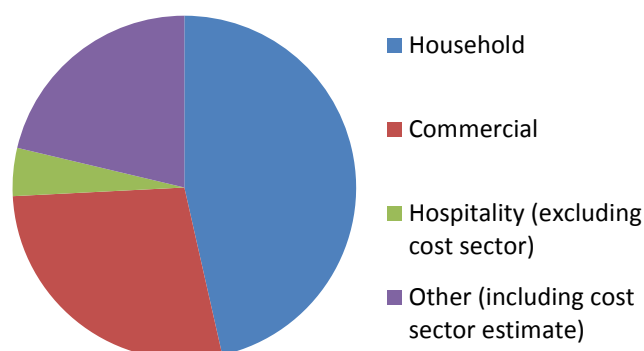


- Possibly Avoidable – Food and drink some people eat but not others, or that can be eaten when a food is prepared one way but not another (eg bread crusts or potato skins). (1.4 million tonnes annually from households)
- Unavoidable – Waste arising from food preparation that is not edible under normal circumstances (eg egg shells or tea bags). (1.4 million tonnes annually from households)

Sources of Food Waste

Food waste arises from three main distinct sources: households, the retail supply chain and the hospitality sector. Figure 2 shows the relative proportions each contributes in the UK.

Figure 2: UK sources of food waste 2009-2012² (NB cost sector figures are not available so are estimated within “other”)



Of the three, household food waste is the largest source accounting for approximately half of the total produced in the UK. The Welsh Government reports that this amounts to around 400,000 tonnes in Wales alone, with less than one-fifth of this classed as unavoidable³.

¹ WRAP, **New estimates for household food and drink waste in the UK**, November 2011 [accessed 3 October 2013]

² WRAP, **UK Handy facts and Figures**, 2013 [accessed 15 October 2013]

³ Welsh Government, Environment and Countryside, Waste and Recycling, Prevention and Minimisation, **Preventing Food Waste** [accessed 15 October 2013]

The retail supply chain covers losses during the manufacture and production of the food as well as losses that occur in stores. This accounts for approximately one quarter of all food waste – the majority of which occurs during production.

The remaining food waste is generated through the hospitality and food service sector and other sources (eg pre-factory gate or as litter). Hospitality and food service includes hotels, pubs, restaurants and the cost sector (defined as where the provision of food is not the primary function of the establishment eg school and office canteens, hospitals, food provision to the armed forces).

Scale of Food Waste

Across the UK an estimated 15 million tonnes of food ends up as waste every year⁴. On average in Wales it accounts for one third of the content of black bag rubbish collected from homes which will end up in landfills⁵.

This has a large environmental impact – food waste that ends up in landfill decomposes to release methane, a greenhouse gas 23 times more powerful than carbon dioxide⁶. The equivalent carbon dioxide emissions associated with the manufacture, distribution, storage, use and disposal of avoidable household food waste is equivalent to the emissions of one in five cars on the road⁷.

In addition to this environmental impact there is a financial cost to the waste. Across the UK as a whole it is estimated that 60% of household food waste could at one point have been eaten, costing £12 billion a year, or about £480 a year to the average household⁸.

⁴ Waste & Resources Action Programme (WRAP), **UK Handy Facts and Figures** [accessed 7 October 2013]

⁵ WRAP, **The composition of municipal solid waste in Wales**, May 2011 [accessed 7 October 2013]

⁶ Waste Awareness Wales, Recovery, **Treatment Options** [accessed 7 October 2013]

⁷ WRAP, **New estimates for household food and drink waste in the UK**, November 2011 [accessed 3 October 2013]

⁸ WRAP, **New estimates for household food and drink waste in the UK**, November 2011 [accessed 3 October 2013]

Government Policy and Strategy

Welsh Government policy is influenced by both European and UK legislation. The revised EU *Waste Framework Directive 2008/98/EC*⁹ sets out a “waste hierarchy” of five steps, ranked by environmental impact, with prevention at the top (offering the best outcome) and disposal at the bottom (the worst outcome). The *Landfill Directive 1991/31/EC*¹⁰ sets a target of reducing the amount of biodegradable waste sent to landfill to 35% of the 1990 level. Finally the UK *Climate Change Act 2008*¹¹ requires that the UK carbon account is reduced by 80% by the year 2050 compared to 1990.

The Welsh Government’s overarching waste strategy document, *Towards Zero Waste*¹², encompasses these directives and targets. It includes the order of priority; first to reduce the amount of waste and then recycle or reuse that which is produced, as well as specific targets. These include reducing total waste every year by 1.5% (of the 2007 baseline) to reach the goal of a 65% reduction by 2050 and to increase recycling/composting to 70% of the total by the year 2025.

Recycling targets were made legally binding by the *Waste (Wales) Measure 2010*¹³ and the *Landfill Allowances Scheme (Wales) Regulations 2004*¹⁴ limited the amount of biodegradable municipal waste sent to landfill.

⁹ **OJ L 312, 22.11.2008** [accessed 14 October 2013]

¹⁰ **OJ L 182, 16.7.1999** [accessed 14 October 2013]

¹¹ **The Climate Change Act 2008** [accessed 7 October 2013]

¹² Welsh Government, **Towards Zero Waste**, June 2010 [accessed 7 October 2013]

¹³ The **Waste Wales Measure 2010** [accessed 15 October 2013]

¹⁴ The **Landfill Allowances Scheme (Wales) Regulations 2004** [accessed 15 October 2013]

Sector Plans

To achieve these targets for overall waste a suite of sector plans are being implemented. Food waste is a key feature of the *Municipal Sector Plan*¹⁵ (covering all waste collected by Local Authorities in Wales) and the *Draft Food Manufacture, Service and Retail Sector Plan*¹⁶ (covering food and drink manufacturers, wholesale and retail sector and the service sector, though also of interest to households as it can influence the waste being produced).

These set out a four step approach:

- Waste prevention
- Preparing for reuse (less important for food waste)
- Recycling collection service delivery improvements
- Treatment and disposal

with an action plan for each of these areas.

In addition the *Collections, Infrastructure and Markets Sector Plan*¹⁷ targets waste collection firms and sets out approaches to increase the amount of waste collected for recycling.

In 2013 the Welsh Government launched a consultation on *The Waste Prevention Programme*¹⁸ for Wales as required by the revised *Waste Framework Directive 2008/98/EC*¹⁹. This was specifically targeted at preventing waste, as opposed to increasing recycling, and was intended to contribute towards the *Food Manufacture Plan*. It also reviewed the *Municipal Waste Plan* and concluded that:

no new actions over and above those outlined in the Municipal Sector Plan were required.

¹⁵ Welsh Government, **Municipal Sector Plan: Part 1**, March 2011 [accessed 7 October 2013]

¹⁶ Welsh Government, **Draft Food Manufacture, Service and Retail Sector Plan: Consultation Document**, March 2011 [accessed 7 October 2013]

¹⁷ Welsh Government, **Collections, Infrastructure and Markets Sector Plan**, July 2013, [accessed 14 October 2013]

¹⁸ Welsh Government, **Consultation on a Waste Prevention Programme for Wales**, March 2013 [accessed 14 October 2013]

¹⁹ **OJ L 312, 22.11.2008** [accessed 14 October 2013]

A key part of implementing these sector plans is the work of the Waste & Resources Action Programme (WRAP).

Other Administrations

The Scottish Government has also published a *Zero Waste Plan*²⁰ that sets out similar targets of 70% of all waste to be recycled and less than 5% to be sent to landfill, both by 2025.

It has also enacted the *Waste (Scotland) Regulations 2012*²¹. This makes it compulsory for food businesses to separate out food waste for collection by 2014 (if producing greater than 50kg per week) or 2016 (if producing greater than 5kg per week). It also compels local authorities to provide separate food waste collection in all non-rural areas by 2016.

The Northern Ireland Executive has consultations on a *Waste Prevention Programme*²² and *Restrictions of Landfilling of Food Waste*²³ due to close in December 2013. It has also published a *Draft revised Northern Ireland Waste Management Strategy*²⁴ which introduces landfill restrictions on food waste, amongst other general waste targets.

The UK Government identified food waste as a priority in the *Review of Waste Policy in England*²⁵ and had a consultation on a *Waste Prevention Programme for England*²⁶ which closed in September 2013, with the programme timetabled for publication in December 2013.

²⁰ Scottish Government, **Scotland's Zero Waste Plan**, June 2010 [accessed 15 October 2013]

²¹ **The Waste (Scotland) Regulations 2012** [accessed 1 October 2013]

²² Northern Ireland Executive, **Draft Waste Prevention Programme for Northern Ireland**, September 2013 [accessed 15 October 2013]

²³ Northern Ireland Executive, **Consultation on the introduction of restrictions on the landfilling of food waste**, September 2013 [accessed 15 October 2014]

²⁴ Northern Ireland Executive, **Draft revised Northern Ireland Waste Management Strategy**, 2013 [accessed 17 October 2013]

²⁵ UK Government, **Review of Waste Policy in England 2011**, [accessed 15 October 2013]

²⁶ UK Government, **Waste Prevention Programme Consultation**, August 2013 [accessed 15 October 2013]

Waste & Resources Action Programme (WRAP)

WRAP is a not-for-profit company, part-funded by Defra, the Scottish Government, the Welsh Government, the Northern Ireland Executive and the EU. It works across the UK to provide help to businesses, local communities and authorities and individuals in order to recycle more and waste less. It has initiated three programmes, detailed below, that each target one of the three sources of food waste.

Love Food Hate Waste²⁷

The Love Food Hate Waste campaign is promoted in Wales in partnership with Waste Awareness Wales (a national consumer campaign designed to promote consumer change). The campaign targets individuals and households in order to raise awareness of the need to take action to reduce waste and provides advice on how to achieve this.

The advice ranges from providing recipes and grocery shopping plans along with correct food storage methods, to increase shelf life and reduce food usage, to providing ideas and plans for organising a “Love Food Hate Waste week” to spread this awareness amongst an organisation or community.

Courtauld Commitment²⁸

The Courtauld Commitment is a voluntary agreement targeting the grocery sector (including retailers, manufacturers and suppliers) aimed at improving resource efficiency and reducing waste. It is funded by the four UK governments and supports their aims to achieve the policy goal of a “zero waste economy” and meet the objectives of the *Climate Change Act 2008* to reduce greenhouse gas emissions.

It entered its third phase in May 2013 and runs until 2015, with phase one running 2005-2010 and phase two 2010-2012, and has 49 signatories to date including all the major supermarkets.

²⁷ Love Food Hate Waste Wales [accessed 7 October 2013]

²⁸ WRAP, Food, Courtauld Commitment [accessed 4 October 2013]

Phase three has targets of reducing household food and drink waste by 5% and ingredient, product and packaging waste in the supply chain by 3% by 2015, relative to a 2012 baseline. Innovative packing, which can prolong shelf life, is being used to meet both of these targets. Other variations in packaging (eg different pack sizes, removal of confusing labelling such as display until dates) alongside retailers’ waste reduction campaigns (eg Sainsbury’s “Make Your Roast Go Further”²⁹ and Morrison’s “Great Taste Less Waste”³⁰) are being used to reach the household targets.

Hospitality and Food Service Plan³¹

The Hospitality and Food Service Plan is a UK wide voluntary agreement launched in June 2012 aimed at restaurants, pubs, hotels and other trading bodies as well as contract caterers that serve clients such as local authorities, NHS, MOD and staff canteens in offices and factories. It has 2015 targets of reducing food and associated packaging waste by 5% (measured against a 2012 baseline and as a reduction in carbon dioxide equivalent emissions) and increasing waste sent for recycling, anaerobic digestion or composting to 70%. To achieve this WRAP identifies four separate groups: small and large sized businesses, contract caterers and suppliers. It produces information targeted at each group and provides advice and technical support to help them record the waste they are producing as well as methods to reduce it (eg sharing good practice at training days and access to tested communications materials for individuals, consumers and staff).

²⁹ Sainsburys, Live Well For Less, Meal Planning, **Make Your Roast Go Further** [accessed 17 October 2013]

³⁰ Morrisons, Food and Drink, **Great Taste Less Waste** [accessed 17 October 2013]

³¹ WRAP, **Hospitality and Food Service: WRAP’s Work** [accessed 7 October 2013]

Food Waste Collection and Treatment

As well as reduction, food waste recycling or reuse is important when considering the 20% of food waste classed as unavoidable. The majority (93%) of all households in Wales now receive a separate food collection service, with approximately 39% of food waste being captured, allowing it to be used in energy from waste programmes³².

The Welsh Government's (as well as the UK Government's) preferred energy from waste method for dealing with food waste is anaerobic digestion (AD). This process uses bacteria to break down the waste in the absence of oxygen to produce biogas (classed as renewable), which can be burned to give heat and electricity, and digestate (similar to compost) that can be used to return nutrients to the soil, and hence reduce reliance on artificial fertilisers.

A financial support package exists for local authorities adopting AD technology. The procurement strategy is outlined in *Food Waste Treatment Programme – Procurement Strategy v2.5*³³. Seven collaborative procurement hubs have been formed from local authorities, excluding Anglesey, Wrexham, Cardiff and Monmouthshire which already have appropriate treatment measures in place, to jointly secure treatment capacity.

³² News Release, [Waste Awareness Wales](#) [accessed 4 October 2013]

³³ Welsh Government, [Food Waste Treatment Programme – Procurement Strategy v2.5](#) [accessed 7 October 2013]

Further information

For further information about **Food Waste**, please contact **Matthew McLeod** (Matthew.Mcleod@Wales.gov.uk), Research Service, or **Chloe Corbyn** (Chloe.Corbyn@Wales.gov.uk), Research Service.

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