

The Bristol Method

# how to tackle food waste in cities

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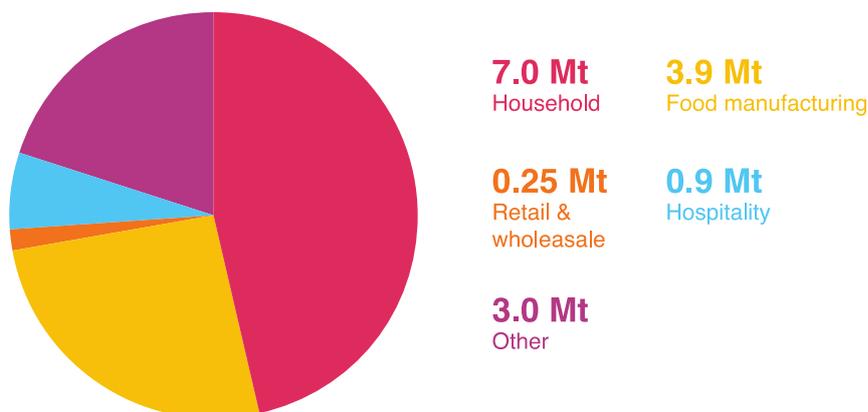
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# Introduction

Research undertaken by WRAP shows that approximately 15 million tonnes of food waste is produced each year from households, businesses and other organisations in the UK. That’s a huge figure comprising a mix of food waste from consumers and processing and distribution sectors. The pie chart below gives a breakdown between different sectors.

Amounts of food waste arising in the UK by sector Total = ca. 15 Mt



Further analysis shows that of the 7m tonnes thrown away by households, at least 4.2m tonnes was avoidable, for example by only buying as much food as you require, keeping food refrigerated and using up leftovers.

The annual cost of avoidable food waste is estimated at an average of £470 per household.

Unavoidable food waste - such as bones or vegetable peelings - contributes to greenhouse gas emissions when landfilled. They also represent a valuable source of energy and nutrients and are best collected separately from other wastes.

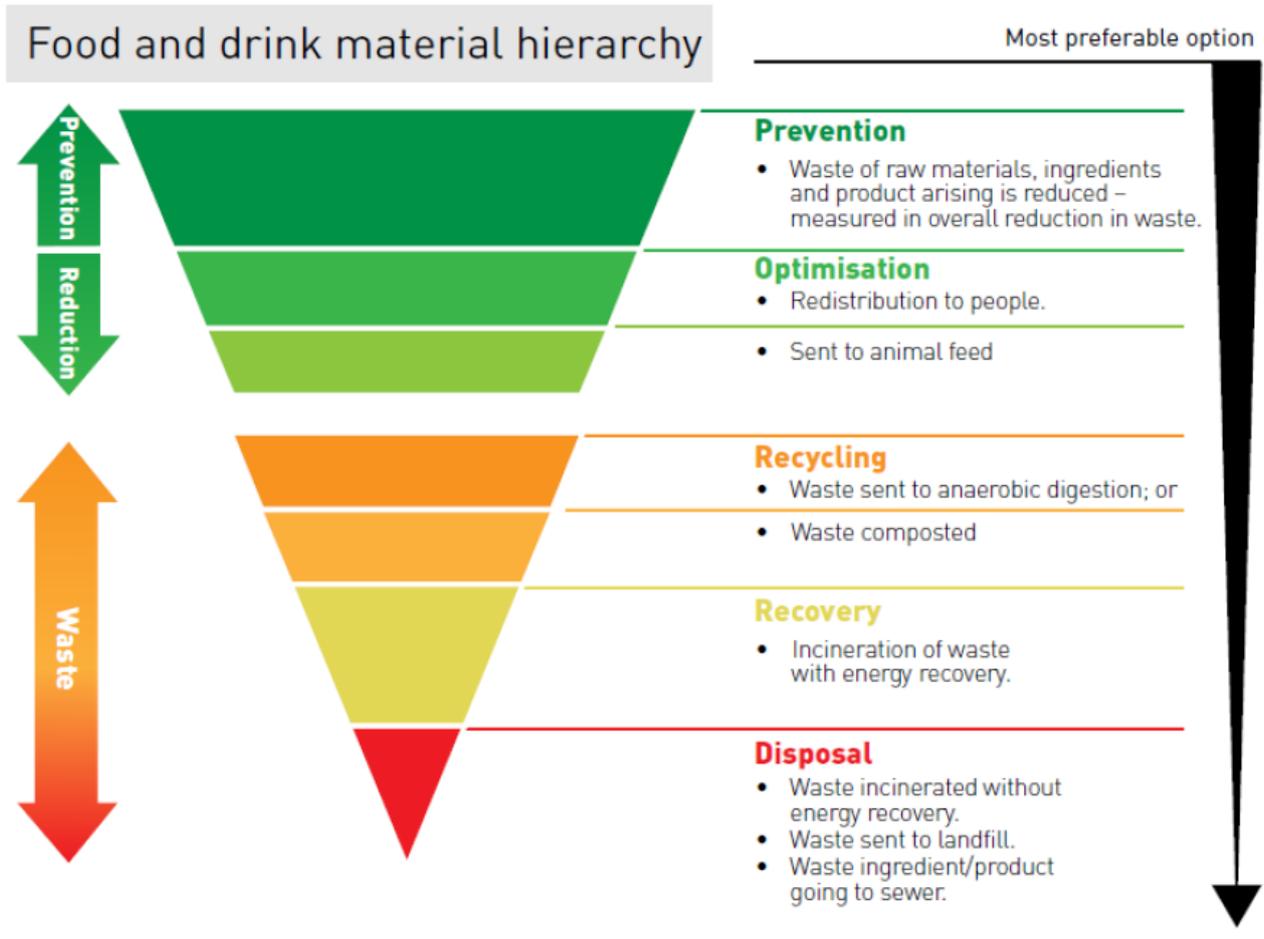
From a national resource point of view, there are also concerns relating to food security as we have become more dependent on food imports and are therefore more vulnerable to the effects that poor harvests and conflicts can have on food supplies. Reducing food waste has become a focus for national and local governments and the food industry in the UK. WRAP has led on research in this area in the UK.

Further information on their work can be found at [www.wrap.org.uk](http://www.wrap.org.uk).

The importance of food waste issues in Bristol relates to the city’s heritage of pioneering approaches to tackle waste issues. The city has a strong food sector with interests in the sustainable food agenda, as well as a vibrant social enterprise sector which has risen to the challenge of addressing food waste issues and poverty. There are also numerous Bristol based organisations who are engaged in research and initiatives tackling food waste issues at a national level.

During 2015, Bristol’s activities relating to food waste have developed further – the challenge going forward is how to develop a long term strategy that addresses the whole supply chain.

This module describes who the key players are and outlines the range of current activities, as well as providing cases studies of some of these. It also outlines ways in which a long-term strategy is being developed.



The food and drink waste hierarchy

## Background

Food issues have long been a focus of attention for groups in Bristol. Bristol is the first UK City to have a Food Policy Council. [The Bristol Food Policy Council](#) (BFPC) was launched in March 2011. The BFPC has led the way in working towards a sustainable food strategy. Food policy councils bring together stakeholders from diverse food-related sectors to examine how the food system is operating and to develop recommendations on how to improve it.

Bristol's FPC has been working on sustainable food growing in urban areas as well as promoting the wide variety of local food initiatives in the city. More recently it has begun taking on board issues relating to food waste. The BFPC is currently in the process of applying for an award as a 'Sustainable Food City'. There is also a [Bristol Food Network](#) bringing together a range of local projects working on food issues. This network is represented on the BFPC.

There is an active network of re-use organisations in Bristol, Bristol ReUse which some of the local organisations involved in food redistribution are members of.

That is not to say that things have been quiet on the food waste front. The Council has set up a range of services aimed at making sure that food waste from householders is dealt with in the most sustainable way possible. Not surprisingly, given Bristol's heritage of community led initiatives to tackle waste, there have been a number of developments to try and tackle these problems at a community level. This document provides detailed case studies of a selection of the major initiatives and brief details of other projects which demonstrate the range of stakeholders.

One of the major challenges facing organisations aiming to tackle material resource issues at a strategic level is how to fully integrate work across the whole supply chain. What has tended to happen is that local authority attention is focussed on the services aimed at householders as a result of their duty to provide waste collection services for residents. In more recent years increasing focus has been given to maximising the potential for reducing landfill and meeting government recycling targets. Bristol was one of the first cities to benefit from kerbside recycling collections. These were initially set up in the early 1980s by Friends of the Earth independently from the Council before being integrated into the Council's contracts in the late 1990s. It is

therefore not surprising that the city was one of the first to introduce a city wide food waste collection service for householders. In recent years less attention has been given to encouraging householders to reduce food waste per se, although there are a lot of nationally available tools and guidance under the umbrella of the national campaign run by WRAP: 'Love Food Hate Waste'. One of WRAP's tools 'Save More', aimed at working with low income families to reduce food waste and save money, was developed in Bristol and tested with local community projects.

However, the Council does not have a duty to provide services for commercial companies and clearly there are a lot of these that are responsible for generating food waste. Including: food processors (bakers, breweries, dairy and meat industries); distribution centres; retailers; the hospitality sector (cafes, restaurants, hotels); educational establishments; hospitals; and works canteens. All these individual organisations will have their own policies and procedures in relation to the management of material resources such as food. All will have means of disposing of waste food. For most, the key driver will be to reduce the costs of food waste – and so measures to reduce food waste will need to be commensurate with any costs of introducing new systems and processes. Unlike household waste - where we know how much food waste is collected separately and data is regularly collected to show how much remains in the residual bin - there is no similar data for commercial waste at a city level. We are not, at present, able to say how much food waste is generated by commercial companies or how it is currently treated.

Food retailers have come under a lot of pressure nationally to reduce the amount of food waste they generate and in particular to redistribute food to local charities supporting people in need. Tesco, Marks and Spencer and Sainsburys all announced new initiatives to tackle food waste during 2015.

Tesco's scheme is a partnership with FareShare (the national charity) and Marks and Spencer have linked up with Neighbourly, a Bristol web-based platform linking corporate and private sector funders with local projects. Sainsburys plans to work with towns and cities devising strategies for tackling food waste – linked to local community action.

The waste industry is beginning to offer separate collections of food waste for their commercial clients but these are still often more expensive than continuing to mix food waste in with the residual waste collections. Bristol does now have a local food waste reprocessing facility run by GENeco (a subsidiary of Wessex Water) and a number of companies have begun to offer separately collected food waste services.

Work has been done at a national level to engage companies within the food supply chain on food waste issues. WRAP have led most of this work and reports are available through their website: [www.wrap.org.uk](http://www.wrap.org.uk). At a local level there is much more to be done to both understand the scale of the food waste problem within the supply chain and to devise innovative solutions that can be replicated elsewhere.

As well as the three case studies below, this module gives a brief overview of other projects to tackle food waste before looking to the future and discussing how to encourage a more strategic and holistic approach to food waste issues in the city in the future.

Given Bristol's heritage of community led initiatives to tackle waste, there have been a number of developments to try and tackle these problems at a community level.



## Case study: FareShare South West

FareShare South West is an independent franchise of the national charity FareShare. It was set up in 2007 to redistribute food from the food industry to local groups working with vulnerable people who cannot afford or are not able to feed themselves properly.

The charity works with the food industry to minimise fit-for-purpose fresh, frozen and long-life food going to waste, and sends this food into organisations working with the most vulnerable people in the community. Food is wasted due to packaging errors, out of date promotions, discontinued lines and vegetables which do not meet retailers' specifications.

At the same time, there are over 4 million people in the UK who cannot afford a healthy diet, among them homeless and elderly people, children, refugees and people suffering from mental and physical health problems.

FareShare South West aims to address this imbalance by redistributing quality surplus food to groups working with vulnerable individuals in and around Bristol.

The group relies on volunteers and each week around 100 people help to re-distribute the food throughout the South West. Around half of these volunteers are or have been vulnerable and the charity offers training opportunities and support in their lives. It also encourages them to take messages associated with food and food waste to their families and their communities.

The project redistributes 30-40 tonnes of food per month which would otherwise have been disposed of. Around 150 organisations in Bristol, Bath, Gloucestershire, Somerset and Wiltshire are supported. These include hostels, day centres, lunch clubs, addiction agencies, young people's projects and refugee centres.

<http://FareSharesouthwest.org.uk/about/>

FareShare have pioneered a number of new initiatives:

### Feeding the 5,000 events

During 2012 and 2013 FareShare South West held events – feeding nearly 5,000 people with 4 tonnes of food which otherwise would have gone to waste. The events highlighted the issues around food waste and generated significant media publicity.



### Eighth Plate

FareShare South West is developing a toolkit to be used at festivals which measures how much edible food is wasted as well as training vendors on how this waste can be delivered to vulnerable people nearby.

The project worked with five trial festivals during 2015. This is going beyond ISO, to create a new "green" standard for festivals. For an example of the scale of the problem, it's estimated that 50–70 tonnes of edible food is wasted at Glastonbury Festival each year alone.

### Surplus Supper Club

This is the catering arm of FareShare South West. The aim of this project is to deliver an incredible catering service to corporates, the community and individuals and in the process change behaviour and generate revenue for the project.

### Food Route Local

This initiative grew out of an awareness that there is a large amount of good quality food in Bristol being thrown away by local micro-suppliers who were not part of FareShare's main activities. With a grant from Bristol 2015 Ltd. initial contacts identified 65 micro-suppliers and 38 local charities who were interested in the project.

During May and June 2015 a pilot scheme operated encouraging suppliers to register any food they had to donate on a web-based platform. Alerts were then sent to local projects seeking food. The project also involved working with one major supermarket.

The project also involved working with one major supermarket. The pilot scheme highlighted that any major supermarket with a number of outlets dominates the site which has an impact on micro suppliers.

In light of the information from the pilot project, FareShare South West developed a new mechanism for micro suppliers which include web, social media and SMS. This is now in pilot phase and is due to launch in early 2016.

The Surplus Supper Club has provided catering for us this year over a range of different events. The quality of the food is always fantastic and the value for money is great! The catering staff are always very helpful and enthusiastic and I would not hesitate to book again!"

**Bristol Natural History Consortium 2014**

# Case study: Household food waste collections and processing

Bristol City Council’s Waste Management Strategy published in 2009 set out a number of ambitious targets. These included: working towards sending no untreated waste to landfill; improving recycling and participation with incentives, education and support; and a reduction in the total amount of household waste. Providing residents with services to tackle food waste plays an important role in meeting these targets. These are described below.

### Restrictions on residual waste collections

These are in place to encourage householders to reduce waste and boost participation in recycling services. Collections are fortnightly and for households with 2-5 members the bin size is restricted to 180litres.

### Home compost bins

Subsidised home compost bins are provided by the Council and support is available from Garden Organics a national organisation with lots of web-based advice on how to compost successfully.

### Weekly collections

A weekly collection of food waste is provided to residents (except those living in flats). Each household is provided with kitchen caddies.

### ‘Feed Me and Win’ campaign

Studies undertaken in June 2015 suggest that food waste makes up 26% of what householders put in their residual bin. Further effort is required to promote the food waste collection service and engage residents in making sure that this waste is captured

One initiative to help address this problem is a new initiative called ‘Feed Me and Win’. This is a West of England nine-month campaign between June 2015 and March 2016 aimed at increasing participation in food recycling, reducing levels of food waste currently collected in the residual waste stream, and promoting consistent messages about the importance of ‘reducing’ food waste. Residents who put their food recycling bin out for collection are entered into a weekly draw to win £50 (or to donate to a charity of their choice).



**Waste Doctor**

The Bristol Waste Company who currently run the household collection services also provide a door to door canvassing team who visit areas of the city with low participation rates to encourage households to use the food waste and dry recycling collections. A ‘Waste Doctor’ service is also provided for residents who are struggling to manage their wastes correctly and have contacted the Council’s helpline. The canvassing and waste doctor services are provided by Resource Futures.

**Anaerobic digestion**

Food waste collected is treated at an award winning state of the art “Anaerobic Digestion” Food Waste Recycling Facility owned and operated by GENeco, a subsidiary of Wessex Water. The facility produces energy from biogas and a nutrient rich fertiliser for local farms.

The biogas is used to produce electricity on site or upgraded together with biogas produced from the onsite sewage treatment works to produce biomethane which is injected directly into the National Gas grid to supply local homes, schools and businesses and provide vehicle transport fuel for GENeco’s nationally acclaimed Bio-Bus – below.

The GENeco food waste recycling facility is an environmental, economic and technological success story.

- It provides Bristol with a cost effective robust and reliable local solution for recycling food waste.
- It makes the cost of recycling food waste in Bristol affordable to many businesses and organisations.
- It reduces or eliminates the reliance on landfill for many food waste streams.
- It reduces food waste miles and reduces the carbon footprint of recycling food waste.
- It reduces the risk of the spread of animal diseases through the improper treatment and recycling of food waste.
- It is a technological exemplar of closing the loop on the food circular economy and demonstrates how unavoidable food waste can be put to good use so nothing is wasted.



## Case study: 'Save More' training materials for low income families

In 2014, Resource Futures began work with WRAP to develop a suite of training materials on preventing food waste aimed at low income families. WRAP has led a national campaign Love Food Hate Waste aimed at changing consumer behaviours around food waste. However, it was recognised that this campaign was not reaching low income families who have most to gain financially from reducing food waste.

Resource Futures brought together a team of practitioners from community education, grassroots projects working on food issues, and nutrition and waste experts to develop a set of training materials that could easily be used by anyone in the community without any specific training or support.

The group spent several months creating materials which were then tested in community settings in Bristol, Scotland, Brighton and Wales. In Bristol these included The Matthew Tree Project, Hartcliffe Health and Environmental Action, The Good Cook School and Linkage.

The materials were reviewed by experienced community and adult educationalists to ensure they took into account the literacy and numeracy levels of the target audience.

The pack focussed on five key behaviours around reducing food waste:

- Reading and understanding date labels
- Planning what to buy
- Portioning so you don't cook too much
- Making the most of leftovers
- Correct food storage – both fridge and freezer.

Feedback from users in Bristol has been positive.

**Save More Save Money| Love Food Hate Waste**

'Save More was enthusiastically received by its peers - deliverers and participants alike. I'd encourage anyone working in this field to use the materials.'

**Ricky Bush, Linkage Bristol**

'We found that clients are better able to choose a variety of different foods from the food bank once they understand more about how to cook and store these foods.'

**Sue Baic, Dietician working with The Matthew Tree Project Foodstore in Bristol (advisor to the project team)**



## Other Bristol based food waste initiatives

Below are brief summaries of some of the other organisations working in the Bristol area to tackle food waste issues.

### Bristol FoodCycle Hub

The Bristol FoodCycle Hub is run by a group of passionate volunteers from Bristol University, UWE, and the wider community. Beyond organising weekly Hub cooking sessions, they also run a pop-up restaurant to make the Hub sustainable, and provide a platform for education, music, and sharing in the Bristol community.

FoodCycle Bristol collects surplus food from Sainsbury's and local independent food retailers and turns it into a three-course meal at a local community centre. These events are open to all but target people who are at risk of social isolation and food poverty.

FoodCycle Bristol representatives also go into primary schools to run classes and assemblies on how to reduce food waste and cookery skills.

FoodCycle Bristol is developing resources for schools. A toolkit will include lesson plans, with information on food waste and food poverty and advice on how schools can put on their own FoodCycle Feast; with children writing to shops, collecting surplus food and cooking meals, soups or smoothies to be shared at a communal meal with parents and guardians. The toolkit will benefit from lessons learnt from a number of case studies.

<http://foodcycle.org.uk/location/bristol/>

"I never thought a student-led project could tackle so many important issues simultaneously! FoodCycle has reduced food waste in Bristol whilst increasing awareness about it, it has tackled food poverty, and it has integrated university students with the local community; lasting friendships have been made over hearty meals."

**Amy, FoodCycle Hub Leader**

### The Matthew Tree Project

The Matthew Tree Project was set up in 2010 and is committed to contributing towards the systemic change needed to tackle poverty and the resulting health inequalities. One of the principal ways that the charity works is to address food poverty. The fact that there is so much waste food available has helped the project to meet its core objectives.

The project's Food Aid work gives out 60 tonnes of food per year to 2,000 crisis hit people from its four food centres in St Judes, Knowle West, Brislington and Cadbury Heath. Half of this food is donated directly by local food distribution and retail companies, with the other half coming from the public. As the profile of the Matthew Tree Project has grown, it has received more direct approaches from food distributors and food retailers offering more waste food than it has the capacity to deal with. As a result, it has begun to develop new service strands and projects that are only made possible by food donated by the food industry. These include:

#### Twilight Years

A weekly 'banquet' club for elderly people comprising a three-course meal and social activities. For the housebound, meals for two are prepared and taken to clients by volunteers who share a meal and stay for the afternoon as part of a programme to reduce isolation.

#### Cook Smart Eat Well

Cookery classes are run with the project's clients using public and food industry donated food to encourage healthy eating and demonstrate ways of cooking easy to prepare, nutritious and affordable meals from home on a budget. WRAP's Save More materials are used in these sessions.

#### Foodtours

This social enterprise provides skills training, apprenticeships and jobs through producing 'cottage industry style' local products in commercial grade kitchens. Food that would otherwise go to waste will form a significant percentage of the ingredients.

[www.the-matthew-tree-project.org](http://www.the-matthew-tree-project.org)

## The Gleaning Network

Bristol is part of the UK wide Gleaning Network which aims to save surplus fruit and vegetables from farms for redistribution to charities. Volunteers harvest vegetables and fruit from the field that don't have a ready commercial market and redistribute them to charities. Since starting in 2012, the Bristol Hub has saved over 12 tonnes of produce during four gleaning days, equal to over 150,000 portions of fruit and vegetables for the hungry and food insecure of the UK.

<https://twitter.com/GleaningBRIS>

## Bristol Skipchen

Bristol Skipchen is part of [The Real Junk Food Project](#), a pioneering movement with an overarching aim of putting itself out of existence by abolishing avoidable food waste. It is a rapidly growing organic movement of 100% food surplus cafés.

Bristol Skipchen run a café in Central Bristol, which aims to raise awareness of the amount of edible food thrown away and campaigns for system change. Skipchen collects waste from food retailers around Bristol and produces meals and asks customers to "pay as you feel". Since January they have collected over 14 tonnes of surplus food and serve 100–200 meals a day. During the summer of 2015, Skipchen attended festivals and migrant camps in Calais. Projects include running workshops in community kitchens and working on a trial with a supermarket, aiming to collect 100% "waste" from the supermarket seven days a week. They have run a Disco Soup event at a local bar and arts space venue in the centre of Bristol.

<https://thebristolskipchen.wordpress.com/>

## What Happens Next

The What Happens Next project is striving to put food, growing spaces and outdoor learning higher up the agenda in children's education. Services to schools include educational food programmes, design and installation of edible gardens, support and advice on composting.

One of the resources provided is an easy-care wormery that turns food waste into plant food. Wormeries are an integral part of educating young people about life-cycles and fostering a mind-set that asks 'what happens next?'

Wormeries have been introduced to three primary schools in Bristol as part of the organisation's *Seed to Celebration Giveaway* in spring 2015. Seeds and growing and cooking resources were given to all 106 primary school in Bristol. The next phase of the strategy is to introduce low-cost wormeries to many more schools in Bristol. The wormeries will give the school the capacity to turn high volumes of food waste into fertiliser that can be used in growing projects and eventually for micro-enterprise.

## Commercial food waste collections

A number of waste management companies provide separate collections of food waste in the city. Two initiatives that have started recently are:

### Bedminster Business waste collection service

A waste collection service for businesses has been established by Bedminster Town team. As a significant retail area in the city, this scheme provides many benefits including a six day a week collection service, reducing recycling and waste management costs for local businesses and improving the street environment for shoppers. The scheme is aiming to recruit 100 local businesses.

[www.bedminstertownteam.org/projects/save-money---waste](http://www.bedminstertownteam.org/projects/save-money---waste)

### Gather

Gather has been operating since 2014 offering a brokerage service for food waste collections to companies in Bristol. Over this time they have expanded to collect 750 bins of food waste per week. Waste food is delivered to GENco's local AD facility.

<http://www.gatherfood.co.uk/>

# Future plans to reduce food waste in Bristol

There is still much more that needs to be done to address the problem of food waste in Bristol. We have seen that, as far as household waste goes, food waste makes up a quarter of what is thrown away in residual bins. We don't know how much food waste is generated by companies and organisations in the city. We do know that more attention needs to be given to encourage them to reduce unavoidable food waste and ensure that it is disposed of sustainably. We also know that there is significant interest and activity at a community level to encourage food redistribution as a means of tackling food poverty. Some ideas of how these issues might be addressed are given below.

## Household food waste

Attention is being given to boosting participation in the weekly food waste collections through the Feed Me and Reward scheme and there are plans to build on this initiative in the future. There are opportunities to work closely with the national Love Food Hate Waste campaign and to encourage community groups to take up opportunities to work with their local communities, for example by using WRAP's cascade and Save More training materials.

## Working with local food redistribution schemes

As the case studies demonstrate, there are a number of Bristol based projects aimed at relieving food poverty through redistribution of waste food. Both FareShare South West and The Matthew Tree Project are working to maximise the potential for linking retailers and food producers with local projects and charities. Currently there is more food available than local projects have the capacity to deal with. Whilst ultimately we would hope that the food industry will be able to reduce the amount of waste they produce it is important that new initiatives to encourage redistribution of food are fostered and encouraged. The Bristol Food and Bristol ReUse Networks have a role to play here in encouraging local collaboration.

## Commercial food waste

More work needs to be done to address commercial food waste (i.e. non household waste). This covers a wide range of organisations from private businesses to public bodies such as schools and hospitals. There is a need to approach this issue strategically and bodies such as the Bristol Green Capital Partnership and Go Green have a role to play in taking this forward.

## A food waste strategy for Bristol

The Bristol Food Policy Council are preparing a food strategy and plan for the city and this work will include food waste issues.

A consortium led by London South Bank University has applied for funding under the EU Horizon 2020 programme to develop sustainable food waste strategies in urban areas. If successful, Bristol will be one of the five cities involved. Other cities involved are Paris, Athens, Budapest and Stockholm. Resource Futures will be leading the work in Bristol and the City Council, FareShare South West and the Bristol Food Policy Council will be partners to the programme.

## ABOUT THE AUTHOR

This module is compiled by Jane Stephenson CEO of Resource Futures. Resource Futures is a non-profit distributing environmental consultancy based in Bristol. The company works with WRAP on collecting and interpreting data on food waste, has led local and regional campaigns on food waste issues and works with schools and community groups to facilitate and support local action on sustainable resource management.

[www.resourcefutures.co.uk](http://www.resourcefutures.co.uk)

Jane has been involved in developing innovative solutions to waste management issues for over 30 years. She leads on partnership working with local authorities, private sector and community organisations. She is an active member of the Bristol Green Capital Partnership and is advising the Bristol Food Policy Council. She is working with national and international partners to secure funding to develop food waste strategies in urban areas.

## BRISTOL 2015

European Green Capital is a prestigious annual award designed to promote and reward the efforts of cities to improve the environment. Bristol is the first ever UK city to win the award.

European Green Capital is run by The European Commission, recognising that Europe's urban societies face many environmental challenges – and that sustainable, low-carbon living is vital to the future of our cities and our people.

The award was first won by Stockholm in 2010. Since then, Hamburg, Vitoria-Gasteiz, Nantes and Copenhagen have carried the torch. Bristol will hand over to Ljubljana at the end of the year.

## THE BRISTOL METHOD

The Bristol Method is a knowledge-transfer programme aimed at helping people in other cities understand and apply the lessons that Bristol has learned in becoming a more sustainable city, not just in 2015 but in the last decade.

Each module of the Bristol Method is presented as an easy-to-digest 'how to' guide on a particular topic, which use Bristol's experiences as a case study. The modules contain generic advice and recommendations that each reader can tailor to their own circumstances.

The Bristol Method modules are published on the Bristol 2015 website at [www.bristol2015.co.uk/method](http://www.bristol2015.co.uk/method)

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