

Frome Community Fridge

Impact Assessment

2019



Kris Fowler on behalf of Frome Town Council

This short report outlines the **environmental, social and economic impacts** of the Frome Community Fridge. It begins with a brief background on the origin of the idea and its motivations along with figures on the scale of the problem of food waste in the UK and globally. It then presents data on the amount of food passing through the fridge and uses this to quantify the total waste diverted from landfill and to estimate the reduction in greenhouse gas emissions as a result. It also looks at how the fridge is used and who uses it, explores some of the less tangible impacts of the project for its users and volunteers, and hears some personal stories of the fridge's impact on their daily life.

Background

What is a Community Fridge?

A community fridge is as simple an idea as the name suggests: it is a publicly accessible fridge, for the use of the whole community. If you have food that is good for at least the next day but that you will not use, you put it in the fridge. That food is then available to be taken by anyone that can use it. The fridge in Frome is supplemented by a community larder for non-refrigerated items. Food is donated by individuals (uncooked food only), food businesses and supermarkets, and the collection, care, cleanliness and rotation of items is undertaken by a small team of volunteers.

Where did the idea come from?

The concept originated in Berlin, Germany in 2012 under the name of 'Food Sharing'; in 2015 it emerged in Galdakao, a small town on the outskirts of Bilbao, Spain as a 'Solidarity Fridge'; and in 2016, with the input of Edventure, ten of their community enterprise students, and the Town Council, Frome became home to the first 'Community Fridge' in the UK. Since then the idea has continued to spread and today there are at least 65 community fridges in the UK, while globally they are found as far afield as India, Bolivia, Israel and New Zealand.

What issues is it intended to address?

Common to Germany's 'food sharing', Spain's 'solidarity fridge', and the UK's 'community fridges', the primary focus is on reducing food waste. They are not to be confused with Food Banks where food is distributed via vouchers in relation to an assessed need. Community fridges are about diverting as much good food as possible from going to waste in landfill, and as such are open to the entire community to make use of. In practice, of course, the food in the fridges can become an important source of food, particularly fresh food, for those in need. The latest figures from the UN estimate that 8.4 million people in the UK experience some form of food insecurity, so the presence of a community fridge will inevitably make a contribution to the alleviation of hunger.

Food Waste

The scale of the problem

Food waste is generally overlooked as a big environmental issue yet it is responsible for **8-10% of the total human-caused greenhouse gas emissions globally**. In the UK most food waste comes from households, with significant proportions of edible food also wasted by manufacturers, retailers, and in hospitality and food service. When all of this thrown-away organic matter is dumped into landfill it breaks down to release a gas that is around 50% methane and 50% carbon dioxide. Globally this contributes up to **70 million tonnes of methane each year - more than from coal mining and natural gas leaks combined, and almost as much as is emitted by farm animals**.

- Up to 35% of food in high-income economies is thrown out by consumers
- In the UK we waste 5 million tonnes of edible food every year
- The estimated value of total food wasted in the UK for 2015 was £20 billion
- One third of household bread and one quarter of vegetables in the UK that could have been eaten is thrown away

In addition to the landfill emissions, each item that is wasted has required energy to produce. The fuel, electricity and resources used to grow, harvest, transport, store, process, package, distribute and retail each item, as well as the energy to refrigerate or to cook it at home, are all wasted inputs as soon as the food is discarded, before it has even been transported to landfill.

In the UK alone the resources used to produce food that ends up as waste, and the emissions from its decomposition, generates 20 million tonnes of carbon dioxide-equivalent greenhouse gases and uses 6.2 billion cubic litres of water every year.

The scale of the problem is shocking - environmentally, economically and socially - but that means the potential positive impact from a range of initiatives to avoid food waste is also very large. **It has been calculated that reducing food waste globally could have almost the same impact on lowering emissions as onshore wind turbines by 2050 - avoiding the emission of 70 billion tonnes of greenhouse gases.**

A recent study by Project Drawdown, a global group of scientists, entrepreneurs and environmentalists, ranked the top-100 ways of addressing climate change according to their potential to reduce greenhouse gas emissions. Reducing food waste came in at number 3 - far above electric vehicles, solar panels and recycling.

Reducing food waste doesn't simply mean less going to landfill - it also means **less land across the world needs to be deforested and converted into farmland**, in turn reducing the impact of a growing world population on the planet while ensuring all can be fed sustainably.

UN Sustainable Development Goal 12:

Halve per capita global food waste at the retail and consumer level by 2030

In the words of Project Drawdown, "*reducing food waste represents one of the greatest possibilities for individuals, companies and communities to contribute to reversing climate change, and at the same time feed more people*". **Frome's community fridge, and the others it has inspired, therefore play a significant role in tackling one of the biggest environmental, social and economic issues facing the world today.**

A Week in the Life of Frome Community Fridge

"I love to hear the comments from people from out of town. When I'm filling up the fridge people'll come over and ask what's it all about, and I tell them what it is and they think it's amazing, what a great idea, and can't see why every town in the country doesn't have one."

Dave

How much food is donated to the fridge? How does it get there?

Environmental campaigns charity Hubbub runs the Community Fridge Network, and they estimate that **95% of food in the fridges is donated by retailers**. The figures presented below agree with this and show that connecting with local supermarkets and bakeries is a great way to divert large volumes of food to people and away from landfill on a daily basis.

The word 'donation' doesn't properly convey how the arrangement works, however. Some small businesses in Frome - such as the Rye Bakery - do physically donate their surplus food to the fridge, but in most cases it is down to **the small team of volunteers to visit the shop to collect the food and bring it to the fridge themselves**. In the case of Greggs, Lidl and Marks & Spencer this happens daily and the 8 volunteers each have days and shops that are their responsibility.

So it was on a Monday evening in March that I met with community fridge volunteers Pauline, Jim and Dave to make the collection from Greggs bakery. Inside the store at closing time were **still-stocked shelves of sandwiches, filled baguettes, savoury**

pastries and cakes. Everything was within its best-before date and was being sold up until a few minutes ago, but would not be suitable for Greggs to retail on the following day. After a friendly chat between the well-acquainted staff and volunteers - this collection has been ongoing for three years - we started filling our bags with the still-warm produce, and with two big bags each wandered back over to the fridge.

By now the arrival of Greggs sausage rolls and chicken bakes is an eagerly anticipated event and the assembled crowd - maybe **20-25 people** - queued up and waited patiently as the fridge was filled and the items recorded in the fridge's donation log book. Once complete the produce is there for the taking and one-by-one people helped themselves to the items. Some people took one thing, others a couple, some filled up small shopping bags, and the queue gradually diminished as people walked away with their food. Some tucked in there and then while chatting with others, and others returned home to share the food out with their family. Not much was left at this point, but Dave told me that he would come and top-up the fridge in the morning to ensure as many people as possible can access the food at different times of the day.

| Donated by | Daily | | | | | | | Weekly |
|-----------------|---|--------------------|-------------------|-------------------|---------------------|--------------------|-------------------|--|
| | Numbers are individual items; weights where quoted are <i>in addition</i> | | | | | | | |
| Greggs | M 173 | T 149 | W 141 | T 172 | F 176 | S 161 | S 96 | 1068 items |
| Lidl | M 20 kg | T / | W 13 | T 14 kg | F 150 + 29 kg | S 16 kg | S / | 163 items & 79 kg |
| Marks & Spencer | M 40 + 6 kg | T 34 + 16 kg | W 17 + 3 kg | T 51 + 8 kg | F 39 + 5.5 kg | S 46 + 11 kg | S 51 + 6 kg | 278 items & 55.5 kg |
| Coffee #1 | M 4 | T / | W 2 | T / | F 2 | S 2 | S 3 | 13 items |
| Rye Bakery | M / | T / | W 17 | T / | F 50 | S / | S 11 | 78 items |
| Morrisons | M / | T / | W 155 | T / | F / | S / | S / | 155 items |
| Coop | M / | T / | W / | T / | F / | S 23 | S / | 23 items |
| Individuals | M ? | T ? | W 2 | T ? | F ? | S ? | S ? | 2 items |
| Total | 217 + 26 kg | 183 + 16 kg | 347 + 3 kg | 223 + 22 kg | 417 + 34.5 kg | 232 + 27 kg | 161 + 6 kg | 1780 items & 134.5 kg |

Data compiled from the community fridge logbook between 18-24 March 2019.

Speaking with the staff in Greggs I learnt that, **prior to the collections, all of the food that we took to the community fridge would have been binned.** The baguettes, pasties, wraps and cakes that were now feeding people **would have ended up feeding animals, or decomposing in landfill** - and Greggs would have paid for its disposal. So linking up with the community fridge is not a radical idea - it is an obvious thing to do, from both a corporate financial perspective and from the point of view of the staff who made and baked the food in the first place. No one wants to see it wasted.

Being on the collection made it clear **how important the volunteers are to the effectiveness of the project.** Without them taking the time to make these collections the food would continue to be wasted, and with **records from just this one week showing 1780 individual items plus 134.5 kg of fresh produce collected,** Dave, Jim, Pauline and the other volunteers are saving around **90,000 food items a year** from going to waste.

"I volunteer because I feel compelled to. I know that if I don't make these collections then there may not be anyone else who will, and I can't bear to think of all this perfectly good food going to waste."

Pauline

The fridge itself is the hardware, but it can only function with a well-coordinated operating system. **At present Frome's fridge has 8 volunteers, some collecting one day per week, others on hand 5 days a week.** It's clear that the **level of commitment of the volunteers is very high,** but also that another couple of volunteers would help to spread the load of the daily collections and enable possible expansion to cover some of the other retailers.

"I started volunteering at the fridge because I'm a stay-at-home mum and I wanted a community element in my life. The fridge is a really worthy cause because there is so much food that goes to waste."

Terri

The table above demonstrates a few things about the community fridge. One is that not everything donated to the fridge gets recorded - particularly items donated by individuals - so **the numbers here are definitely an underestimate of the total amount of food passing through.** The second is that there is **potential to increase the amount of surplus food that the fridge makes available,** given that there are at least another 4 supermarkets in the local area without regular collections. Enquiring into this revealed that **there is capacity and willingness for more collections on the side of the volunteers,** but that some retailers find it difficult to enable it, either because their operating hours make it difficult to offer surplus food after it is taken off sale but before it is beyond its best before date (e.g. Coop closes at 11 PM), or because of the health and safety issues and bureaucracy that arise in a large supermarket chain.

Also apparent is the relative absence of food donated by households. Despite the huge quantities of food that pass through community fridges it is useful to be aware that the level of food waste from retailers - which makes up most of the fridge's contents - only counts for 2% of the total food waste figure for the UK. **The majority of food that is wasted in the UK (69%) is wasted by households, who make up only around 5% of fridge donations across the network.** Some of this waste will be cooked food which cannot be donated to the fridge by households for health and hygiene reasons, but much of it will be items that were simply not consumed before spoiling. The community fridge is the ideal place to drop off any excess food (excluding meat, eggs, fish or opened milk) that will not be used in time, for example before going away on holiday. These figures do not detract from the benefits of the community fridge, but show that other activities linked to it - such as **cookery classes, recipe sharing, leftovers suggestions**, etc. - can strengthen its impact in reducing this household food waste.

Local Meets Global - Environmental Benefits

What is the Fridge's Positive Impact on the Environment?

Beyond the simple and obvious good of redistributing surplus food and avoiding it going to waste, the impact of the fridge can be quantified in terms of its prevention of greenhouse gas emissions. There are two aspects to this: the prevention of additional emissions through decomposition in landfill; and the avoidance of emissions from additional production (to replace that which was wasted).

A recent study by the WWF and Food Climate Research Network suggests that **the elimination of all avoidable food waste in the UK could reduce the impact of food consumption on the environment by 15%, saving 38 million tonnes CO₂-equivalent emissions annually.**

The figures for greenhouse gas emission savings that follow, based on a DEFRA study, are an under-estimate. While they include emissions from production as well as decomposition, they fail to include the emissions associated with the change in land use required to produce additional food. **Deforestation and conversion of land to agricultural uses counts for 40% of the total emissions associated with food production for UK consumption**, so in reality the actual savings from each fridge will be significantly higher.

The community fridge network is a significant part of the solution to this problem in the UK. **The average community fridge redistributes around 500 kg of food per month, which equates to about 2.1 tonnes of carbon dioxide-equivalent emissions.** The busiest fridges see around 4 tonnes of food passing through each month which equates to a **saving of almost 17 tonnes of CO₂-equivalent emissions.**

Over a year the average fridge will have avoided over 25 tonnes of greenhouse gas emissions - meaning that **across the UK network of community fridges an estimated total of 1,625 tonnes of CO2-equivalent emissions are avoided.**

Frome's fridge is currently making available 6,000 - 8,000 food items each month - roughly 2.8 tonnes of food - making Frome one of the higher-volume fridges in the network. This equates to an estimated saving of 11.7 tonnes of CO2-equivalent emissions each month, and roughly 140 tonnes annually - equivalent to driving 340,000 miles or taking 43 cars off the road every year.

It is clear that a growing global population and continued food wastage rates of 35-40% in high income countries are incompatible, and that food waste requires a systemic approach, but community fridges play a fundamental role at the community level in reducing food waste and its environmental impact in the UK.

Beyond Food - The Fridge's Social Impact

Who uses Frome's Community Fridge?

Spend any time around the fridge and you quickly gain a sense of its rhythms and its nature. Unlike many of the community fridges that have been created subsequently which tend to be located in community centres, town halls, churches or universities, Frome's fridge is far more public, located outside in public space and not really observed or overlooked by anybody. As a result it offers an even greater sense of freedom to those passing by, as well as a few extra challenges.

"I use the community fridge every day. I usually come down when the Greggs collection arrives and take home a bag of food for my 3 kids and me for dinner. My eldest loves the chicken bake. I'm on benefits and my kids have difficulties, so the fridge has been a lifeline when we've had no money. I don't know what I'd do without it."

Meg

School-aged children on scooters check out what's in there and report back to their friends; elderly people look in and take a sandwich or a pastry for their lunch; people walk past and then come back to read the signs, curious, helping themselves - sometimes sheepishly - to a banana or a baguette; people experiencing homelessness or food insecurity return regularly at collection times knowing they will be able to get some sustenance, something fresh or maybe even a still-warm meal; others simply wonder why there's a fridge out on the street!

The fridge is used by a broad swathe of people, as it should be - it is necessary to reiterate regularly that **it exists for the reduction of food waste, not as a food store**

for the homeless - but at the moment, at least whilst I've been visiting (March 2019), it is very clearly **servicing a particular purpose for those in need**. It is indicative that the first three people I spoke with who were using the fridge all had similar stories to tell, of **mental and physical ill health, insecure housing, food insecurity and struggles with money. Issues with the Universal Credit system and delayed, reduced or terminated payments affected them all**. The fridge for them was a regular part of their day and a valuable source of food, interaction and community. It's undeniable in their cases that this volunteer-run food waste prevention project is offering a more reliable means of acquiring food and achieving a level of wellbeing than a Government-administered social security system, and without the stigma some feel with visiting a Food Bank.

Beyond this more severe level of need the fridge also plays a valuable role in the household economy of its users and volunteers. In some cases **the money saved by 'shopping' at the community fridge has freed-up money for other things that may otherwise not have been possible, such as transport costs to visit family**, or enabling a small amount of disposable income.

"I come down once a day most days. I only take one thing - a sandwich or a pastry. I just like to get out of the house and to be around people. There's nothing for me at home, TV is boring. The routine of the community fridge and the people helps with my depression."

Dave

The younger group using the fridge clearly enjoy their spoils but there is an impact beyond the free donuts. Some seem to wrangle with the fact that what's in there is free and their access is unsupervised, and they are unconsciously dealing with questions of value, of fair-use expectations, and of respect for the food and for those visiting after them, or others who may be more in need. Volunteers have had issues to deal with related to this user group, some involving direct interventions over misuse, and others engaging with children via local schools. The issues that I've heard about, and the interactions with the fridge that I've seen, suggest that these problems have been greatly reduced, if not eradicated, by the users' and volunteers' own interventions.

It's unfortunate that the stories of 'kids throwing pasties and aubergines around' or of other occasional abuses are repeated more often than the less apparent stories of people being fed and greenhouse gas emissions being avoided, so it is important that the positive impacts of the fridge are well-documented and shared often.

"The community fridge kept me alive for a while, when I was homeless and had no money. I'm a volunteer now - after seeing how it was run and the good it did, I stepped-in to help. For me it was a way into the community. It's a kind of social glue, and it cuts across class differences in the town."

Richard

The Community Fridge in the Bigger Picture

It's clear that the community fridge is more than simply a container for the storage and collection of food, and that its positive impact goes beyond the facts of feeding people and avoiding food waste. The fridge is a part of the community - it's a hub and a meeting place, an event in the day for many people, even something to look forward to. As well as nourishing food it offers the respite that comes with a chat over a cake or a sandwich that some of us take for granted - for some the conversations that occur while waiting for the fridge to be filled may be their only interactions in a day.

What seems key is the notion of enfranchisement, ensuring that everyone feels that they 'own' it as a part of the community. By existing in a public space and being open to public use, **the fridge breaks down the clear-cut relation between 'business' and 'consumer'**, and that sort of ambiguous situation is one that leads to new perspectives and different outcomes - people do not take all that they can from the fridge, they do not 'maximise their own advantage', and they inevitably think of those that may be coming after them. People also interact more, in ways that they wouldn't in the queue at a shop. **Some have likened the fridge to an example of a 'commons'**, in that it entails the self-management of a resource in the community outside of the workings of the market and the state, and relies upon a self-regulating (rather than legally enforced) set of rules and expectations. As well as all this, for anyone finding something that they want in the fridge there is the unmistakable thrill that comes with not having paid for it!

For its volunteers, too, one word has been repeated many times - purpose. Each volunteer I spoke with had a connection to their work for the community fridge that went well beyond the purely instrumental collection of surplus food. **The role with the community fridge offers a sense of meaning** and the chance to help others and the environment in a very real, simple and tangible way. It also offers a sense of control and a feeling of ownership, and the organised collections have very much become 'my day' or 'my round' for those that undertake them. This is particularly the case for those who are retired, or have otherwise faced some form of exclusion or sense of isolation (relating to housing or work, for example). For someone who may not feel much of a sense of agency or power in their daily life, or who wants to 'do good' but is not sure how their actions can be effective, the chance to discover that they can step up and do something of value is significant.

Research by the New Economics Foundation shows that social connection, physical activity, and giving to others or volunteering within the community are three of the five most important day-to-day actions we can undertake to foster and maintain our wellbeing.

This overall impact is not recorded in the log-book or added up at the end of the year, but it must not be overlooked. The positive impact on health and wellbeing is likely to translate into a financial figure - in terms of reduced or avoided interactions with health and social services - significantly greater than that spent on the fridge's operation.

“We’d love to see at least one community fridge in every town across the country, to help families who are struggling and to cut down on waste.”

Jamie Oliver, ‘Jamie and Jimmy’s Friday Night Feast’

The community fridge is a catalyst - for community, for sharing, and for developing new perspectives. It taps into the instinct for mutual aid that is all too often subverted by the mainstream organising principles of the economy and society, and raises questions, however unconsciously, of the value of products, of the rationality or otherwise of a system that allows so much to go to waste whilst so many go hungry. When those involved with the fridge, as users, volunteers, or curious passers-by, become aware of the amount of food going to waste every day - especially when what was previously labelled as ‘waste’ is more properly thought of as ‘surplus’ - it becomes necessary to ask how and why we as a society, as individuals and businesses, can simultaneously produce too much and not have enough to go around. Frome’s community fridge is a physical object doing tangible good for people in the community and for the global environment, but it is also an economic and political lesson for us all.

FROME COMMUNITY FRIDGE SUMMARY

- Saves 90,000 food items annually - one of the most-used fridges in the UK
- Prevents 140 tonnes of CO₂-equivalent emissions every year
- Emissions savings equivalent to driving 340,000 miles, or taking 43 cars off the road
- The UK Community Fridge Network saves approximately 1,625 tonnes CO₂e/year
- Food waste is responsible for 10% of global greenhouse gas emissions
- Reducing food waste is the 3rd most effective way to cut greenhouse gas emissions
- Eliminating avoidable food waste in the UK could save 38m tonnes CO₂e per year

