Unmaking waste:
An exploration of surplus food redistribution in Oxford, United Kingdom

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Abstract
The intersection between food poverty and food waste is an area of rising concern, with hunger amidst abundance an emotive moral dilemma. Surplus food redistribution groups such as the Oxford Food Bank (OFB) address this through collecting food categorised as ‘waste’ by retailers and redistributing it to local charities. There is a tension between the good work done in reducing food waste while feeding those in need, and the potential to institutionalise this system such that the root causes of food waste and food poverty go unaddressed. However, little work looks at how food surplus ‘becomes,’ critical to understanding the practical and moral viability of this mechanism. This article explores the socio-material transformations in the value of food as it moves from waste to surplus and is finally used or thrown away, drawing on empirical research carried out with the OFB and their network of charities (June-August 2017). In-depth interviews expose something of the daily practices and beliefs of those involved, while participant observation and analysis of ‘food surplus’ materials add depth to this. Two key contributions are offered: firstly, an empirical understanding of the fluidity in the line between edibility and inedibility within surplus food redistribution, with transformation possible at any moment and by every actor. Secondly, attention is drawn to the multiple values that attach to surplus food during these transformations, including education, stronger community ties, and challenges to the stigma associated with food assistance, such that longer-term reductions in food poverty and food waste may be effected.
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Chapter 1 Introduction

‘The difference between waste and surplus? It’s a hard question that, cause in somebody’s eyes, it’s like anything in life really, to somebody it can be waste but somebody else could use it.’

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[72x740]!
[72x719]!
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[72x593]!
[72x563]!
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1.1 Positioning surplus food redistribution

Lippincott, pioneer in market design and corporate branding, commented in 1947 that ‘our willingness to part with something before it is completely worn out is a phenomenon noticeable in no other society in history’ (Humes, 2013: 66). Although food does not ‘wear out,’ retailers throw away large volumes of food still fit for human consumption. Surplus food redistribution seeks to address this by collecting food categorised as waste and redistributing it as surplus to charities and other groups in the local area. With issues of food waste and food poverty increasingly visible (Kerridge, 2017; McKie, 2017), surplus food redistribution appears a win-win solution. However, very little academic research looks at how food surplus ‘becomes’ (Midgley, 2013), critical in understanding the long-term practical and moral viability of this mechanism. This research project contributes to this gap through an exploration of the Oxford Food Bank (henceforth OFB) and the charities with which they work, examining the potential transformations in the value of food as it moves from waste to surplus and is finally consumed.
The OFB is a surplus food redistribution charity working with approximately 85 groups in Oxford. They launched in 2009, starting small with two volunteers operating out of the back of their car and visiting a limited number of local supermarkets. Today, they estimate that in the past year they have delivered over £1 million worth of fresh food which would otherwise have gone to landfill (OFB, 2017). In the UK, one in four low-income families are unable to put sufficient food on their table (Kerridge, 2017), and in some parts of Oxford this rises to 44% of children live in food poverty (Hansford and Friedman, 2015). ‘While food is so plentiful it is discarded, people remain hungry…thus arises an emotive paradox: want amidst plenty’ (Hawkes and Webster, 2000: 1), with surplus food redistribution a practical answer. However, some question this, asking whether it dis-incentivises retailers to reduce waste at the source and what the long-term implications of tying corporate waste management to charitable food assistance are (Tarasuk and Eakin, 2005), broader questions which this project addresses.

This piece draws on Gille’s (2010; 2013) conceptualisation of ‘waste regimes,’ the social institutions and conventions that determine the values assigned to waste as well as regulating their production and distribution. Waste regimes differ between places, rendering the specific sites involved in surplus food redistribution critical in how the value of food transforms as it passes from the retailer, through the OFB and into the hands of various charities. A ‘follow the thing’ approach (Cook, 2004) has been utilised in the analysis to make this pathway clear, and to expose the ways in which human and non-human actors come together with different effect in each space. Furthermore, this works to reveal the contingency in how food is categorised as ‘waste,’ the line between edibility and inedibility not as stable as commonly understood (Thompson and Haigh, 2017). There is some work on how households ‘ideologically and culturally construct edibility’ (Blichfeldt et al., 2015: 89), evidencing the continuum on which understandings and interpretations of ‘edibility’ exist. This research project provides a novel contribution to this work through considering it in the context of surplus food redistribution in Oxford. Focussing on the OFB and the fairly small area within which they operate allows an exploration of the place-specific nature of surplus food redistribution, and the role they play in tying the local community together.

Edible food is here defined as that which is consumed, or intended for consumption, by the actor in question. Inedible food, irrelevant of its material state, is that which is categorised as
waste, as not for consumption, and will be thrown away unless another actor intervenes in that waste regime (Watson and Meah, 2013). The act of categorising food as waste, marking it as ‘matter out of place’ (Douglas, 1984; cited in Hetherington, 2004:162), is sufficient to categorise it as inedible.

1.2 Research Aims

This research project aims to investigate surplus food redistribution in Oxford, tracing the path of ‘surplus’ food from the retailer, to the OFB, through to the charities with which they work. In particular, I explore the potential for transformations in the values attached to food and food waste, considering the individual roles of the varied human and non-human actors involved in surplus food redistribution.

1. How and with what effect does the value of food transform through surplus food redistribution?

2. How, why and with what effect do the different human and non-human actors involved in surplus food redistribution reposition the line of edibility of foodstuffs?

In the following chapter, I will explore the literature that forms the conceptual basis of this research. In Chapter 3, I outline the methodological approach taken and the methods used, including in-depth interviews, participant observation and content analysis of ‘food surplus’ materials. Chapters 4, 5 and 6, the bulk of this dissertation, address the research questions above, using a ‘follow the thing’ approach (Cook, 2004) to trace the path of food through the three sites in question. The final chapter offers some concluding thoughts on the research questions above, opportunities for further research and a reflection on the efficacy of surplus food redistribution.
Chapter 2 Literature review

2.1 Waste and society

Waste is integral to human society: ‘as much as people are connected by flows of commodities and goods, they are also united by flows of waste and remainders’ (Moore, 2012: 780). Contemporary society is hugely wasteful, with developed nations producing approximately 1.75 million tonnes of solid waste per day (Hoornweg et al., 2012), equivalent to 8,750 blue whales. Waste is, however, an elusive concept to pin down. Deeply embedded in social and material practices it is difficult to define, with a number of lay and academic assumptions bound to it. Unpicking these assumptions is pivotal in understanding how waste ‘becomes,’ central to this study.

Evans et al. (2013) unpack three of these assumptions in how waste is commonly understood. Firstly, waste is often seen as the rejected or worthless stuff requiring removal. In line with this, Frow (2003) defines waste as 'the degree zero of value, or it is the opposite of value, or it is whatever stands in excess of value systems grounded in use’ (p.25). Thompson, too, in
‘Rubbish Theory’ (2017 [1979]), sees waste as in an asymmetrical relation to things of value. Gille (2010) warns against this, suggesting that in this framework waste can only exist as inefficiency: ‘waste simply does not exist other than as a tax-like burden on production, as an abstract factor reducing productivity’ (p.1054). Gidwani and Reddy (2011), however, point to dual registers in how we understand value. Firstly, as the economic coding of capitalism, in line with Gille (2010); but secondly, as a ‘normative or moral template for conduct’ (p.1627). This second understanding indicates a need to make full or best use of all items, helping to direct us towards the continued value in objects categorised as waste, and perhaps towards thinking beyond an intrinsic or stable monetary value (Hawkins and Muecke, 2003). Furthermore, it introduces a consideration of multiple perspectives in how waste is valued, of import here in questioning the different ways people interact with food waste.

The second assumption Evans et al. (2013) raise is that waste is a fixed or self-evident category, the innate property of things at a certain stage. This is enabled in part by the daily imperatives of waste management: ‘that which is managed as waste is waste, and that which is waste is what is managed’ (Gregson and Crang, 2010: 1026). Indeed, as Cooper (2010) comments, ‘anything, once named as waste, becomes subject to whatever practices of disposal or recuperation may be deemed appropriate’ (p.1). The importance of ‘placing’ emerges here: Douglas (1984) frames waste as ‘material excess that is unruly or improper: disordered matter, or matter out of place’ (cited in Gidwani and Reddy, 2011: 1627), therefore requiring appropriate removal. However, in pointing to the ‘unruliness’ of waste, its potential to object to the smooth running of things and to be ‘that which disturbs or disrupts socio-spatial norms’ (Moore, 2012: 781) comes to the fore. Lastly, Evans et al. (2013) consider the effects of understanding waste as located at ‘end of pipe,’ the final output in a linear chain of production, consumption and disposal. Hetherington (2004) argues that we need to question the idea of disposal as the end state of rubbishing, challenging the common sense idea of ‘an inevitable, discrete, linear temporal sequence’ (p.159).

There is, as suggested above, an emerging body of literature challenging these assumptions, looking at the dynamics, the mutability and the materiality of waste. Much of this grew out of Jane Bennett’s ‘vital materialisms’ (2004) and the re-materialisation of geography and the social sciences (Moore, 2012). Zsuzsa Gille has been central to this transition, developing the concept of ‘waste regimes’ (2013). These ‘consist of social institutions and conventions that
not only determine what wastes are considered valuable but also regulate their production and distribution’ (ibid: 29). The human and non-human actors making up our social institutions and conventions, those determining how we value waste, differ across time and space. In line with this, Gille states, ‘waste regimes differ from each other according to the production, the representation and the politics of waste’ (2010: 1056). Gregson and Crang (2010) suggest that waste is ‘historically mutable [and] geographically contingent’ (p.3), begging the question of how different materials come to matter differently. If waste is not something that just ‘is,’ pre-determined and immutable, how does it ‘become’? In this, the socio-materiality of waste emerges, the categorisation of something as ‘waste’ neither entirely material nor entirely social (Gille, 2010). Coles and Hallett IV (2013) define waste as ‘matter that has crossed a contingent cultural line that separates it from stuff worth keeping’ (p.157). This definition is pertinent in this dissertation, helping to understand how waste, in particular food waste, ‘becomes,’ as explored in the following sections: ‘the question of how edible food is ideologically and culturally transformed into inedible waste…remains largely unanswered’ (Blichfeldt et al., 2015: 90).

2.2 Understanding food waste

Alexander et al. (2013) suggest that despite the increasing prominence of food waste in policy and activism, it is ‘barely on the agenda in the field of food research’ (p.472). Little discussion on the food supply chain considers food waste, while waste scholarship rarely directly addresses food (Segrè and Gaiani, 2012; Evans et al., 2013). This dissertation is important in contributing to a small body of literature tying these two together, engaging critically with understandings of food waste as the stable end point of a linear chain of production, distribution and consumption (Alexander et al., 2013).

2.2.1 Defining food waste

Between one third and a half of food produced globally is never eaten, wasted at various points in the food supply chain (FAO, 2011; Institute of Mechanical Engineers, 2013; Lundqvist et al., 2008). Estimates vary across all sectors of the supply chain, due in part to the fact that ‘there is not a single and commonly agreed definition of food waste (Segrè and Gaiani, 2012: 45). Definitions of food waste demonstrate the complexity of defining any form of waste, as multiple perspectives in the food chain render forming a consensus
challenging. Furthermore, unlike other commodity flows, food’s natural process of biodegradation means that it transforms materially throughout its lifetime, with its potential value hard to trace. Rotting food has no value to supermarkets, but certainly has value to those involved in anaerobic digestion or, eventually, to worms in the soil.

For this study, I will use the definition suggested by FUSION (Östergren et al., 2014), an EU project aimed at reducing food waste:

‘Food waste is any food, and inedible parts of food, removed from the food supply chain to be recovered or disposed (including composted, crops ploughed in/not harvested, anaerobic digestion, bio-energy production, co-generation, incineration, disposal to sewer, landfill or discarded to sea) ’(p.6).

This definition is significant in including ‘inedible parts of food,’ which may involve items like vegetable peelings, seeds or meat trimmings (Segré and Gaiani, 2012). In including ‘inedible parts’ in statistics, FUSION hope to encourage greater resource efficiency. Furthermore, this fits conceptually with Coles and Hallett IV’s (2013) definition above, which focusses on a ‘contingent cultural line’ that denotes the valuable from the value-less. In relation to food, this line may be understood as that which separates the edible from the inedible, leading us to question how, why and under what conditions certain items are eaten while others are not (Ryland, 2015). I will consider this in depth in the next section.

Efforts to reduce food waste currently focus on household practices (Parfitt et al., 2010; Quested et al., 2013), with up to 70% of UK food waste produced by households (WRAP, 2017a). Although just 2% of food waste comes from the retail sector, studies suggest that retailers substantially underestimate their waste output (Stuart, 2009). Moreover, approximately 60% of this waste is avoidable (Parfitt et al., 2016), suggesting that this is an area requiring intervention. The Courtauld Commitment is a voluntary agreement to reduce resource use in the UK’s food supply chain by one-fifth by 2025, with tackling food waste a central target (WRAP, 2016). The scheme currently has over 100 signatories including all major UK food retailers, an indication of positive future change. However, genuine waste reduction requires a stronger understanding of the dynamics of retail waste practices (Brancoli et al., 2017). Segrè and Gaiani (2012) outline the main reasons for food waste in the retail sector (Appendix 1), revealing that much of the food classed as ‘waste’ by retailers
is still safe to eat. This dissertation offers a valuable insight into retailers’ waste practices from the perspective of the OFB and the charities with which they work, providing a qualitative angle into how these practices are experienced and interpreted by those engaging with ‘surplus’ food (Hawkes and Webster, 2000).

2. The contingency of food waste

As suggested, food waste is not something that just ‘is’, but ‘becomes’ through a series of contingent socio-material relations. Roe (2006) brings this into focus, asking ‘how do things like rancid mammary gland secretions, fungi and rock under particular circumstances become cheese, mushrooms and salt?’ (p.112). This tongue-in-cheek reflection attunes to the contingent nature of separating the edible from the inedible. Furthermore, Fischler (1979) notes that the category of ‘biologically edible’ is far larger than that of ‘culturally edible.’ MacClancy et al.’s (2007) ‘Consuming the inedible’ illustrates a diverse range of biologically safe but culturally curious consumption habits, including eating earth, mucus and cat.

Categories of edibility differ over time and space, with notable examples including the Icelandic penchant for hákarl, or fermented shark (Bachórz, 2016), and the now out-dated British delicacies of jellied eel and tapioca pudding (Rhys-Taylor, 2013; Lawler, 2005). Such examples reflect Gregson and Crang’s (2010) previous comment that waste is ‘historically mutable [and] geographically contingent’ (p.3).

These differences in the value assigned to foodstuffs developed over time, but there are moments in which food moves between the line of edible and inedible rapidly. Appadurai (1986) considers the trajectories of objects, their potential careers taking them through multiple regimes of value. Coles and Hallett IV (2013) give this empirical focus, looking at how the value of salmon heads, a part of the fish categorised as ‘waste’ by the fishmonger, may be re-negotiated in context-specific practices such that they are rendered edible once more. Alongside this, there is space for considering additional and alternative transformations in the value of food and food waste. Some work on recycling and e-waste considers this in relation to waste generally (Humes, 2013; Moore, 2012; Lepawsky and McNabb, 2010), following flows of waste as they are re-valued by different actors. Gille (2010) defines waste as ‘any material we have failed to use,’ deliberately leaving this open so as to remain attuned to the ‘material and social consequences of one type of waste metamorphosing into
another’ (p.1050). Surplus food redistribution allows a consideration of this, with the potential for new values attaching to food explored in this study.

Furthermore, Coles and Hallett IV (2013), in their piece mentioned above, focus on the role of place and ‘processes of place-making’ (p.157) in contesting and reproducing how the line between foodstuff and food waste is negotiated. Much of the work on food and food waste emerges from sociology, rarely explicitly including the role of space and place. This gap in the literature is therefore well attuned to the work of geographers, and through focussing on Oxford and a number of sites within I look to build an understanding of the context-specific nature of surplus food redistribution.

2.3 Surplus food redistribution

Surplus food redistribution involves collecting ‘surplus’ food that has been set aside by retailers and delivering it to charities within the local area (Hawkes and Webster, 2000), looking to simultaneously address issues of food waste and food poverty. Midgley (2013) states that ‘the utilisation of fit for purpose food is a lacuna of food waste research’ (p.1874), with the practical and moral dimensions of this practice demanding greater attention. Much of the existing literature focuses on volumes collected and delivered, or on developing models to address logistical challenges (Garrone et al., 2014). Davis et al. (2014) consider the utility of food delivery points, where charitable agencies can collect food and therefore reduce transport costs. Brock III and Davis (2015) talk through four methods to approximate availability, working through the issue of an information gap in the volume of food available from supermarkets prior to collection. Nair et al. (2017) develop a set of models to maximise collection and delivery routes in Australia, building in transport costs, wastage and equitable distribution.

This literature is useful but incomplete. There is a small body which looks beyond practical considerations, taking a more critical stance on the fundamental ethics of surplus food redistribution. Midgley (2013) states that ‘food poverty and food waste are potent symbols of the inequalities and efficiencies found in contemporary food systems’ (p.1873). Food poverty is defined by Hawkes and Webster (2000) as ‘the inability to acquire or consume an adequate quality or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so’ (p.1). Despite the UK being one the richest nations in the world (World
Bank, 2017), recent austerity measures and welfare reform are understood to have led to increased rates of poverty (Lambie-Mumford and Green, 2015). For their proponents, therefore, surplus food schemes are win-win solutions to food waste and food poverty, one used to solve the other. However, Hawkes and Webster (2000) caution against such enthusiasm, pausing to consider the motivations of retailers involved in surplus food redistribution: ‘financial benefits and corporate kudos, or an educated contribution to problems of deprivation?...If they have costed surplus into prices borne by the consumer, are they really part of the solution or part of the problem?’ (p.viii). Alexander et al (2013) explain that ‘for retailers, once monetary value can no longer be extracted from food, it becomes waste…for those who wish to redirect such food items, they are surplus’ (p.477). This ties into the previous section, helping to explain the process through which surplus ‘becomes.’

Furthermore, however, it points to an important moral dilemma within surplus food redistribution which Tarasuk and Eakin (2005) explore. They look at food assistance through an ethnographic study of food bank work in Ontario, Canada, in which the majority of food is donated ‘surplus’ that could not be retailed. They suggest that a reliance on industry donations means that food aid is defined as that which the corporate sector cannot retail, with moral and political implications. In addition, they argue that intertwining corporate and food bank needs ‘may function to further entrench this ad hoc secondary food system and mitigate against initiatives to develop more effective responses to problems of hunger and food insecurity’ (p.177).

In line with this, Tim Lang in 1991 spoke against the establishment of Grocery Aid, a surplus food redistribution scheme run through the Institute of Grocery Distribution. He commented that ‘both critics and supporters agree that schemes which were set up in the heat of the moment as crisis solutions have ended up being institutionalised’ (cited in Hawkes and Webster, 2000: 1). Alexander and Smaje (2008) look at surplus food redistribution through the UK charity Fareshare, considering the tensions between actors and the ways in which ‘the hierarchy of donor, redistributive agency and client limits the clients’ ability to control food flows’ (p.1290). This research project considers the validity of these comments from the perspective of my research participants, individuals entangled in the daily workings of food surplus and food assistance.
Chapter 3 Methodology

3.1 Designing a methodology
This research project utilised three qualitative methods, each gaining a different angle into the lived experiences and opinions of those involved with the OFB (Seale, 1999). In-depth interviews were the primary method used, while participant observation and content analysis of ‘surplus food’ materials were secondary methods, all research carried out between 12/06/2017 and 25/07/2017. The methods used and how they were mobilised changed during research, as certain themes emerged that required deeper exploration, particularly regarding the use of qualitative content analysis.

Issues of food waste and food poverty reflect broad societal patterns but are spatially embedded in particular places (Gille, 2010), their research therefore requiring a close understanding of the place in question. In recognition of this, initial research planning involved speaking to the manager of Good Food Oxford (GFO), a network organisation that brings together food-based organisations in Oxford, and a researcher for Feeding the Gaps, an Oxford-based community initiative tackling food poverty and food waste in the area. They helped me to understand ongoing work in the area, potential areas for further research, and suggested individuals or groups to contact. In the conversation with the manager of GFO we discussed the possibility of raising my findings with the community. In line with this, the intention for this project is a condensed write-up, including any recommendations, to be disseminated to those involved in surplus food redistribution in Oxford. Furthermore, Lalor (2014) carried out a piece of research into food poverty and food surplus in Oxford with Feeding the Gaps, aspects of which informed this research.

In the primary stages of research I met with the OFB manager to ensure that they would be happy to work with me. This first conversation was instrumental in the overall direction taken. She was also able to send me a full list of the charities that they work with which formed the basis of participant contacts. Initial access was secured over email, contacting each charity on the list, with limited snowballing of participants (Noy, 2006). However, there were occasions in which participants directed me towards other individuals in their organisations, and I was able to secure an interview with them as well. I had initially planned to interview the clients of charities working with the OFB, but a number of charities requested that I did not due to privacy concerns of their clients, so this avenue was not pursued.
3.2 Interviews

In-depth semi-structured interviews were the main method utilised in this research project, seeking to understand the opinions and beliefs of those working in or with the OFB (Appendix 2). In total, I completed 22 interviews with an average length of 45 minutes, the majority of which took place in the participant's place of work. 16 of these were face-to-face, while the other 6 were either by telephone or email. Webb and Webb’s (1932) over-cited definition, ‘a conversation with purpose’ (p.130), is apt here, the meandering nature of many interviews leading into themes not previously considered (McCracken, 1988). Participants often spoke at the start of avoiding talking too much, asking me to stop them ‘waffling on,’ but I assured them this was the interaction I was looking for. I used a semi-structured interview script (Dunn, 2010), adapted slightly for each participant but created around the same core (Appendix 3). I rarely had this script in front of me, instead recalling the questions more organically. This may have meant that, on occasion, a question I had intended to ask was forgotten or questions were asked out of order, but in analysis since this has not emerged as an issue. Furthermore, the benefits in having a more natural interaction were significant. The interview questions used changed throughout the research process, responding to emerging themes from previous interviews and observation.

A major challenge while interviewing was frequent disruptions, as few participants were able to completely remove themselves from their responsibilities. At times this led to a break in the flow of the conversation, the previous question forgotten or a thought left unfinished. However, listening to snippets of conversations and reflecting on how individuals interacted with each other was useful. Furthermore, the individuals interrupting were often interested in my presence and would offer a few words or stay for a brief interview themselves. Additionally, a number of interviewees were under time pressure, with perhaps only 20 or 30 minutes to speak before they had to get back to work, which may have limited how far they could relax.

As mentioned, six of the interviews completed were by telephone or email due to participants’ time constraints, both of which have an inferior reputation to face-to-face interviews (McCracken, 1988). However, I did not find this the case. Sturges and Hanrahan (2004), in their research on the perceptions of visiting jail inmates, note that although they
had expected to obtain weaker results from telephone interviews, no significant difference was found in the resultant transcripts. I also found no noticeable difference between my transcripts. However, telephone interviews were generally shorter than face-to-face interviews, suggesting that a more distanced interaction could not generate the same lengthy, fluid conversation (Miller, 1995). Email interview responses were more of a limitation, as the participant was only able to respond to a set number of questions and often did so in one or two word sentences. Meho (2006) looks at in-depth email interviewing, in which a number of emails are exchanged so as to respond in greater depth to questions and answers, and on reflection this may have been a more productive way to carry out these email interview. However, all responses were of value and the charities that these responses were from added depth to the total data set.

Interviews were transcribed verbatim shortly after they were conducted, ensuring that nothing was lost which may later prove useful (Oliver et al., 2005). The transcription of initial interviews helped to inform later ones, and directed primary analysis.

3.3 Participant observation

Participant observation was a secondary research method, completed in places I had previously held an interview (Appendix 4). Sauer (1924) states that ‘geographic knowledge rests upon disciplined observation’ (p.19), working to understand aspects of the world through first-hand observation and participating in certain activities alongside those being observed. Five pieces of participant observation were carried out, ranging from one to five hours long.

At times, the line between participant observation and ordinary participant blurred (Spradley, 2016). For example, during participant observation at the OFB I worked as a volunteer, going out on a collection and delivery route and sorting through food at the base. This gave me excellent access to the daily operations of the charity, how volunteers interacted with each other and with charities, and the opportunity to talk to people more informally. However, I was only able to take notes at the end of my shift, meaning there were many moments I was not able to accurately recall. Emerson et al. (1995) talk of the interconnection between writing, participating and observing as a means of understanding, suggesting that if the researcher establishes note-taking as a central part of their role it becomes natural to those
around. However, I believe that in my participant observation stopping to jot down notes or removing myself from the area entirely may have appeared intrusive (Cloke *et al*., 2004) or limited the strength of relationships formed, and would have prevented my working effectively as a volunteer.

### 3.4 Qualitative content analysis of ‘food surplus’ materials

Qualitative content analysis of ‘food surplus’ materials was utilised in order to gain a deeper understanding of how organisations mobilise the terms ‘waste’ and ‘surplus’ and how these may reflect wider discourses. Qualitative content analysis is a method in which meaning is interpreted from the content of textual data, focussing on the characteristics of language used, the content itself and the contextual meaning of the text (Hsieh and Shannon, 2005). Online and physical materials were obtained from a number of organisations, including the OFB, WRAP and related organisations (Appendix 5). Qualitative content analysis is highly flexible, with no systematic procedures (Cavanagh, 1997), meaning that the researcher has little firm guidance to rely on. I focussed on similarities and differences in the way organisations use the terms ‘waste’ and ‘surplus,’ in particular whether they were used interchangeably or for distinct purposes.

### 3.5 Coding and analysis

All research material was coded in the same way. A number of macro-codes were generated, primarily from thoughts noted down during transcription, but also supported by academic literature and emerging during observation. Each interview or piece of text was carefully read and split into one of these categories, labelled on a word document through ‘comments’ (Appendix 6), with sub-codes developing naturally (Bernard and Ryan, 2010). The set of macro and sub codes that had emerged were then made more uniform, ensuring that further analysis between textual sources was as easy and systematic as possible. Each extract was copied across to a large spreadsheet, helping to compare across all interviews and other sources (Appendix 7). Although this document became somewhat large and unwieldy, the advantages of being able to view all relevant extracts at the same time outweighed this. This method of coding is heavily reliant on modern technology, and I was therefore careful to back up all documents, while bearing in mind the various locations in which I was storing potentially sensitive information.
While alert for patterns during coding, I was not seeking out homogeneity (Brady and Collier, 2004), looking instead for themes within which opinions or practices appeared on a spectrum of variance, as well as notable moments of difference or exception. Through each stage of analysis I used predominantly an inductive approach, with empirical data guiding me rather than relying on pre-existing thoughts and theories (Bernard and Ryan, 2010). Meeting individuals working in food waste and food poverty in Oxford during initial research planning helped to ensure that my first thoughts on the topic were informed and locally grounded. However, prior theoretical understanding from academic literature and my personal values played a substantive role, and I will consider further the role of my personal values in the following chapter.

3.6 Ethics

I have sought to remain reflexive in this project, paying attention to how my positionality has affected each stage of research (Rose, 1997). As a middle class, white individual at Oxford University, a prestigious institution, I have had access to individuals and information that others may not. Furthermore, my personal values have played a significant role. I strongly believe that food waste and food poverty should not coexist, a view I did not choose to actively suppress while conducting research. I am an advocate for research that seeks to make a difference, in which the researcher is committed to an area of inequality (Castree, 2000). Additionally, I found that participants were often more open and animated when it emerged that we held similar opinions on things they cared about. However, I was careful in how I expressed certain opinions so as not to unintentionally either offend individuals or guide their answers. Furthermore, Armstrong (2008) reflects on the gap that exists in research between intention and meaning, ‘which allows room for the researcher to impose an external meaning onto a response’ (p.54). I look to McDowell (1997) and Rose (1997) in considering the partiality and contingency of the knowledge created in this research project, and in acknowledging the role that I have played in knowledge production.

I obtained full, informed consent from all research participants. Their identities have been fully anonymised throughout this report, with limited information used to provide context to certain interview quotes, but these individual quotes left unconnected to the table of participants in Appendix 2 (Corden and Sainsbury, 2006). The managers of the OFB gave
permission for the charity to be named directly, but the names of the managers with whom I spoke have been anonymised. All photos used in this dissertation were obtained from the Oxford Food Bank with their permission.

Chapter 4 At the retailer: constructing inedibility

The analysis in the following three chapters uses a ‘follow the thing’ structure (Cook, 2004; Cook and Harrison, 2007), tracing the journey of surplus food as it passes from site to site, considering the intersecting roles of actors in each location. This chapter looks at the retailer (supermarkets and wholesalers), asking how, why and with what effect their line of edibility is drawn, thereby helping to expose how food surplus emerges from retail waste practices.

4.1 Over-ordering

Retailers produce a small fraction of total food waste, but theirs is notable in the percentage which is still safe to eat (Parfitt et al., 2016). It is largely impossible to look first-hand at the waste practices of retailers, with significant effort made to hide from prying eyes (Stuart, 2009). However, the views of my research participants, individuals who come into daily contact with ‘surplus’ retail food, is valuable in helping to unpack the main reasons why supermarkets waste such large volumes of edible food, many of which are reflected in Appendix 1 (Segrè and Gaiani, 2012).

One of the key reasons identified was the over-ordering of food: ‘they get way more in than they actually need’ mentioned one participant, while another commented ‘they’re just ordering stupid amounts of food.’ Many participants reflected on the irresponsibility or disorganisation associated with this, placing the blame squarely on the retailers, with one reflecting that retail food waste was largely due to ‘poor buying on the part of the supermarkets, poor management really.’ However, there was also a recognition by some of the difficulty in accurately forecasting sales: ‘I mean, I’d hate to be the manager of a shop trying to decide what people are going to buy.’ Issues associated with seasonality and
weather were identified, with one person commenting that ‘in the summer they need to have stock in for barbecues, but then the weather might change,’ meaning they cannot sell that stock. Furthermore, consumer demand plays a role in over-ordering, with one participant stating ‘we expect the shops to be full, we expect them not to run out of things.’ In line with this, Louise, a manager of the OFB, reflected that shops can’t afford not to be fully stocked: ‘empty shelves are a crime,’ as visiting a shop that doesn’t have certain items in stock may prevent you from going back.

4.2 Date labels

As one participant stated, ‘by the time it gets round it to it’s all out of date...have to stick to the ‘use by’ dates when it’s actually not off.’ Date labels are estimates of when food will begin to lose its quality (‘best before’) or start to go off (‘use by’) (Godfray et al., 2010), and are understood to be conservative estimates erring on the side of caution (Milne, 2012). Once items meet their ‘use by’ or ‘best before’ dates they will no longer be sold, but must be categorised as waste, regardless of the physical state of items at that stage. This is one part of a system in which items of food that may be understood as edible in another context, becomes inedible to supermarkets and wholesalers: for retailers, date labels act as a fixed line delineating edibility from inedibility.

Date labels are applied by the food industry, normally the manufacturer, based on the biological properties of foodstuffs under appropriate storage. Their use is externally regulated by the Department of Environment, Food and Rural Affairs (DEFRA) under the European Union (EU) Regulation No.1169/2011 on the labelling of foodstuffs (EU, 2011). DEFRA (2011) state that it is an offence to sell food that has passed the ‘use by’ date, but products after their ‘best before’ may be sold providing they are of an appropriate quality. Retailers, however, will not sell food that has passed the ‘best before’ date, as the potential reputational damage of selling ‘out-of-date’ food is not worth it; both date labels are fixed lines. Retailers also use internal mechanisms to manage stock. Under pressure from the Waste and Resources Action Programme (WRAP), whose studies found that multiple food labels confuse
consumers and lead to greater food waste, the use of external ‘display until’ labels declined from 40% in 2009 to 3% in 2015 (WRAP, 2017b), a positive change. The various levels of responsibility are clear here, with regulations set by the state and the EU carried out in context-specific ways. Frow (2003) comments that the material properties of objects do not regulate the transformation of value, empirically evident here.

Lebersorger and Schneider (2014) look at the reasons for food loss rates in food retail, finding that more than a quarter of food discarded shows no flaw besides having passed its ‘best before’ or ‘use by’ label. In line with this, many participants commented directly on the role of date labels in generating waste, and a comment by the chef of a community lunch club summarises this clearly:

*I think a lot of it is to do with the dates they put on food…they’re not allowed to put it out any longer, even though you can see there’s nothing wrong with it, if it’s near the expiry date or the ‘best before’ date or whatever, I think that’s got a lot to do with it, because we get a lot of food in and the expiry date is on that day or maybe gone, and the food is fine.*

Date labels applied to food are highly conservative. It is important that the potential health risks of eating food that has physically expired *before* its ‘use by’ date are avoided, despite no evidence of this having occurred previously (BRP, 2011). However, the comment above indicates the ability of individuals to negotiate around date labels, re-drawing the line of edibility, which I will discuss further in Chapter 6. There was a recognition among participants that the retailers are following rules imposed from above (Milne *et al.*, 2011), the attribution of blame hard to establish.

**4.3 Damaged food or packaging**

Another reason identified in the generation of ‘surplus’ food was damage (or potential damage) to individual items within a larger volume. This is a problem the OFB encounters more frequently than charities, as the OFB sort through packages before food is sent out. Louise, the OFB manager mentioned previously, commented: ‘*cause they’re dealing in big amounts, tray of mushrooms, if there’s just a few that are squashed or brown, they haven’t got time to pick them out.*’ In this way, one item of food ‘infects’ the rest, such that they all
become waste, crossing as one into the inedible even though only a small portion may be unsafe to eat. She further commented ‘boxes of eggs we get, they get dropped in the warehouse, or shunted by a forklift, they’re not going to open up the box and see if any are broken...so literally into a skip it all goes.’ The motivation behind these examples is the maximisation of profits, part of which involves not using time and resources on recovering comparatively small volumes of food. In this way, food that is still safe to eat, that customers would still purchase, is categorised as waste.

Furthermore, damage to packaging was raised as another reason food is prematurely categorised as waste. Louise stated: ‘so packaging is damaged on items, a little tear, or a box is a bit squashed, they throw all that.’ An element of this is related to the above thoughts: that the food inside may be damaged, and it is not economically worth sorting through the contents. However, it is further related to the potential damage to reputation in selling items in damaged or soiled packaging. In referring to big drums of cooking oil that the OFB sometimes collects, Louise remarked:

The reason we get them from the wholesalers, one is burst in the warehouse...and they’re always dripping with oil, not very pleasant...they would get complaints from their customers, the wholesalers, if they delivered that to them, their reputation would be lost.

Consumer expectations come to the fore here in rendering certain items unsaleable. In line with this, De Hooge et al. (2017) look at consumer choices of suboptimal foods and find that consumers are less likely to purchase food items in damaged packaging. Furthermore, they posit that consumer choices of suboptimal foods depend on the setting (supermarket or home), as indicated by the willingness of the OFB and charities to accept these items. In these examples, the material conditions of food and the non-human objects with which they are bound (including packaging and date-labels) intersect with certain beliefs and practices performed by the retail industry, but enabled through the social institutions and conventions with which they come into contact (Gille, 2010). Watson and Meah (2013) comment, ‘the processes through which food is categorized as waste are [not] solely cultural, purified of the role of the matter itself’ (p.116): both the social and material are key, coming together such that the socio-materiality in how waste ‘becomes’ is evident.
4.4 Gatekeepers of value

In surplus food redistribution, the work of charities such as the OFB in collecting and redistributing food is clear, but the retailer also plays a central role in enabling the conversion of food from ‘waste’ to ‘surplus.’ Frow (2003) remarks that ‘the assignment of things to each category [of value] is a function of a social game with fixed rules in which those with control of time, space and knowledge perform assignment’ (p.34). Here it is the retailer who controls which items are put aside for collection and which are placed in the rubbish bin or tip, thereby performing the first assignment of value. During participant observation with the OFB I travelled out on collection to a large wholesaler:

> On arrival we passed a large tip completely full of food...a number of the more recent items on the surface still appeared theoretically edible. A man was throwing food away which looked perfectly good, so we asked to look through his boxes and he obliged...I rescued some strawberries, avocados, mangoes. In the proper pile for us were lots of butternut squash, carrots, potatoes, parsnips and a few other green bits.

In this extract, the role of the retailer as the gatekeeper of what may enter surplus food redistribution is exposed. Why that food was in the tip or in the process of being thrown away was unclear, but it is evident that it is the retailer in control of ‘time, space and knowledge’ (Frow, 2003: 34) in the categorisation of waste food. As explored previously, the state plays a central role in ensuring that date labels are used appropriately, but in the moment of disposal or rescue the retailer is key. The OFB relies on retailers putting aside part of their stock that they have categorised as waste, as having no further economic value to them, so that they may collect it. In this way, the retailer is positioned as the first actor in the chain of surplus food redistribution; without their cooperation the system could never take hold. As Midgley (2013) states, ‘the surplus categorisation appears defined by industry actors rather than the organisations utilising this resource’ (p.1888).

The OFB commented that there is a significant degree of variation in how cooperative retailers were in donating their ‘surplus’ food. Lesley, one of the OFB employees, commented:
There is limited information as to why retailers behave differently in this regard, but the differential waste practices of supermarket brands has been highlighted by the media in recent years. In the documentary ‘Hugh’s War on Waste’ on Channel 4, Hugh Fearnley-Whittingstall, a celebrity chef-cum-food waste advocate, attempted to speak to the ‘Big 4’ (Tesco, Asda, Sainsbury’s and Morrison’s) with varied levels of success (Vaughan, 2015). Furthermore, while Lesley suggests that cooperative retailers are those who ‘see the problem,’ more critical voices suggest that retailers are primarily motivated by financial savings on waste disposal and landfill taxes, and an improved corporate image (Tarasuk and Eakin, 2005). We may ask whether the motivations behind donating ‘surplus’ food truly matter if the end result is the same. However, I posit that those supermarkets with a genuine desire to reduce waste and help their local community are more likely to work cooperatively with the OFB, ensuring the chain of surplus food redistribution is as efficient as possible.

The role of additional actors at this stage in the transition of food from waste to surplus was mentioned, with Louise commenting ‘the best supermarkets are ones where they’re actually administered by a third party.’ She referenced the group ‘Neighbourly,’ which ‘connects local stores that have surplus with the charities and project that can put it to good use within the community’ (Neighbourly website, 2017). Normally they operate by donating food directly to charities in the local area, but in Oxford it quickly emerged that this clashed with the established OFB system; as such, the two now work together. This highlights the place-specific nature of waste regimes, as the transformations of value in food ‘becoming’ surplus is dependent on the spatial context at play.

Surplus food is defined by Tarasuk and Eakin (2005) as that which cannot be retailed and is therefore of no monetary value, reflected in the differential practices of retailers. However, food does hold potential value to the OFB and the charities with which they work. The following chapters consider their work in transforming the value of this food, rendering it edible once more.
Chapter 5 At the Oxford Food Bank: transforming value

5.1 Waste vs. surplus

Surplus food redistribution works with items that the retail industry has classified as waste or without monetary value (Tarasuk and Eakin, 2005). However, there is a tension here between the terms ‘waste’ and ‘surplus,’ both depicting the same material object and yet with different functional and symbolic value. Understanding how these are understood and mobilised by groups such as the OFB is important in considering the process by which they render food ‘edible’ once more, and the work involved in this transformation.
Content analysis of materials produced by those involved in surplus food redistribution was instructive in understanding how these two terms are used. Food was rarely referred to directly as ‘waste,’ particularly after it had been collected, but the concept of wastefulness or of preventing food from being wasted was mentioned frequently. On the OFB website, they state: ‘The [OFB] visits supermarkets and wholesalers, collecting fresh food that would otherwise get thrown away.’ Here the material item is ‘fresh food’ but its potential loss as waste, ‘otherwise thrown away,’ is drawn upon. The Felix Project, a London-based surplus redistribution charity, follows a similar line on their website: ‘Our suppliers let us know they have surplus food. It’s fresh and nutritious, but will go to waste if someone can’t find a use for it.’ Crucial is the fact that food is ‘rescued’ before it is thrown away, saved before it is wasted. The OFB further state that ‘as this food has been written off and is being thrown out…,’ placing a distinction between the categorisation of food as waste (the moment in which it is ‘written off’) and the act of disposal. It is between these moments that food ‘becomes’ surplus. If food is not collected by groups such as the OFB it continues its trajectory towards disposal: ‘if we didn’t exist, it would be waste. If we don’t turn up on a given day, it’s waste’ (Louise, OFB manager). Understood this way, the difference between ‘waste’ and ‘surplus’ lies in how it is materially treated, on whether the right actors have come together to ensure that food intended as waste is not thrown away. A number of interviewees working in charities reflected this view, commenting for example that ‘most of the food that is redistributed is still useable, therefore is not waste, but surplus.’ This is a running theme in discourse around food waste, with Humes (2013) arguing for a fundamental shift in the definition of ‘waste’ we emphasise, towards the verb ‘to waste’: ‘now the nature of the debate changes, because ‘to waste’ implies the object being wasted has value’ (p.179; also: Scanlan, 2005; Rathje and Murphy, 2001).

Notwithstanding, the ways in which the OFB and others use the terms ‘waste’ and ‘surplus’ are deliberate, often actively looking to avoid negative understandings associated with ‘waste.’ These semantic decisions move beyond the materiality of food, or the processes involved in surplus food redistribution, but look towards more fundamental societal understandings around food waste. Louise, mentioned previously, states ‘I mean that’s common in food waste collecting circles, to talk about surplus, I think if you call it waste people will say urgh you got it out of a skip!’ In this, she refers firstly to the importance of
using the standard ‘lingo’ of surplus food redistributors, tying themselves into the practices of others. Furthermore, how these terms are employed reflects a desire to attract potential charities, and describing food explicitly as ‘waste,’ with the emotive, visceral reactions this inscribes, may not be the most effective way to do this. Douglas (1984) points to the role of disgust in the ‘becoming’ of food waste, rendering the consumption of these items undesirable. Indeed, Watson and Meah (2013) suggest that for households the boundaries of edibility were more frequently defined by ‘the affective experience of disgust’ than a reflection on food safety risks (p.109), a theme also apparent here.

Lesley (OFB employee), when asked whether using the term ‘waste’ or ‘surplus’ mattered, replied ‘it matters to the charities. If you say this is waste food it doesn’t sound good does it, it’s just a difference in the way it sounds.’ In this, the role of language is evident, the terms used assigning different value to waste and to surplus without the material properties of these items changing. Lesley further suggested ‘I think waste is a, people don’t like the term, it’s distasteful;’ as one participant reflected, the difference lies in ‘semantics I suppose.’ Through separating waste and surplus, referring to waste only as an action they are helping to avoid, the OFB is able to prevent people from associating their food directly with waste. Here, ‘the transformation of value is not grounded in the intrinsic properties of objects’ (Frow, 2003: 35), instead enabled in part through the use of language, with the two terms deployed in certain ways.

5.2 Sorting food

As explained previously, surplus food is defined by Tarasuk and Eakin (2005) as that which cannot be retailed and therefore of no monetary value to the retailer, but certainly possessing value to the charities to which is distributed. The OFB play a practical role in ensuring that as much edible food as possible reaches charities in need, smoothing the transformation of valueless waste to useful surplus. OFB volunteers sort through the food at the retailer, removing any items which should not be passed on to charities. A secondary check is carried out at the OFB depot; Louise commented:

*We go through it...cause if they don’t sometimes there’s chicken in the box, or a spillage, yeah, so they should do a check and put it back, but yeah, ideally do the sorting at the supplier, so they know we won’t take, we won’t take rotting foods.*
In this, she indicates the work involved in ensuring that food delivered to charities is safe to eat, and further states ‘basically if you think you wouldn’t eat it then we throw it in the bin.’ In this way, the OFB acts as a secondary gatekeeper, after the retailers, in which items of food become surplus and which remain categorised as waste. This work is understood as necessary due to the potentially negligent behaviours of certain retailers, as explored in the previous chapter. Louise further commented on once finding a raw pork chop at the bottom of a box, a clear food safety concern, ironic given the retailer’s concerns around following the food safety requirements laid out by date labels.

Many charities were aware of the fact that the OFB sorts through the food before delivering it to them, reflecting that this was one of the reasons why food was generally of a high quality. One participant stated: ‘so the quality’s always quite good sort of thing, I’ve never had anything that’s been like why have you brought this out sort of thing, so I think they do regulate it, they do sort through all the stuff before they put it in the van.’ The transformation of value between waste and surplus here is not automatic, but requires the deliberate work of a range of actors, not always working seamlessly together, but each playing a central role nonetheless.

5.3 Deliveries

Once food has reached the OFB warehouse and has been sorted, it has achieved its transformation in value from waste to surplus (see Fig.1). However, if ‘negative value can be exchanged into positive value’ (Hawkins and Muecke, 2003: xi), if waste can become surplus, then the opposite is equally true. The period during which food is transferred from the OFB to charities is critical in ensuring that surplus food achieves its potential value. Participants commented positively on their interactions with the OFB volunteers during delivery, with statements such as ‘they’re jolly friendly people,’ ‘the guys are fantastic’ and ‘lovely, absolutely lovely, you know, really polite.’
These positive relationships pave the way for ensuring that charities receive food items best suited to their needs:

...the people who come in the van, they understand what it is that we do, that we are different, like some of the things they have are in bulked sizes, well for the most part that doesn’t work for us, we need to break it up to serve all the different families...And frequently if they’ve been here a long time then they’ll think like, oh, chilli peppers, something that other charities might not want as much, they’re like oh these are something we think you’ll want.

This quote, from an interview with a charity running an informal bank, reflects the care that the OFB take during the moment in which food is passed to charities, here considering both specific items and the format in which food is given. The OFB works with a huge range of charities, each with a unique set of requirements and limitations. Through working closely with the charities to ensure that the food passed over is suitable to their individual needs (see Fig.2), the OFB limits the volume of food which may go un-used. The OFB continue to act as gatekeepers in the transformation of value here, playing a central role in preventing surplus food from slipping into waste once more.
Furthermore, a number of participants mentioned that food was often on or near its ‘use by’ date. For many, this was of limited concern as they are able to re-interpret these markers of edibility, and I will reflect on how individuals negotiate date labels within their own limits in the following chapter. However, for charities selling food to the public or giving it to vulnerable members, greater care must be taken to ensure that food is not consumed after it has passed its ‘use by’ date, in particular with dairy items (FSA, 2016). One participant, whose charity works closely with children and their parents, stated ‘we wouldn’t take anything that, we’re very careful about the out of date stuff with the parents…if there was any illness.’ Another, the manager of a social enterprise café, commented ‘I don’t get any dairy food…I kind of have to regulate the dairy, ‘cause I’m selling to the public.’ In these cases, the OFB plays an additional role in alerting them to items on or close to their dates: ‘the people on the van are quite good about saying, that needs using today.’ Through ensuring that the right items end up with the right charities, the OFB help each charity to carry out their services with limited concern around food safety.

Practices enacted by the OFB ensure that the individual needs of charities are met with regards to the type, amount and quality of food passed over, important in preventing food
from becoming waste once more. However, once food leaves the hands of the OFB it is subject to the subjectivities and contingencies of the charities to which it is passed, with new waste regimes coming into play which continue to regulate how the value of surplus food is translated and interpreted.

**Chapter 6 At the charity: using surplus food**

There are, however, moments in which food taken by charities nears or crosses the line of edibility. The ways in which charities work to prevent and reduce food waste are notable in their ability to control the potential for further transformation in surplus food redistribution. These strategies can be conceptualised through a pyramid of food waste reduction, based on the Food and Drink Material Hierarchy produced by WRAP (2017a; Appendix 8). Not every group is able to employ each of these strategies, and they be drawn upon in a different order, but nearly every participant referred to using at least one to ensure that they reduced their total volume of food waste: ‘the main this is that we feel we shouldn’t be wasting it.’

**Figure 3: Food Waste Reduction Hierarchy**

6.1 Not taking too much food
For many individuals, reducing food waste was framed as a moral imperative, particularly in relation to Fig.3’s first tier: ‘I think we’re more mindful not to take too much from them, because they might be going to somewhere else that needs that.’ This exposes an awareness of the needs of other charities in relation to their own, and the need to balance out a fixed volume of ‘surplus’ food. In another interview, two participants speaking together reflected:

Participant 1: *We get a limited amount to make sure everybody gets, so other people get some.*

Participant 2: *I mean, the thing is, actually, to stand back a little bit and say actually we don’t need this…because it’s so tempting to go [gesture of expanse]*

Participant 1: *You think, oh all this is going to waste.*

Participant 2: *But for it to be wasted here, that’s something that we don’t want*

In this, a potential tension between two moral imperatives is referred to: their role in using food that would otherwise be going to waste, and the necessity not to produce waste themselves. Furthermore, a number of participants reflected on the generous nature of the OFB, suggesting that they were often willing and able to give more than the charities were able to use: ‘we sometimes sort of have to stop them piling it on [laugh], we don’t want to waste it!’ The need to balance out food between charities and within the charity itself was a dominant theme throughout, with moral and financial pressures making it important that waste was limited while the needs of as many people as possible met. This is against a dominant rhetoric in the media and in academic literature of a wasteful society (Kennedy, 2007; Humes, 2013), and perhaps points to the role of surplus food redistribution in making individuals more aware of food waste. Midgley (2013) suggests that ‘food, as it becomes surplus, gains new qualities alongside its original ones’ (p.1888), identifiable here.

6.2 Sending home leftover items

Despite avoiding taking excess food, many charities referred to sending leftover items or dishes home with people. A number have set up informal food banks as a response to an increase in food poverty, which I define as any mechanism through which individuals are given one or more items of food to take away with them and consume off the premises. There is a spectrum of informality here, from those closely replicating traditional food banks (Lambie-Mumford, 2013) to offering leftover items to clients to take home with them. The
OOFB has made these set-ups possible for many charities through providing fresh, healthy produce which they would not otherwise have the funds for: ‘fresh food’s so expensive to buy…and it’s healthy, we just couldn’t supply the amount they provide for us.’ This research project lacks the scope to explore the growth of food banking and the spectrum of informality within in depth, but further research into this area is needed, in particular as a way to address the gap in current understandings of UK food poverty (Taylor and Loopstra, 2016).

Moments in which leftover items are offered to clients have two-fold benefits: helping families to secure sufficient food, and avoiding food waste. One participant commented ‘if there’s any stuff leftover, then we’ll give it to members, then it’s helping them in that way as well.’ Another participant reflected that they were frequently delivered more food than they could use so she gives the excess to individuals to take home, further suggesting that she believed a number of their families were food insecure: ‘I have heard that some of them go home to very little, so it makes a big difference.’ In this way the potential value of surplus food escapes the confines of the charity, both spatially and in terms of the individuals it is benefitting, such that the food security of other individuals and families is improved. Beyond charity clients, another participant mentioned the importance of encouraging volunteers to take leftover food home: ‘the biggest message that I have for volunteers, is please take it home…don’t leave it for the weekend, it’ll be mouldy by Tuesday and there’ll be more coming in on the Monday.’

Additionally, certain charities redistributed items that they were not able to use back to the OFB or on to other charities. This was either because they were unsuitable for their needs or because they had too much of particular items, thereby passing on their leftovers in a different way. In particular, one charity suggested that they were well placed to pass on quite a lot of food:

We link with [another charity], and periodically, we send them a whole sack of stuff…we tend to get the sort of things they like, too much of, we get pasta and pulses and things like that. We feel that’s one way of sharing things out. Because [our community] is very, very generous, and I know [they] are desperate.

This charity, an independent food bank outside of Oxford City, operates within a generous church network such that they have more of certain items than they require. The charity they
mention operates a fairly large-scale informal food bank serving asylum seekers. They themselves state: ‘we get like the baked beans, in fact I give them frequently to the food bank or another charity, you know some people do take them but we can only use so many of those. I know there are other charities that can use them as well.’ As in the previous section, the need to balance out the requirements of charities is drawn upon to help charities ensure that they have sufficient and appropriate food for their clients.

Here, food appears to step back a stage in the chain of surplus food redistribution so far described. While thus far I have considered the multiple transitions in value which surplus food passes through lineally, this process may be far more circuitous. To the aforementioned charity, baked beans hold very little or no value. In returning them to the OFB, who will in turn deliver them to another charity who may be able to make use of them, the baked beans themselves traverse multiple regimes of value, negative value exchanging into positive (Hawkins and Muecke, 2003), with no pre-defined limit on how many times this may occur. Notwithstanding, the potential for food to be passed back and forth depends on the items in questions: long-life items, such as tins, may pass hands multiple times, whereas fresh, fragile items such as strawberries will go off far more quickly. The biological ‘time-clock’ of different food items is significant in delimiting how far they may travel between regimes of value, an important factor which the OFB and charities must carefully negotiate.

In sharing food between organisations, surplus food takes on additional value. Participants reflected on how working together to ensure that the total volume of food is balanced out strengthens Oxford’s community network. Through these connections, new ties may form around sharing information, signposting to relevant services and sharing potential employment or skills-building opportunities for clients. Midgley (2013) comments on the role of different actors involved in the redistribution of food, stating that ‘it is how they variously detach, rework, relate and transform the values and qualities associated with surplus food that enable their activities’ (p.1889), pointing directly to the social values that surplus food takes on in this context. Surplus food plays an important role in Oxford in helping to tie the community together. Coles and Hallett IV (2013) argue that food and waste are not simply questions of materiality, but of ‘the ways in which the material intersects with relations of place, place-making and geography’ (p.156), coming to the fore here.
6.3 ‘Thrifty’ practices

Using items which are past their best in more creative ways was understood as an important means to prevent food waste. Watson and Meah (2013) refer to ‘thrifty’ practices as techniques which enable individuals to ‘police the line between food and waste, and to minimize what crosses it in order to fall within their own acceptable limits’ (p.114). In this, the contingent cultural line separating the edible from the inedible is brought into sharp relief, with individuals holding different ‘acceptable limits.’ Indeed, one participant commented that she had been scolded in the past for her ‘wasteful’ kitchen practices by another chef in the kitchen:

*I’ve already been told off... for chopping too much off the ends of leeks, Lucy was just saying you’ve chopped too much off, it’s perfectly good, it’s going in the soup, and I was like sorry I just thought, and she said no.*

In line with this, another participant, when asked about the general quality of food from the OFB, commented *‘on vegetables we take the chance, and fruit as well... if we’re putting it in fruit salad we normally peel it up and cut it anyway, so if it has gone bad, we wouldn’t use it anyway.’* In Chapter 4, I considered the ways in which retailers deal with having one bad item in an otherwise unaffected box, revealing that that one item had the ability to render the entire box inedible. Here, however, she is able to ensure that only the food which has ‘gone bad’ goes to waste, itself a highly individual decision.

The definition of food waste developed by FUSIONS, explained in Chapter 2, includes *‘inedible parts of food,’* but as these examples suggest, the limits of edibility are unique to each person. They are constructed around factors such as family upbringing, food knowledge and the individuals for whom they are cooking. Of note in this was the ways in which participants spoke of interpreting date labels in situ, often choosing to judge for themselves whether food was safe to eat rather than relying on externally applied dates. One participant stated *‘I don’t even think half of us look at [them] to be honest, just look at and it and smell it to know if it’s edible,’* while another commented *‘we kind of use our common sense for it.’* In this, the role of physical senses and common sense come to the fore in enabling an informed decision about the safety of food items. Two participants speaking together built on this, saying:
P2: You touch it, you smell it, you feel it.

P1: You feel it, if it looks good...fish you can see it, they change colour; a block of cheese a little bit mouldy on the outside, it's not bad, clean the bad a little bit! Cheese is made like that [laugh]

Here, the role of the physical senses emerges as central, with touch, smell and sight referenced as critical in determining whether food is still safe to eat (Watson and Meah, 2013). Furthermore, knowledge around food and cooking was identified as important in supporting decisions around the edibility of food items, made explicit in mentioning how cheese is produced. There was a recognition that this form of food knowledge is not innate but must be learnt. A number of participants referenced their upbringing, with one commenting ‘I cut the mouldy bits off food, but that’s ‘cause I grew up like that, my mum wouldn’t throw anything away.’ In contrast, others spoke of professional training, suggesting that the creative cooking skills gained were beneficial in thinking of novel ways to prevent food waste: ‘and that’s why we’re really lucky we’ve got Tim and his chef background cause he can do some wonderful stuff with what comes out.’

This knowledge is not ubiquitous, and a number of charities were aware of their obligation to educate their clients in food and cooking generally. For example, one participant stated: ‘the bananas are sometimes past it, but then we talk about actually you can do some cooking with the bananas rather than eating them fresh, do you know what I mean.’ These practices of knowledge sharing enable the reduction of food waste, from this perspective crucial in helping families reduce the amount they spend on food. Furthermore, there was a recognition in interviews and in academia more broadly that there is a lack of food education passed down either through families or formal education, and that this acts as a major barrier to encouraging healthy eating practices, a key determinant of food poverty (Caraher et al., 1998; Darmon and Drewnowsk, 2008). In this way, surplus food takes on additional value here, moving past its pure use value into education and the potential long-term reduction in food poverty.

Reflecting back to Chapter 4, date labels acted as a strict limitation on when food was categorised as inedible by retailers, whereas in the kitchen these labels are negotiated more flexibly. In this, different waste regimes in different sites with distinct social institutions and
conventions, clearly have consequence for where the line of edibility lies. As Watson and Meah (2013) argue, ‘there is no stable, universal line differentiating matter which is food from that which is waste’ (p.110), and a key part of the contingency of waste is rooted in the differing beliefs and practices of individuals. Notwithstanding, for certain charities date labels continued to act as a more definitive line on whether food could be served to the public. One participant who worked as a chef in the kitchen of a café which works with a homeless charity reflected

Some of the stuff that I’ve seen people throw away is perfectly edible, but it just misses the guidelines, of the food regulations, it’s like ‘best before’ and ‘use before’ dates, I’m shocked, I’ve got the same in there, I have to legally put a ‘best before’ date on it, if it goes after that, I have to completely... The ‘best before,’ I’ll have a smell, a taste, make sure it’s ok, maybe give it an extra day, not like a ‘use by’ sort of thing.

But we tend to go from the ‘use by.’

Here, the chef in question is caught between a desire to avoid food waste, to use his culinary knowledge, and a legal requirement to stick to certain guidelines on ‘use by’ dates, as the regulations referenced in Chapter 4 refer to the sale of all food (DEFRA, 2011). In this, the ‘social institutions and conventions’ of the waste regime at play (Gille, 2010: 29) take part of the decision-making process out of his hands. This is reflective of Ryland’s (2015) findings on waste management practices in a catering kitchen, in which she suggests that food waste reduction was constrained in part by external health and safety regulations. As stated by Blichfeldt et al. (2015), the transformation of edible food into waste is ‘deeply grounded in cultural and ideological ways and practices’ (p.91). These ways and practices are a combination of human and non-human factors, including date-labels, the knowledge and beliefs of individuals, and the requirements of others.

Furthermore, using items in more thrifty ways highlights the ways in which surplus food redistribution creates the conditions for food to gain additional value. Bananas were items which cropped up frequently in this respect.
Both of the OFB members of staff commented on the number of bananas they receive, due to the speed with which they go brown and are therefore deemed ‘inedible’ by retailers (see Fig. 4). This inedibility is a categorisation based on appearance rather than safety, with bananas delivered to charities often ‘past their best,’ and therefore prime for reflecting on secondary uses of food items. One participant stated: ‘so we had loads of bananas recently, one of our volunteers took some home and made banana cake, brought back the banana cake to share, so it’s not wasted.’ Here, food donated by the OFB takes on added social value (Midgley, 2013), as items shared generate conversation, build social links and create the opportunity to share information and signpost individuals to other services.

Figure 4: Bananas that have been categorised as ‘waste’ by retailers

6.4 Using food for other purposes

Despite charities’ best efforts, there are moments in which food is no longer safe for human consumption, or will not be eaten before it reaches that stage, and is therefore categorised as inedible, of zero value for human consumption in that moment (Thompson and Haigh, 2017). As this chapter has outlined, this process of categorisation is contingent, based on a range of socio-material factors such that items of food may continue to be understood as edible in another context. Here, however, this categorisation of food as without value for human consumption is taken at face value. Several charities referred to the ways in which they were able to use food for other purposes, such that it continued to have value to them. One participant, who runs a charity which works with parents and young children, spoke of ‘using out of date food as a resource for play,’ including the use of rice for ‘filling, emptying and
pouring’ or in shakers. In this way, she is able to re-purpose items which would otherwise be thrown away, giving them renewed value. Academic literature on waste points to the possible ‘regimes of value’ which waste may pass through, considering the way in which different actors are able to extract value from items thrown away, such as with those involved in landfill sites or recycling plants (Reno, 2009). Some link this to capitalism’s tendency away from the unproductive towards positive valuing (Hawkins and Muecke, 2003). However, the use of ‘waste’ food items for alternative uses highlights the potential of one actor to transform the value of their own waste for the social and learning value of others, such that this appears part of responsible waste management practices (Humes, 2013) as opposed to an innate feature of a competitive capitalism.

In line with this, one interviewee commented that any food waste would ‘go home to my chickens,’ while another suggested that it would be ‘put on the compost.’ Here, the value of food takes on a series of further transformations, as food used to feed chickens or, in the case of compost, worms, will eventually come back to feed people again. Moore (2012) argues that centring the economic as the most important generator of value is flawed, but understanding waste as a useful resource with continued value is important. This helps us to ‘demonstrate the material and social consequences of one type of waste material metamorphosing into another as it traverses the circuits of production, distribution, consumption, reclamation and ‘annihilation’” (Gille, 2010: 1050). However, Gille (2010) is not talking explicitly of food here. Moments such as those described above, in which the original physical nature of food is lost almost entirely through the process of biodegradation or consumption by other animals, make this conceptualisation of metamorphosis trickier to hold on to. However, if we understand it as predominately a transfer in value, capable therefore of encompassing the material changes in food and considering the food system more broadly, this view holds import in helping us to understand how ‘that which has been turned into rubbish tends to have the ability to return’ in new forms (Hetherington, 2004: 159): as a rice shaker, as chicken eggs, as plants in the future.

6.5 Disposal

The final tier of Fig.3 is disposal. This is the stage at which individuals decide that food has crossed the line of edibility, and is therefore no longer safe to eat and must be disposed of.
Charities may lack the opportunity to use food in the ways suggested above, it may be ‘too far gone’ for these uses, or it simply may not be an approach that individuals are aware of. Here, the very material properties of food, and its natural process of biodegradation plays a significant role in drawing the lines of edibility, with participants commenting that food will ‘kind of go mouldy,’ or is ‘rotting...literally disintegrating.’ The processes through which food is re-categorised as waste involve a complex set of socio-material relations, with the material properties of food playing a stronger role in certain contexts, such as this. Here, the value of food escapes the circuit of surplus food redistribution, its usefulness in any form lost to the actors involved. In Oxford, it is likely to go to an anaerobic digestion plant (Oxfordshire County Council, 2017); the potential for further transformation in value here is of interest, but this research project lacks the scope to approach this.

6.6 Breaking the stigma

Surplus food redistribution highlights the volume of waste produced by the retail sector. ‘Waste’ is a category with a number of taboos attached, such that its consumption is often deemed socially unacceptable. The consumption of ‘waste’ food therefore, in the comparatively sanitised form of ‘surplus,’ may work to break down this stigma. A number of participants remarked on how the attitudes of their clients and society more broadly are changing. One commented ‘people look into food surplus in a completely different way they didn’t think five years ago, cause they would think oh my god cooking something that was supposed to go in a bin!’ Her partner further stated:

*When the food bank first started delivering surplus to [the children’s centre], and people found out, [they] were very open about it, there was...some of that attitude of that should have gone in the bin, but another thing as well they felt that because it had come to [us] free, why should they be paying for it?*

This view reflects the idea that waste is defined through that which has zero value, neglecting to consider both the continuing value embedded in edible food items, and the added value generated in collection, distribution and cooking. However, they suggest that as the issue of food waste has become more prominent in society, this viewpoint has gradually eroded.
Furthermore, several participants commented on the stigma associated with accepting food assistance (van der Horst et al., 2014). They further suggested, however, that the use of ‘waste’ food helped to reduce the stigma associated with accepting food assistance: ‘there was definitely a bit of a guilt thing, until I explained...if you don’t take it home and eat it then it will go to landfill.’ Here, the moral imperative of preventing food from going to landfill was used to encourage people to accept free food. Tarasuk and Eakin (2005) argue that intertwining food assistance and industry donations means that ‘food assistance becomes defined as that which the corporate sector cannot retail’ (p.177), working to further exclude clients from traditional consumer behaviours. Alexander and Smaje (2008) further suggested that unequal power relations between retailer, charity and client leaves the client with limited control. However, the charities interviewed did not reflect this view, and I argue instead that working with the OFB meant they could offer a broader range of choice, including far more fresh fruit and vegetables, further freeing up resources to focus on other areas. In this way, surplus food redistribution enables the generation of further value in helping to break down the dual stigma of eating ‘waste’ food and accepting food assistance.

Chapter 7 Conclusion

7.1 A summary
This research project has looked at surplus food redistribution in Oxford through the OFB and the charities with which they work. Using a ‘follow the thing’ structure, I have traced the path of food as it traverses through multiple regimes of value, from waste, to surplus, back through to waste once more. As noted, there is a substantial gap in the literature looking at how food ‘becomes’ surplus, critical in understanding the practical and moral dynamics of surplus food redistribution. Through exploring the human and non-human actors involved the work involved in this process is clear, and the highly contingent ways in which groups and individuals establish the moment at which food slips into inedibility.

At the retailer, significant volumes of food are categorised as food which is still safe to eat, due to a range of factors including over-ordering, date labels and damaged items or packaging (Segrè and Gaiani, 2012). Date labels were notable for the way in which they provided a fixed temporal line beyond which food could not be sold, regardless of the material state of items in that moment. The retailer emerged as an important gatekeeper in what could become surplus, as the food put aside for collection and the ways in which donations were managed delimited the type, volume and quality of food that the OFB could collect.

The OFB, as the nexus of surplus food redistribution in Oxford, plays a critical role in framing how waste and surplus are used and understood, with both material and semantic importance. Furthermore, the work that the OFB do in terms of sorting and delivering food helped to ensure that food delivered to charities was the appropriate type and quality. In this way, the transformation of value, from ‘waste’ food without value to surplus food with high use value, is complete.

Notwithstanding, there are moments when the value of food escapes this circuit, and Chapter 6 explored the tactics employed by charities to ensure that as much food as possible is used by clients, including being careful not to take too much, using ‘thrifty’ kitchen practices and utilising non-landfill ways of disposing of food. Here, date labels were re-negotiated, with factors such as existing knowledge, personal preferences and the requirements of clients dictating how far they could be ‘pushed.’ Furthermore, this section evidenced the additional values that surplus food may take on, including helping individuals to form social ties and acting as a platform for education around food and cooking.
7.2 Reflecting on the Research Questions

The first research question asked ‘*How and with what effect does the value of food transform in surplus food redistribution?*’ As indicated in the summary above, the value of food transforms through the work of various actors. This is not an automatic or easy process, involving the negotiation of more and less compliant individuals and objects. Broadly speaking, this transformation is positive, starting at the categorisation of nil value by the retailer, moving upwards as it ‘becomes’ surplus and is eventually used by charities. There are moments of potential slippage in which food slips into waste once more, crossing over the contingent line of edibility, but the OFB and their charities work to ensure that this slippage is limited. Furthermore, the value of food moves beyond exchange and use value, taking on additional material and symbolic dimensions.

The second research questions asked ‘*How, why and with what effect do the different human and non-human actors involved in surplus food redistribution reposition the line of edibility?*’ Waste was previously defined as ‘matter that has crossed a contingent cultural line that separates it from stuff worth keeping’ (Coles and Hallett IV, 2013: 157) and this has proved a useful way in which to conceptualise the line between edibility and inedibility. A number of factors emerged during this research project which cause or enable the line of edibility to shift, such that more or less food is categorised as waste. Date labels play a key role: a non-human actor with the potential to act as a fixed or more fluid line denoting edibility, dependent on the individual reading the label and where they are situated. Other factors include whether items are damaged, the application of ‘thrifty practices’ and personal preferences.

7.3 Opportunities for future research

Completing this piece of research has drawn my attention to the opportunities for future research in this field. This project is empirically located in Oxford, unique in addressing the becoming of waste and surplus in this context. Work on surplus food redistribution in other areas, such as in London with the Felix Project, would be of value, both to further general scholarship in this area and as a means to compare how far patterns are place-specific or representative of broader trends.
I was unable to secure direct access with any retailers. Although the reflections of my participants was useful in working through the reasons why retailers produce large volumes of food waste, a first-hand perspective on this would have been of value. In particular, looking at the interactions between decisions made at the top management level, those made in each store, and how these are carried out in practice would have provided a useful insight into the roles of different actors within the food retail sector. In relation to this, the role of date labels in the generation of large volumes of food waste remains a persistent problem, and I advocate for work into how these may be modified by and for both the retailer and households (Milne, 2012).

Mentioned briefly in Chapter 6, the OFB is a key part of the recent increase in informal food banking mechanisms in Oxford, a feature of the social welfare landscape which has received little academic attention. Furthermore, current UK statistics of food poverty are understood to under-estimate its severity (Taylor and Loopstra, 2016). Using data from informal and independent food banks to supplement our understandings of food poverty is critical, therefore, in unpacking both the extent of food poverty and the diverse ways in which it is being addressed. Furthermore, exploring further the role of surplus food in informal food banking, including the improved availability of fresh fruit and vegetables, and the ways in which this opens up discussion around food waste, may have practical applications for the future development of surplus food redistribution schemes.

Finally, a questions remains, addressed in part throughout this research, as to how effective surplus food redistribution is in addressing issues of food waste and food poverty. Of particular note here is whether the integration of corporate waste management needs and the needs of individuals requiring charitable food assistance can be, or even should be, aligned (Tarasuk and Eakin, 2005). Broadly, this is a moral concern, particularly as relates to the fact that retailers involved in surplus food redistribution save money in waste disposal costs and gain corporate responsibility credits, with some arguing that this is their core motivation above waste reduction or helping those in need (Midgley, 2013). Furthermore, Lambie-Mumford et al. (2014) state that ‘the joint intertwining of [these] interests can lead to entrenching the provision and normalising the system as a solution’ (p.57; Lang et al., 2009). Even the strongest supporters of the use of surplus food in food assistance recognise the importance of building longer term strategies to help people escape food poverty.
However, in considering the transformation of value in surplus food redistribution, this research has exposed its potential for helping to build these longer-term strategies. The formation of social ties; passing on information on other sources of help; developing opportunities for the future employment of individuals in food poverty; and sharing knowledge around food and cooking all act as means through which individuals can improve their long-term food security. Furthermore, in increasing the awareness of food waste in the retail sector and identifying ways in which it can be avoided for charities and households, sustained reductions in the volume of food categorised as waste are possible. Lastly, the OFB have the ability to help break down the stigma associated with both the consumption of ‘waste’ food and accepting food assistance. This research project has offered a unique insight into the operations of Oxford’s surplus food redistribution system, with theoretical and practical implications for how food waste and ‘surplus’ food are conceptualised.
References


Lang, T. (1991) *An open letter to John Beaumont, then Director of the Institute of Grocery Distribution, when it was about to set up Provision (now Grocery Aid).*


**Appendices**

**Appendix 1** - Food waste in the retail sector (includes wholesaler and supermarket); adapted from Segre and Gaiani (2012)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess stock</td>
<td>Due to ‘take-back’ systems and last-minute order cancellations between the supermarket and wholesaler</td>
</tr>
<tr>
<td>Forecasting difficulties and poor ordering</td>
<td>Estimating demand for a product is complex, affected by range of factors inc. weather, seasonality, promotions, special occasions</td>
</tr>
<tr>
<td>Performance measurement and management</td>
<td>Emphasis in industry on cost, efficiency and availability; waste rarely considered a key performance indicator</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cold chain management</td>
<td>Failure to maintain a cold chain can have significant food waste consequences; this is rare in the UK, where air temperatures are rarely high enough to rapidly spoil food</td>
</tr>
<tr>
<td>Training</td>
<td>Employees may not follow procedures in stacking, shelving and stock rotation which can lead to waste; particularly at Christmas when seasonal workers are brought in</td>
</tr>
<tr>
<td>Quality management</td>
<td>Quality issues can lead to rejections or even product recalls; this is seen particularly in the dairy industry (with strict health and safety standards) and the fruit and vegetable sector (where harvests are inevitably variable); product recalls are rare, but result in large waste volumes; rejections also common due to packaging damages, even if product within is untouched</td>
</tr>
<tr>
<td>Waste management responsibilities</td>
<td>Companies without clear roles and responsibilities for food waste will have greater waste volumes, and less information on their waste.</td>
</tr>
<tr>
<td>Marketing standards</td>
<td>Aesthetic issues and packaging defects may cause products to be rejected, even if product quality or safety is unaffected</td>
</tr>
<tr>
<td>Marketing strategies</td>
<td>Marketing strategies such as 2-4-1 deals may help to address overstocking problems, promoting specific products; but waste is often shifted to the household as consumers are incentivised to purchase more than they can consume.</td>
</tr>
</tbody>
</table>

**Appendix 2 – Table of interview participants**

<table>
<thead>
<tr>
<th>Function (key charity function)</th>
<th>No. participant/s</th>
<th>Form of contact</th>
</tr>
</thead>
</table>

59
<table>
<thead>
<tr>
<th>Service Provided</th>
<th>Contact Method</th>
<th>Delivery Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>After-school youth project</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Alleviation of loneliness and isolation</td>
<td>Telephone</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Allotment working with mental health recovery</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Café providing skills to homeless</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Café working with mental health recovery</td>
<td>Email</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Child learning support</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Community support and socialisation</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Dementia lunch-club</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Food surplus catering</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Homeless services</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Independent food bank</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Music group</td>
<td>Telephone</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Over-50s project</td>
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<td>Face-to-face</td>
</tr>
<tr>
<td>Over-60s lunch club</td>
<td>Email</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Oxford Food Bank (Lesley)</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Oxford Food Bank (Louise)</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Refugee services</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Surplus food social supermarket</td>
<td>Telephone</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Therapeutic mental health recovery</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Volunteer-run social enterprise café</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Weekly community lunch</td>
<td></td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Youth learning disability support</td>
<td>Email</td>
<td>Face-to-face</td>
</tr>
</tbody>
</table>
Appendix 3 – Interview questions
• Please could you tell me about your charity – what community do you serve, why do they require this service, etc.?
• What role does food play within this? What is food used for?
• Do you cook with the food or give it to people to take away? Why?
• How did you start using the OFB? Why?
• How many times a week do they deliver?
• What food do you get from the OFB?
• Does food from the OFB vary much in type/volume/quality? Is this ever a concern?
• What proportion of food are you able to get from the OFB? What additional things do you have to buy?
• What are the benefits for you of getting food from the OFB?
• Can you tell me something about your clients?
• What is the process through which they are involved in your organisation? (do they have to be referred, etc.)
• Would you say that your clients are food secure?
• Would you say that food poverty/poverty generally is a concern in Oxford?
• Do your clients also access food from other non-supermarket sources? (food banks, soup kitchens, etc.)
• What are the benefits to your clients from this service? (indirect/direct benefits)
• Do you think any/most/all of your clients know that the food is from the OFB? Do they care? Are they interested? What are people’s attitudes?
• Do you think that your food service is changing how your clients purchase or consume food? Is this related to the connection with the OFB?
• What are your views on food waste?
• What are your food waste practices like in the charity? (i.e. Do you throw much food away, reuse it, compost it, etc.)
• Has working with the OFB changed your waste practices?
• The volume of food the OFB has shows how much food in the retail sector is wasted. Why do you think they waste so much? Whose fault is it?
• The supermarkets call this food ‘waste,’ but the OFB call it ‘surplus.’ What is the difference between these terms? Does it matter whether we call it waste or surplus?
• Would you say that the Oxford Food Bank provides a good solution to food waste?
• Have you ever had any issues with the OFB?
• Is there anything you think the OFB could do better/differently?
• Is there anything you would like to do better/differently?
• Do you have connections with any other charities in Oxford? Or further afield?
• Do you think that the charity network/community generally in Oxford is strong/not?

Appendix 4 – Table of participant observation

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent food bank</td>
<td>Observation of food bank operations</td>
</tr>
<tr>
<td>Oxford Food Bank</td>
<td>Collection and delivery route; wholesaler collection route</td>
</tr>
<tr>
<td>Oxford Food Bank</td>
<td>Work at base (including taking food off van, sorting it, putting it away)</td>
</tr>
<tr>
<td>Weekly community lunch</td>
<td>Assisting with prep and serving lunch</td>
</tr>
<tr>
<td>Surplus catering ‘pop-up’</td>
<td>Guest at pop-up</td>
</tr>
</tbody>
</table>
**Appendix 5** – Materials used for qualitative content analysis of ‘food surplus’ materials

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Source reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford Food Bank</td>
<td>The Oxford Food Bank (2017) <em>Working across Oxfordshire to reduce food waste and tackle food poverty</em>, physical leaflet</td>
</tr>
<tr>
<td>Agrivert</td>
<td>Agrivert (2017) <em>Food waste recycling</em>. Available at: <a href="https://www.agrivert.co.uk/food-waste-recycling">https://www.agrivert.co.uk/food-waste-recycling</a>. Last accessed 21/08/2017</td>
</tr>
<tr>
<td>Waste Reduction Action Committee (WRAP)</td>
<td>WRAP (2017) <em>Surplus food redistribution: WRAP’s work</em> Available at. Last accessed: 21/08/2017</td>
</tr>
</tbody>
</table>
Appendix 6 – Example of coding document using ‘comments,’ labelled
Appendix 7 – Small section coding spreadsheet, labelled.

<table>
<thead>
<tr>
<th>Purpose of coding</th>
<th>Coding Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each column corresponds to one data source (interview, etc.)</td>
<td>Rows denote macro codes/sub-codes beneath</td>
</tr>
<tr>
<td></td>
<td>Extracts of text copied into corresponding row/column</td>
</tr>
</tbody>
</table>

Appendix 7 – Small section coding spreadsheet, labelled.

<table>
<thead>
<tr>
<th>Purpose of coding</th>
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</tr>
<tr>
<td></td>
<td>Extracts of text copied into corresponding row/column</td>
</tr>
</tbody>
</table>

65
**Appendix 8** – Food and drink material hierarchy, produced by WRAP (2017a)

![Food and drink material hierarchy diagram](image-url)

**Prevention**
- Waste of raw materials, ingredients and product arising is reduced – measured in overall reduction in waste.
- Redistribution to people.
- Sent to animal feed

**Recycling**
- Waste sent to anaerobic digestion; or
- Waste composted

**Recovery**
- Incineration of waste with energy recovery.

**Disposal**
- Waste incinerated without energy recovery.
- Waste sent to landfill.
- Waste ingredient/product going to sewer.

*Least preferable option*