



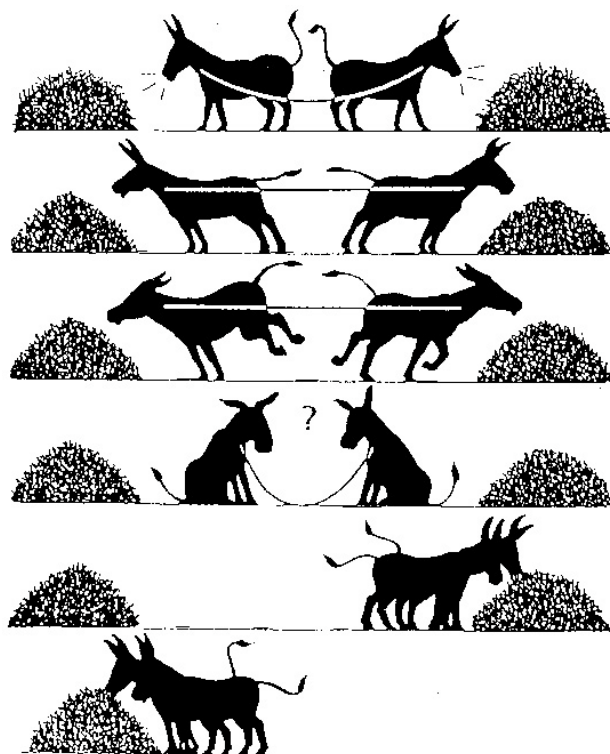
UNIVERSITY OF
LINCOLN



Feeding Lincoln: multiple benefits from considering food as a local system

Full report

July 2016



**Professor Nigel Curry, Professor Jacquelyn Allen-Collinson and Dr Claire Markham
Health Advancement Research Team (HART) (hartresearch.org.uk)**

A FOOD STRATEGY FOR LINCOLN

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Acknowledgements

We are grateful to the University of Lincoln for funding this research through the Research Infrastructure Fund. Thanks are due to all of the participants in this project, referenced throughout the report.

The Steering Group also has offered much guidance and wisdom in our meetings throughout the term of the research project, and in the compilation of the report. All are members of the Health Advancement Research Team (HART), at the University of Lincoln. The full research team comprised:

Name	Position	Role
Professor Nigel Curry	Visiting Professor, Lincoln International Business School	Project Manager
Professor Jacquelyn Allen-Collinson	Director of HART, School of Sport and Exercise Science	Principal Investigator
Dr Claire Markham	HART	Full-time Researcher on the Project
Dr Sarah Chaudhary	Lincolnshire County Council Public Health Directorate	Steering Group Member
Dr Jennifer Jackson	Research Fellow, Lincoln International Business School	Steering Group Member
Mr Geoff Middleton	Senior Lecturer, HART, School of Sport and Exercise Science	Steering Group Member

All errors and omissions remain the responsibility of the authors.

PART 1 - WHAT IS LOCAL FOOD?

1.1 Local food is becoming increasingly important

Over the last fifteen years or so there has been a huge growth in interest in local food in cities and towns throughout the western world (Renting *et al*, 2012). This interest is illustrated in case studies throughout this document. Two major concerns have been at the forefront of this local food movement. *Threats to global food security* are a concern for many and have been highlighted in a number of international reports¹. These include fossil fuel dependence and fuel shortages (it takes 10 calories of energy to produce one calorie of food, Lott (2011)); crop failures; intensive animal production; soil erosion; land use change; climate change; resource depletion (including water); population growth; price volatilities; extreme weather and civil unrest, for example.

Food system waste is a particularly pressing issue within this global food security agenda, because it requires solutions that are almost entirely local. Globally, the issue is huge: there is enough food waste going into landfill to feed a billion people. There is more food wasted in the northern hemisphere than is consumed in the sub-Saharan world. A third of all food produced is lost or wasted each year (50% of the world's fruit and vegetable production). This is equivalent to 1% of all global output (UN Food and Agriculture Organisation, 2016a). It wastes resources and contributes significantly to global warming.

At the same time these reports note the importance of *sustaining* food production resources – soil quality, biodiversity and water quality – and to do this whilst at the same time reducing greenhouse gas emissions. This is all part of the food security agenda. As the *Who Feeds Bristol?* Report (Carey, 2011) notes, if the UK is to meet its legally binding greenhouse gas reduction targets emissions from the whole of the food chain will have to be reduced by 70% by 2050. A lot of local food strategies – in Bristol, Brighton, Edinburgh, Durham and Sheffield - are tackling these issues directly: in The City of Lincoln, for example, there are significant problems of *food waste* which could be used effectively in a range of different ways. We address these issues in Part II of the report.

The second issue that is triggering an interest in local food, is *health*. It was the trigger for this current report. Obesity, diabetes, high blood pressure and heart disease all stem from poor diets that are high in animal (saturated) fats and sugars and made up of processed and 'fast' foods, sweetened and alcoholic drinks and over-large portion sizes (Public Health England, 2016, Lincolnshire County Council, 2015). The National Food Survey (Department of the Environment, Food and Rural Affairs, 2016) shows that as a nation we are eating increasing amounts of takeaway foods, pizzas, pasta, chips and ready meals. The World Health Organisation's (2016) global report on diabetes shows that the incidence of diabetes has quadrupled since 1980, almost entirely as a result of diet and lifestyle. A more local concern for 'healthy food' can attempt to address these issues.

Within the City of Lincoln boundary, around 24% of the adult population of the City was estimated to be *obese* in 2012 (Lincolnshire Observatory, 2016) and the problem is getting worse. Whilst this figure is similar for overweight and obese Reception Year children, by Year 6 this figure is nearer to 35% and in some

¹ The World Bank (2016), the European Commission (2015), the United Nations, Food and Agriculture Organisation (2016), the Biotechnology and Biological Sciences Research Council (2016), The Economist Intelligence Unit (2016)

Wards this touches 40%. This impacts hugely on our local health services and on people's quality of life.

At the same time, there are health issues relating to 'food poverty'. Between 700,000 and 800,000 families benefitted from just one national food bank – the Trussell Trust (which has 400 food banks) - in 2013/2014, and there are many others (BBC Radio 4, 2016). This number is increasing annually (HM Parliament, 2014) but this is more likely to be because they represent a relatively recent *solution* to pre-existing food poverty than an indication of a growth in its extent. Recent research by Lambie-Mumford and Dowler (2015) has found that the main use of such food banks is because of delays to, and the stopping of, welfare payments. There are a number of food banks currently working in The City of Lincoln, including the Trussell Trust.

This health agenda is likely to become more important into the future as budgets become devolved to more local areas. The announcement of a new Mayor for Lincolnshire in March 2016² and the devolution of health budgets in Manchester also launched in March 2016³ both point in the direction of more local control over health budgets and if Manchester is anything to go by, the broader spread of such funds into health prevention and poverty alleviation. A food strategy will be central to any such moves.

1.2 Would a local food strategy be helpful?

In the context of these 'big issues' it is obvious that food is an essential need for life. When people examine human need they often refer to what is termed a hierarchy of needs, originally devised as a psychological tool by Maslow (1943). Maslow claimed that food and drink (alongside other things such as air and sleep) are the most fundamental of needs for sustaining life. Of 'second order' importance relative to food, Maslow suggests, is the need for shelter (in policy terms this might be within the housing portfolio) and the need for law, order and security (in policy terms, the legal and policing system). Within his five point hierarchy, education and training are only 'fourth order' (achievement and mastery) or even 'fifth order' needs (realising personal potential).

At the *City* level in general, therefore, it is perhaps surprising that there are comprehensive public policies for fourth and fifth order needs (education and training) and for second and third order needs (housing, law and policing) but none specifically for the first level need of food. This is illustrated diagrammatically in figure 1 below.

² <http://thelincolnite.co.uk/2016/03/lincolnshire-mayor-additional-layer-bureaucracy-says-pcc/>

³ <http://www.bbc.co.uk/news/uk-england-manchester-35933922>

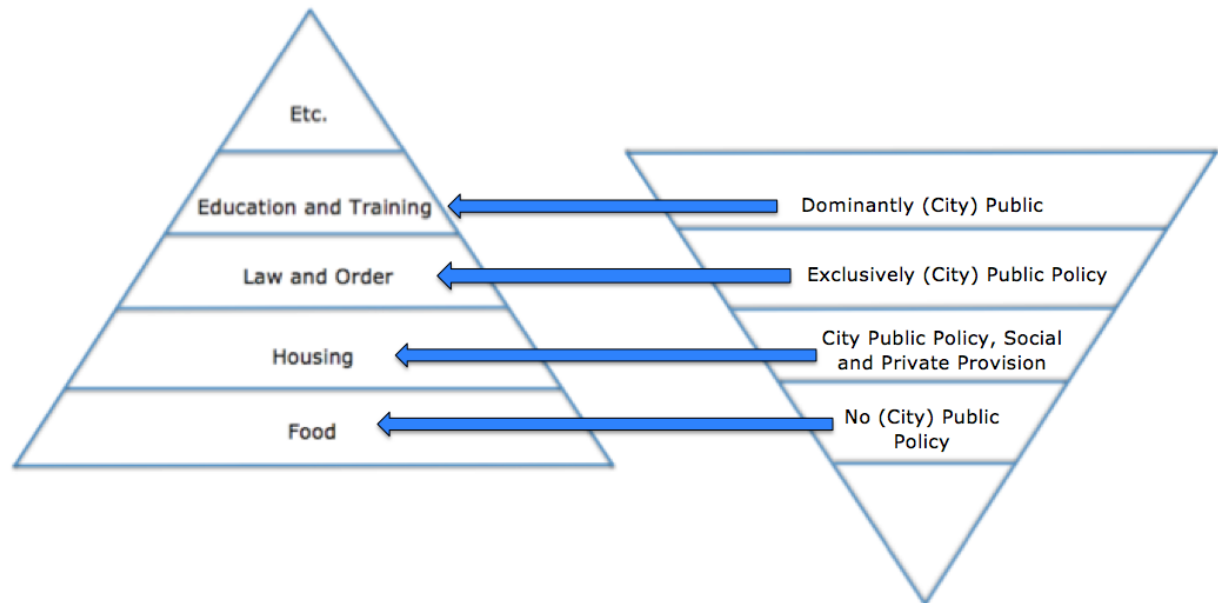


Figure 1 – The hierarchy of needs (left) relative to public policy concerns (right)

Where public policy for food does reside, at the national and European level (with county interpretations (Collison Associates, 2014)) it is overwhelmingly for food *production* (and food hygiene control) rather than for the meeting of food needs. Thus, food policy, where it does exist, is at the 'wrong end' of the food chain for serving first order food needs and it is not sufficiently local to tailor policy to the needs of local communities.

So, a City of Lincoln food strategy could provide a very useful set of policies for tackling the 'big issues' that concern people about local food – food security and health. But local food strategies can do much more than this because they have the potential to bestow a wide range of *benefits* as well as solve pressing problems. Before examining these benefits a little more closely, it is important to get some idea of the kinds of activity to which a food strategy might pertain.

1.3 What is a local food system?

There has now been a considerable amount written about local food systems or local 'short' food chains and what they comprise⁴. In sum they all recognise that food impacts on our lives not just when we eat it, but in every stage in its life, from seeds, to growing, to processing and distribution, retailing, preparing and cooking as well as, of course, eating. The model of the local 'short' food chain for The City of Lincoln has grown during the course of our research and we have represented it diagrammatically overleaf.

⁴ Fawcett *et al* (2014), Min Aung M and Seok Chang Y (2014), Sustainable Food Supply Chain Commission (2014), Gustavsson *et al.*, (2011), Morgan and Murdoch (2000)

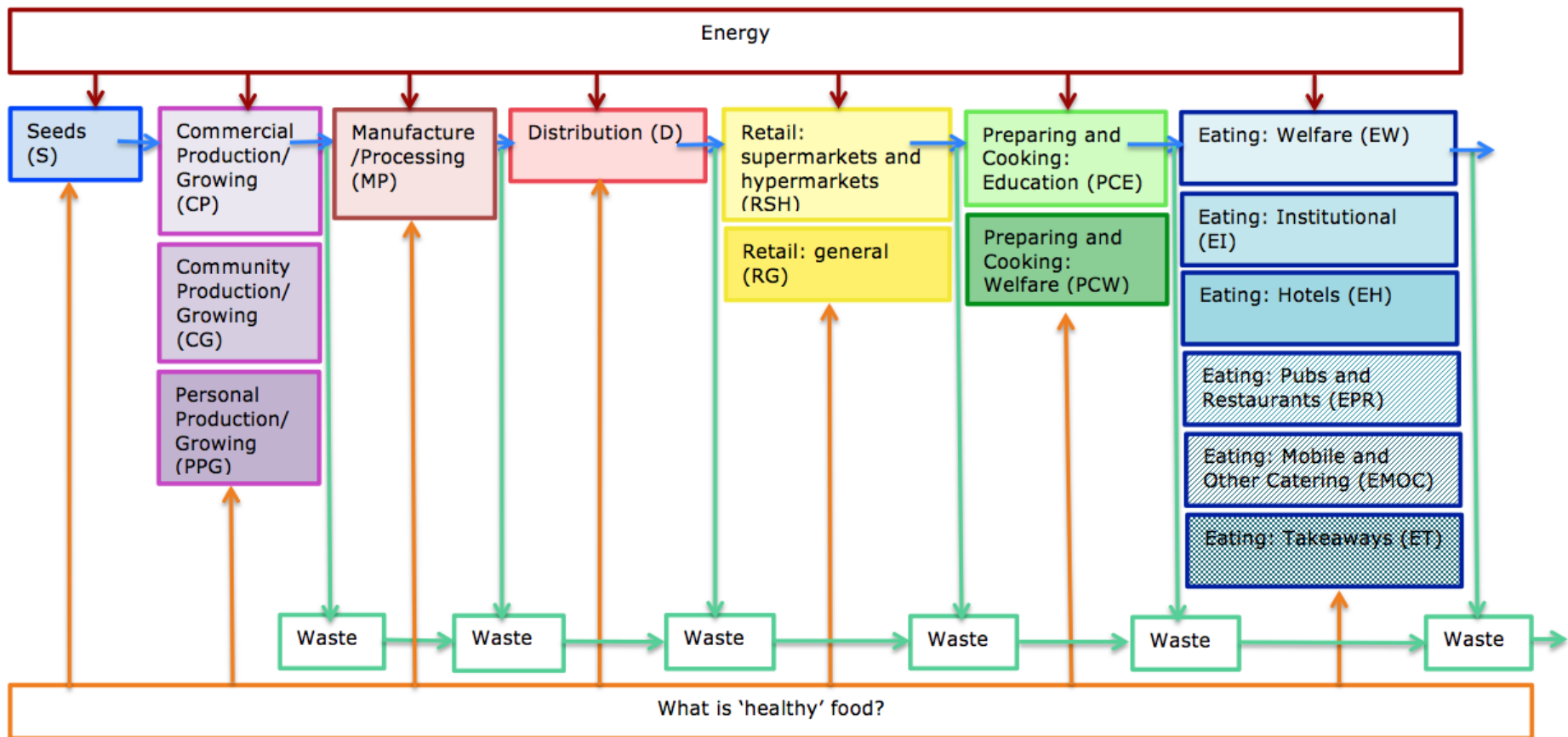


Figure 2 – Food as a system: the food chain in the City of Lincoln

Whilst this looks quite complex, the stages of the food system are all there – seeds – production/growing – manufacture/processing – distribution – retail – preparing and cooking – eating and these are represented in each column in a different colour. In our research, however, we came to see the importance of the energy that goes into the food system at every stage (the top row in the diagram) and the waste that comes out of the food system at every stage (the second to bottom row of the diagram). These are critical to the 'food security' issue that has triggered an interest in local food. The issue of food *quality* also became critical and so the question of what is healthy food (the bottom row of the diagram) became part of the food system.

Importantly, too, for a food strategy, we came to understand that lots of different kinds of people work within this local food system. Certainly, it is dominated by private commercial organisations in many parts, but there is a large voluntary, and community sector, and public sector presence too. We identified nearly 80 organisations of this type within the City of Lincoln food system (there will be more). The diversity of these organisations and their functions required multiple boxes in some parts of the food chain. So, for example, whilst there is commercial food production and growing within and for the City there is also significant community food growing and private food growing too. We need to acknowledge all of these in any strategy.

So a food strategy to address this City of Lincoln food system that goes beyond the operation of just the marketplace is important for at least four reasons:

- the problems that trigger an interest in local food – food security and health - cannot be dealt with by the market alone;
- the identification of food as the most basic of needs suggests some form of strategy for the well-being of the City's population;
- there is a range of benefits that come from being involved at different stages in the food system (we cover these in the next section);
- the large number of voluntary, community and public bodies working within the City food system that might benefit from some overarching 'steer' in their activities.

Looking at other city-wide food strategies, it seems clear that the development of local food strategies should not be left to public authorities alone. Certainly local authorities and health authorities have been critical to the success of strategies, but as facilitators and supporters rather than sole implementers. Strategies seem to be most successful where the voluntary and community sector, the public sector and the private sector act in concert.

Finally, a food strategy can help unlock support from national and European governments as policy for food at these levels changes. The United Nations Environment Programme (IAASTD, 2009) has called for new models of food development based on agro-ecological principles, considering current intensive agriculture neither sustainable nor resilient. The UK Government's Foresight Programme (Government Office for Science, 2011) also calls for a move away from a high intensity agriculture towards policies that address all parts of the food system in an integrated way.

Policies are beginning to flow from these recommendations in terms of both *legislation* and *incentives*. Discussion of national legislation to 'tax' sugar in foods (already in place in NHS Hospitals) (The Guardian, 2016), and pending European legislation to ban food waste from landfill sites, provide two examples. A range of grant-aid opportunities is also available to encourage these changes, but they are currently diffuse and uncoordinated (we address these in section 2.8).

In March 2016, the Food Waste (Reduction) Bill was given its second reading in the UK Parliament. This proposes a scheme to incentivise food waste reduction by individuals, businesses and public authorities. But it also proposes a *requirement* on large supermarkets, food manufacturers and food processors to reduce food waste (levels of which they should make publically known) by no less than 30% by 2025 and to enter into formal agreements with food redistribution organisations (Parliament UK, 2016). A food strategy that allows conformity to new legislation of this type, and to orchestrating incentives, will be essential if implementation is to be effective.

The food system depicted in figure 2 has informed the structure of this report.

1.4 The multiple benefits from local food systems

There are now hundreds of cities in the western world with their own food policy councils and food strategies of one sort or another (to name but a few, New York, Detroit, San Francisco, Seattle, Vancouver, Rotterdam, Rennes, Malmo, Vienna, Bristol, Brighton and Hove, Leicester, Manchester, Bradford, Durham, Sheffield, Birmingham, Edinburgh, Plymouth, Middlesbrough and smaller places such as Todmorden) (Sustainable Food Cities, 2016). Many have been used to initiate discussion amongst city policymakers and the community.

Reviewing the results of their strategies – and the projects that have followed – shows that some local public involvement in the whole of the food system has yielded a wide range of benefits for the resident population. Rather than present the whole of this review, we have summarised the main benefits in figure 3 below.



Figure 3 – Multiple benefits from involvement in all parts of the food chain

A few examples serve to show the potential of these benefits. In Bovey Tracey in Devon, for example, community gardening has developed as a means of *learning* about food production and healthy eating (Scott-Cato and Hillier, 2010). In Ghent

in Belgium food growing, selling and cooking are used to *integrate ethnic minorities* and in Riga, Latvia, food is used to *reinvigorate cultural traditions*. In Stroud, a community farm has been set up to improve *food quality* and in Bristol, salad growing and selling is used as a central plank in *drug rehabilitation*.

In Brighton and Hove, food projects have been used to improve *food in hospitals* and enhance physical and mental health. In Botton Village in North Yorkshire, food is the cornerstone of a residential community of those with *learning disabilities and other special needs*. In Cashes Green, food is a central part of a *social housing* development. Across Holland, 'care farming' uses food to *rehabilitate people* with a wide range of problems and across England, FareShare is a project that reduces food waste. In Todmorden, *Incredible Edible* has made the whole community fanatical about food.

Each of these can be explored further using the links provided in figure 4 but are summarised in Appendix 1.

Sources:

Bovey Tracy: food learning: www.boveyclimateaction.org.uk

Ghent: integrating ethnic minorities: <http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&ved=0CEsOFjAG&url=http%3A%2F%2Fsupurbfood.eu%2Fscripts%2Fdocument.php%3Fid%3D90&ei=qA3vVLifHszD7gaLyoGwBw&usg=AFQjCNEsa-pFFj4dqdLAPhBOQd9nZiXhHA&sig2=j2I5-iovHL88H6Xcbj1LJQ&bvm=bv.86956481.d.ZGU>

Riga: developing cultural traditions: <http://www.likealocalguide.com/riga/kalnciema-street-quarter/>

Stroud: improving food quality: <http://www.stroudcommunityagriculture.org/about-sca>

Bristol: drug rehabilitation: <http://www.thesevernproject.org>

Brighton and Hove: improving food in hospitals: <http://bhfood.org.uk>

Botton Village: creating identity, community and belonging. <http://www.cvt.org.uk/botton-village.html>

Cashes Green: affordable housing with a twist: http://www.gloucestershirelandforpeople.coop/index.php?option=com_content&task=view&id=28&Itemid=11

Care farming in Holland: food as social care: <http://www.carefarminguk.org/sites/carefarminguk.org/files/Dutch%20Handbook.pdf>

FareShare: recycling food waste: <http://www.fareshare.org.uk>

Todmorden: developing multifunctionality: <http://www.incredible-edible-todmorden.co.uk/home>

Figure 4 – Case studies of the multiple benefits arising from local food chain projects.

In the projects cited above, whatever the impetus for setting them up, the benefits have been wide-ranging and sometimes unexpected. Developing a food strategy for Lincoln is likely to offer similar pleasant surprises. One thing is for sure: food is about much more than feeding people!

In interviews with 'key players' in the local food scene in the City of Lincoln (see section 1.5 below and appendix 4), it became clear that working within the food chain has multiple benefits and the literature terms this the *multifunctional* nature of food. We have explained this term more fully in Appendix 2 but it is important to bear in mind in the development of a food strategy for the City of

Lincoln. Growing food, for example, might be fun, but it also makes us healthier through exercise, develops community cohesion, improves our diet, teaches us about food and so on. It also offers great tourism potential which 'imports' wealth into the local economy. A good strategy will seek to capture a number of these benefits simultaneously.

1.5 The research: objectives, approach and report structure

In early 2015, the Lincolnshire County Council Public Health approached the Health Advancement Research Team (HART) at the University of Lincoln, to explore the potential of undertaking research into obesity in the County. It was agreed that a 'baseline' study of the nature of food would be a useful starting point for this, and the City of Lincoln district was chosen as a first district case study.

This work was considered important because, from 'times of plenty' in food production from the mid-1970s onwards, central and local governments have not maintained any systematic information about the operation of the 'whole food chain' in particular places. Nor are there responsible bodies to ensure the maintenance of resilient and sustainable 'whole food systems'.

HART made a successful bid to the University for funding to undertake the project with the following objectives, agreed with the County Council.

Research Objectives

The overall purpose of this baseline study, or mapping exercise, was to develop a fuller factual and normative understanding of the food system (and its multifunctional characteristics) as it operates in the City of Lincoln. The study was designed to uncover the extent of awareness of, and levels of action within, each element of the food chain and establish the 'practice' of connectivity between them. Specific objectives were to:

- establish the nature/extent of involvement of various actors and assets in local food production, distribution and consumption in the specific locality of the City of Lincoln;
- examine levels of awareness and interconnectedness of these actors and assets in the development of an holistic local food network within the City of Lincoln;
- make recommendations regarding the development and improvement of such a network of actors and assets in the locality, including the development of strategy, an action plan, resourcing and sources of finance.

These objectives were designed to establish the nature and level of involvement within the voluntary and community sector, relevant private sector actors (particularly food producers/retailers) as well as appropriate interventions by the local and national state within the City.

The research approach

Because there is an incomplete picture of the food system within the City of Lincoln, the study has adopted a 'snowballing' approach, identifying primary, secondary and web-based sources of information and building on these where they point to further sources.

Five broad avenues have been pursued within this overall approach. Firstly, a web-based and academic review has been undertaken of local food projects in Britain and Europe in order to garner good practice that is likely to have a relevance to Lincoln – a number of case studies is presented in boxes in the report. Secondly, web-based searches and secondary sources have been used to identify specific data and contextual information about the food system specifically in the City of Lincoln.

Thirdly, data mapping exercises have been undertaken where data in relation to the food system already exist. Data needs also have been identified through this process. Fourthly, a series of semi-structured interviews has been undertaken with various actors in different parts of the food system both to inform our understanding of it, but also to obtain their views as to which new ideas and embellishments are most likely to be successful.

Fifth, a focus group was held with various actors in the City of Lincoln and Lincolnshire County Council local food scene to discuss possible initiatives for the strategy. Above these formal research approaches, the research team has become actively involved in the local food scene in the City of Lincoln. As an example, the team led, in October 2015, a bid to the Sainsbury's *Tackling Food Waste* initiative for funding for various aspects of the strategy contained in this report. This involved working with 33 interested groups in the City that were collectively termed the Lincoln Community Association for Food Endeavour (Lincoln Café) for the purposes of the bid.

These different approaches to data collection have not been presented separately in this report but have been combined in a thematic way, the themes being reflected in the structure of the report. Further details of individual methods and their assumptions and limitations can be found in Appendix 3.

The nature and structure of the report

The report has examined the nature of local food in this first part. Part 2 examines data on a number of aspects of local food in The City of Lincoln: organisational data, health data, food growing spaces, employment, waste, finance and policy and law. In part three, the main issues concerning local food in the City of Lincoln are reported from the face to face interviews. These are: food cultures, infrastructure, resources, food poverty, food waste and policy change. Part four assesses innovations in local practice in the City of Lincoln, of which there is a considerable number. From all of these parts of the report, a strategy for local food in the City of Lincoln is proposed in part 5.

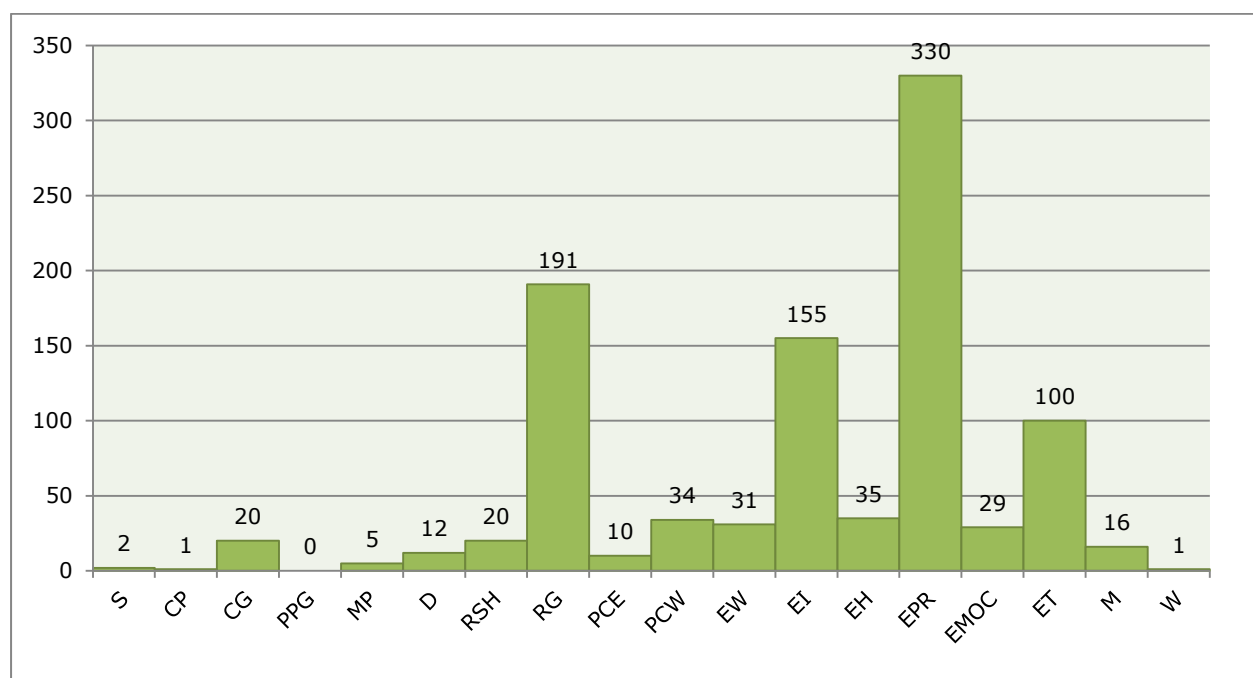
PART 2 – LOCAL FOOD IN LINCOLN

In this section of the report we present a series of data about the food chain in the City of Lincoln. Where we refer to different parts of the food chain, we use the abbreviations of the food system diagram presented as figure 2 in Part 1. The methods used in procuring these data are discussed in part 1.5 and appendix 2.

2.1 Food organisations in the Lincoln food chain

The research uncovered some 992 organisations that have an active involvement in the food chain in the City of Lincoln at October 2015. This can be an estimate only as food organisations form and close on a regular basis. The data were collected using the City food hygiene register and also extensive web searches and interviews with a range of stakeholders in the local food chain (see appendix 4). A full explanation of the data collection process and the assumptions made in compiling the database is to be found in appendix 3. The data themselves are available as a separate spreadsheet.

These 'food' organisations are distributed across the food chain as in figure 5 below



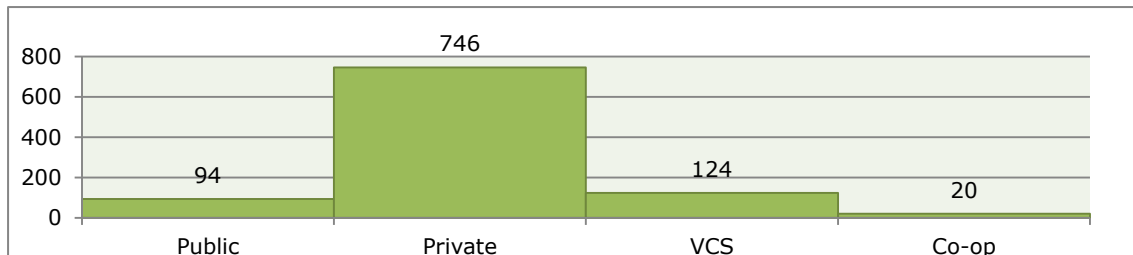
Key: parts of the food chain (after figure 2)

Code	Part of the food chain	Code	Part of the food chain
S	Seeds	PCW	Preparing and Cooking: Welfare
CP	Commercial Production/Growing	EW	Eating: Welfare
CG	Community Production/Growing	EI	Eating: Institutional
PPG	Personal Production/Growing	EH	Eating: Hotels
MP	Manufacture/Processing	EPR	Eating: Pubs and Restaurants
D	Distribution	EMOC	Eating: Mobile and Other Catering
RSH	Retail: supermarkets and Hypermarkets	ET	Eating: Takeaways
RG	Retail: general	M	Multiple Parts of the Food Chain
PCE	Preparing and Cooking: Education	W	Waste

Figure 5 – Distribution of food organisations across the food chain in the City of Lincoln, October 2015 (992 Organisations).

These organisations have been broadly divided into four sectors: private, public, voluntary and community sector (VCS) and co-operative (Figure 6). At the margins it is sometimes impossible to determine the sector of particular organisations and in these limited cases, reference has been made to their objectives to determine their principal purpose. These organisations vary considerably in size.

The geography of local food chain organisations is multi-faceted. Some are uniquely located within the City; others are outside the City but have a clear influence over the City’s food chain. Others still are regional or national organisations: their work covers the City as part of a larger interest in local food



Key: different types of organisation in the food chain

Sector	Number
Public	94
Private	746
Voluntary and Community Sector (VCS)	124
Co-operative (Co-op)	20

Figure 6 – The sectorial breakdown of food organisations in the food chain in The City of Lincoln

Retail

From figure 5, the distribution of the 20 supermarkets and hypermarkets (RSH) (using the food hygiene ratings register definition) is shown in figure 7 below.

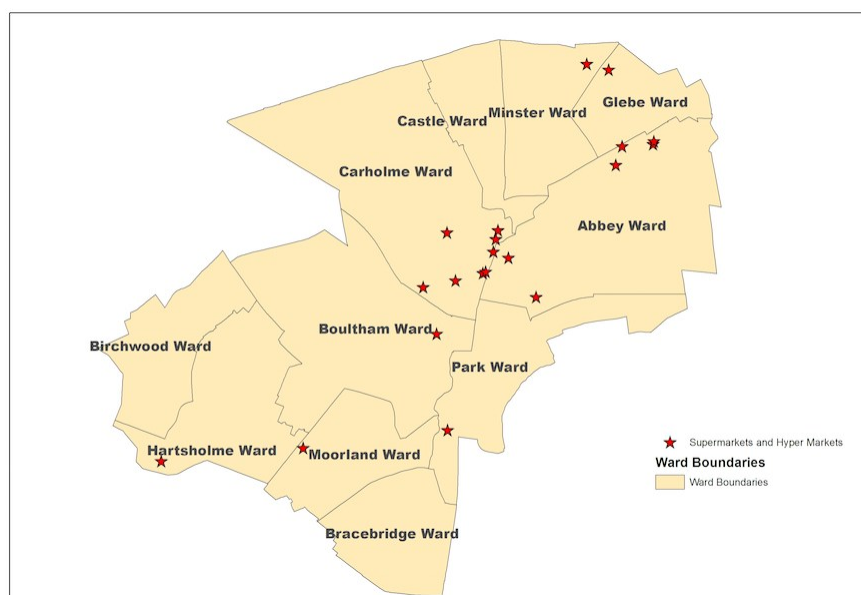


Figure 7 – Spatial distribution of supermarkets and hypermarkets in the City of Lincoln

Eating: commercial

The distribution of the 330 pubs and restaurants (EPR) in The City of Lincoln in figure 5 is shown in figure 8 below, and their distribution by City Ward is shown in figure 9

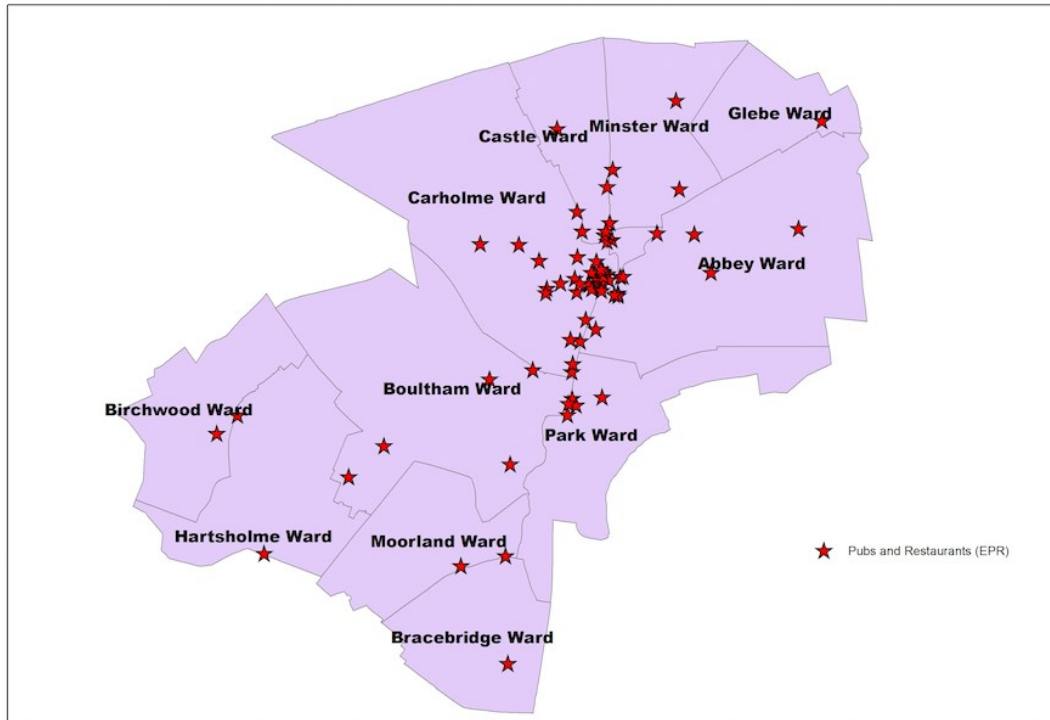


Figure 8 – distribution of pubs and restaurants in The City of Lincoln

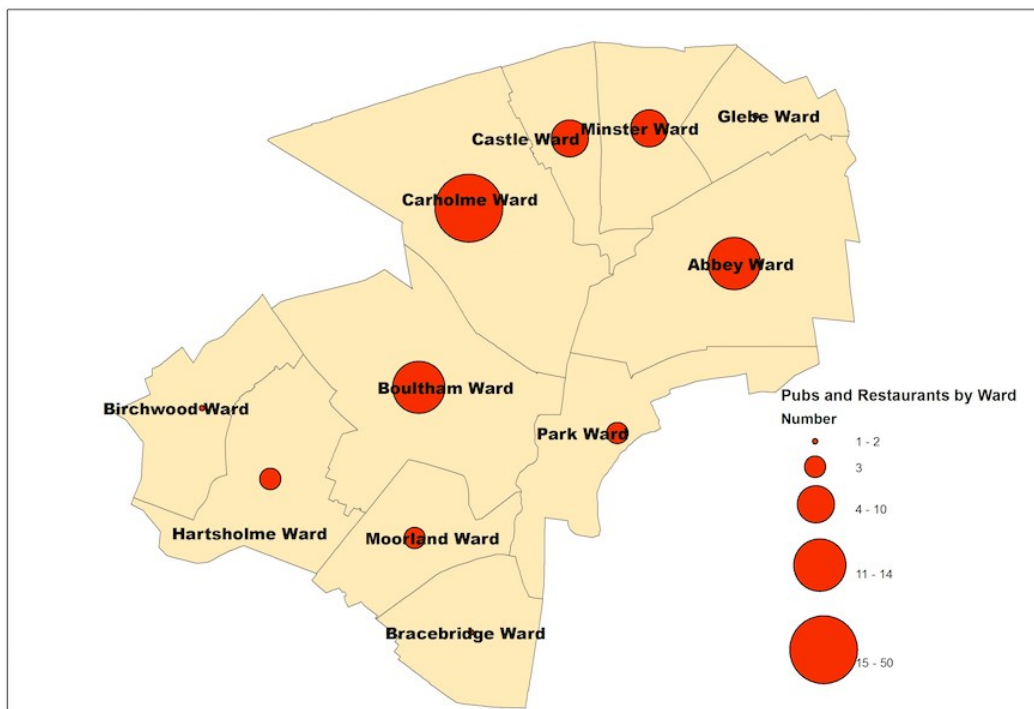


Figure 9 – distribution of pubs and restaurants by City Ward

The distribution of the 100 takeaways (ET) from figure 5 is shown in figure 10 and that of the 29 mobile catering and other (EMOC) food outlets is shown in figure 11

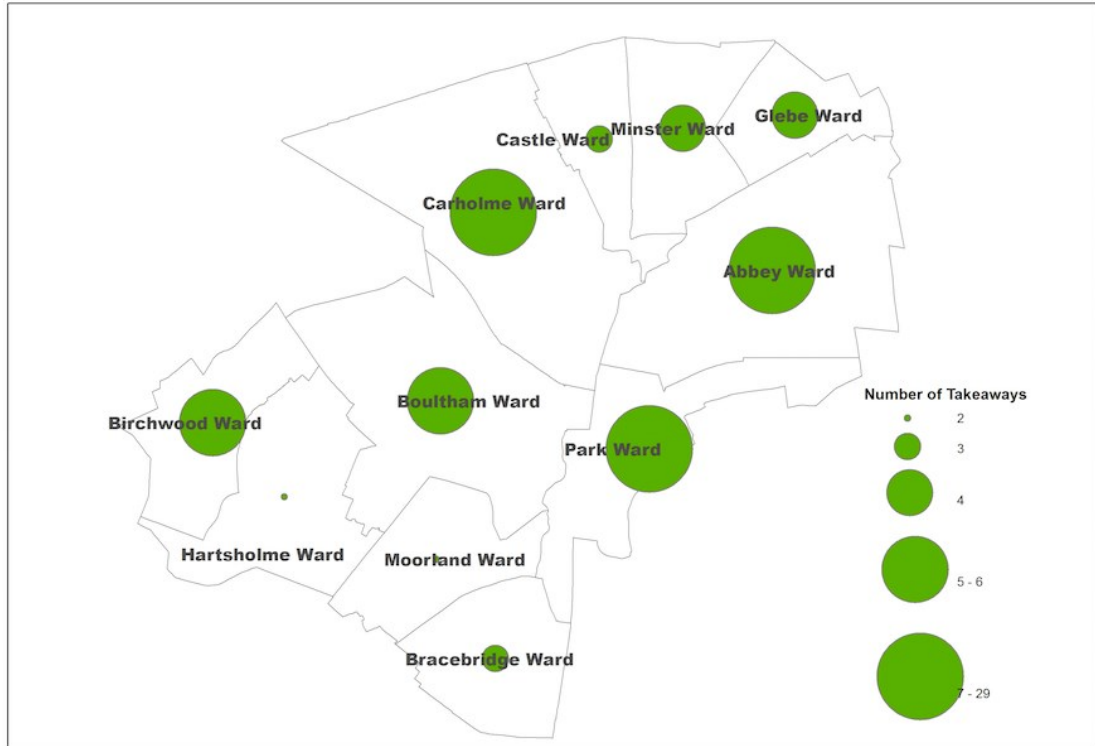


Figure 10 – distribution of takeaways in The City of Lincoln

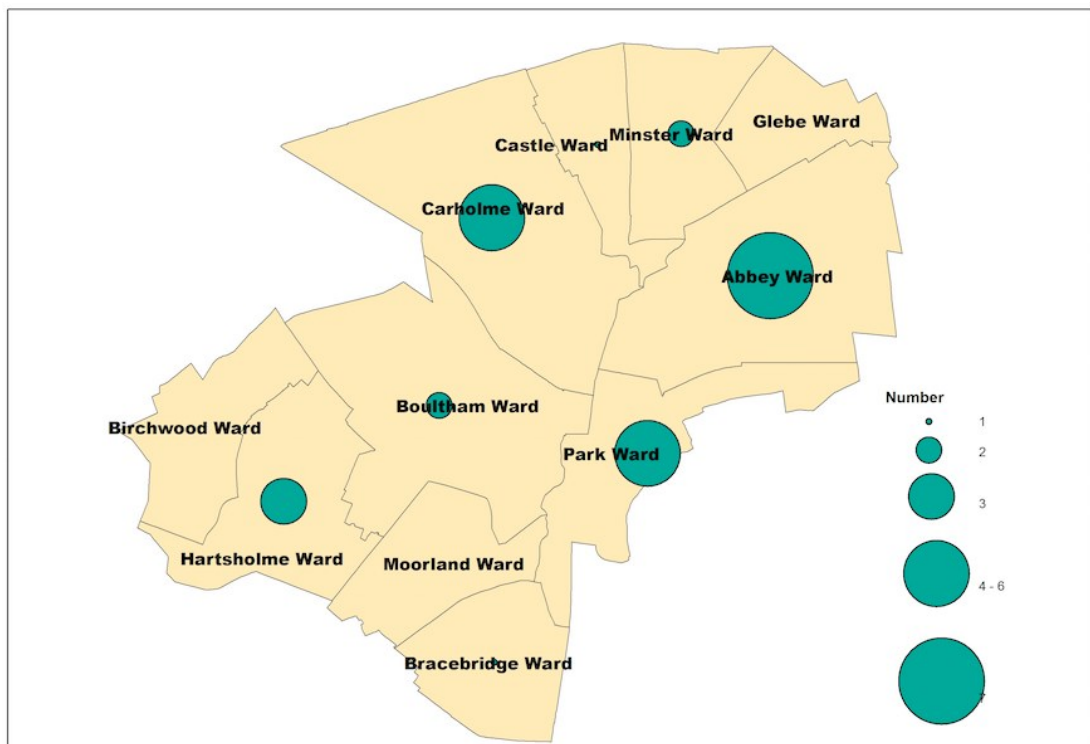
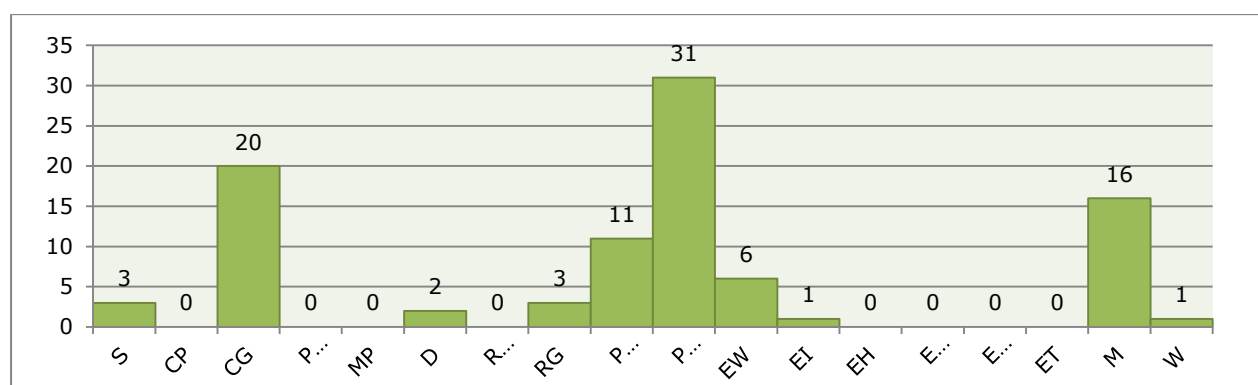


Figure 11 – distribution of mobile catering and other food outlets in the City of Lincoln

2.2 Community, Welfare, Environment and Education Groups.

Of particular interest in the development of a local food strategy is the number of organisations that have a specific interest in food from a community, welfare, environmental or educational perspective (or a number of these) in, or having an impact on, the City of Lincoln. From internet searches and interviews, it is estimated that there were 94 of these at October 2015, and these are detailed in appendix 5.

Of these, 70 are voluntary and community organisations, 13 are public bodies and 11 are private organisations. They are distributed across the City of Lincoln food chain as in Figure 12.



Key: parts of the food chain as for figure 5

Figure 12 – distribution of community, welfare, environment and education food organisations across the food chain in the City of Lincoln, October 2015 (70 organisations).

The proportionate distribution of the 55 voluntary and community organisations with an interest in food across the City of Lincoln Wards in shown in figure 13 below.

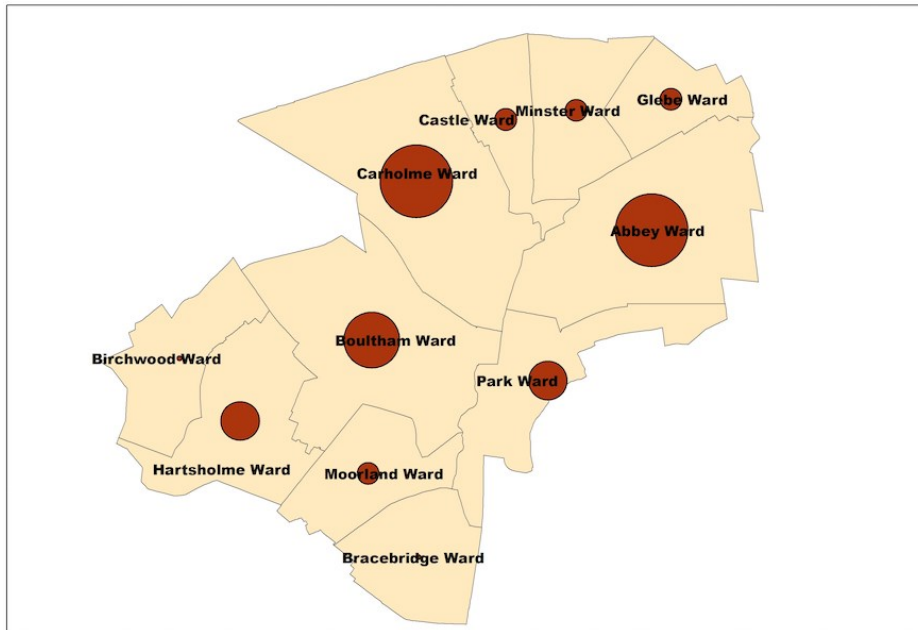


Figure 13 – the distribution of 'food' voluntary and community organisations by ward in the City of Lincoln.

2.3 Food, health and welfare in the City

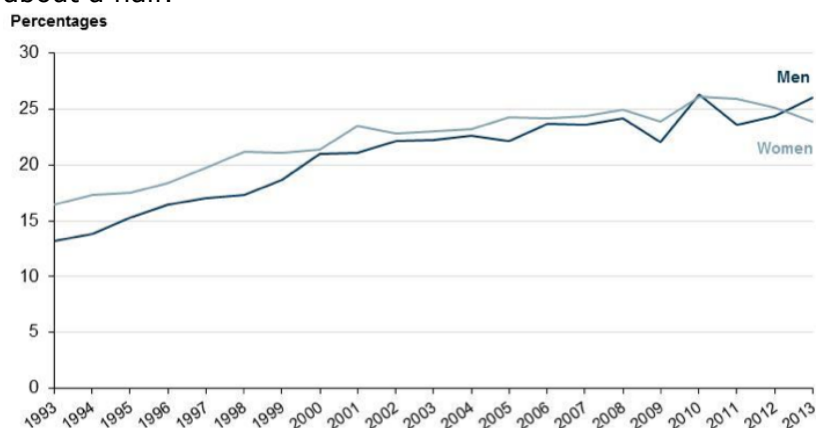
Obesity in the City is one of the key challenges facing the development of a food strategy. Figure 14 below shows the proportions of the City of Lincoln population that are overweight and obese in different age categories, together with the proportion of the adult population that eats at least 5 portions of fresh fruit, vegetables or salad a day. These are presented by Ward. In the City as a whole using data from 2012 – 2014 (Public Health England, 2016a), 24% of the City's adult population was obese and 40.4% was overweight (an 'excess weight' population of 64.4%). In contrast, 0.8% of the population was underweight and 34.8% was deemed to be a 'healthy weight'. These figures, however, are lower than for the county as a whole: 27.4% obese, 42.6% overweight, total excess weight 70.1%, underweight 0.9% and 'healthy weight', 29.0%).

Ward	Total Ward Population	Reception children: overweight (%)	Reception children: obese (%)	Year 6 children: overweight (%)	Year 6 children: obese (%)	Over 16 population: obese (%)	Over16 population eating at least 5 a day (%)
ABBEY	10354	24	9	40	24	22.8	26
BIRCHWOOD	8150	29	11	34	16	26	22.8
BOULTHAM	7365	23	7	33	21	25.4	28.6
BRACEBRIDGE	7340	37	11	37	23	25.9	27.5
CARHOLME	12660	23	8	36	18	16.9	30.5
CASTLE	7548	21	7	39	22	22.4	28
GLEBE	7217	25	11	36	23	23.9	26.1
HARTSHOLME	6374	22	9	31	20	25.6	29
MINSTER	7308	23	10	33	21	23.6	26.6
MOORLAND	7434	25	9	36	22	26.3	24.3
PARK	8457	28	13	39	23	24.9	28.6

Sources: column 2, for 2008, Lincoln Research Observatory (2008a), columns 3 – 6, for 2014, Joint Strategic Assessment, (2014), column 7, for 2010, Joint Strategic Assessment (2014), column 8, for 2008, Joint Strategic Assessment (2008)

Figure 14 – proportions of different groups of the City of Lincoln population who are overweight or obese

The obesity problem is worsening over time. The Health Survey for England (2014) charts this issue for English adults over a 20 year period, in Figure 15 below. Here, obesity in men has nearly doubles and for women, increased by about a half.



Source: Health Survey for England 2014

Figure 15 – Obesity prevalence of adults (16+) in England 1993 to 2013

The obesity problem in the City generally appears to get worse as people get older. In Birchwood, for example, 11% of reception children were obese, but this rose to 16% in year 6 children and 26% in adults over 16 years. The incidence of obesity increases in *all* Wards for children between reception and year 6 and increases further into adulthood in 10 of the 12 Wards in the City – it declines from year 6 to adulthood only in the Abbey and Carholme Wards. These data are summarised in figure 14 below.

In other urban food studies (for example, Carey, 2011) obesity data have been mapped against takeaways to explore if there is any relationship between them. In Lincoln, this is of limited value because of the size of the City (most Wards are relatively close to most takeaways). Figure 16 below, for example, maps takeaways against the incidence of obesity in year 6 children. Here, there does seem to be a preponderance of takeaways just inside Park and Abbey Wards which are also the two wards with the highest incidence of obese year 6 children. But patterns in relation to the other Wards and the distribution of takeaways are indeterminate.

In a city the size of Lincoln, more useful differentiated data can be found at the Lower Level Super Output Area (LSOA). Unfortunately, obesity data are not collected at this level (Public Health England, 2016, Pers comm), but data for the Index of Multiple Deprivation (IMD) is. At this more disaggregated spatial scale the distribution of takeaways in the City is mapped against the IMD in figure 17 below.

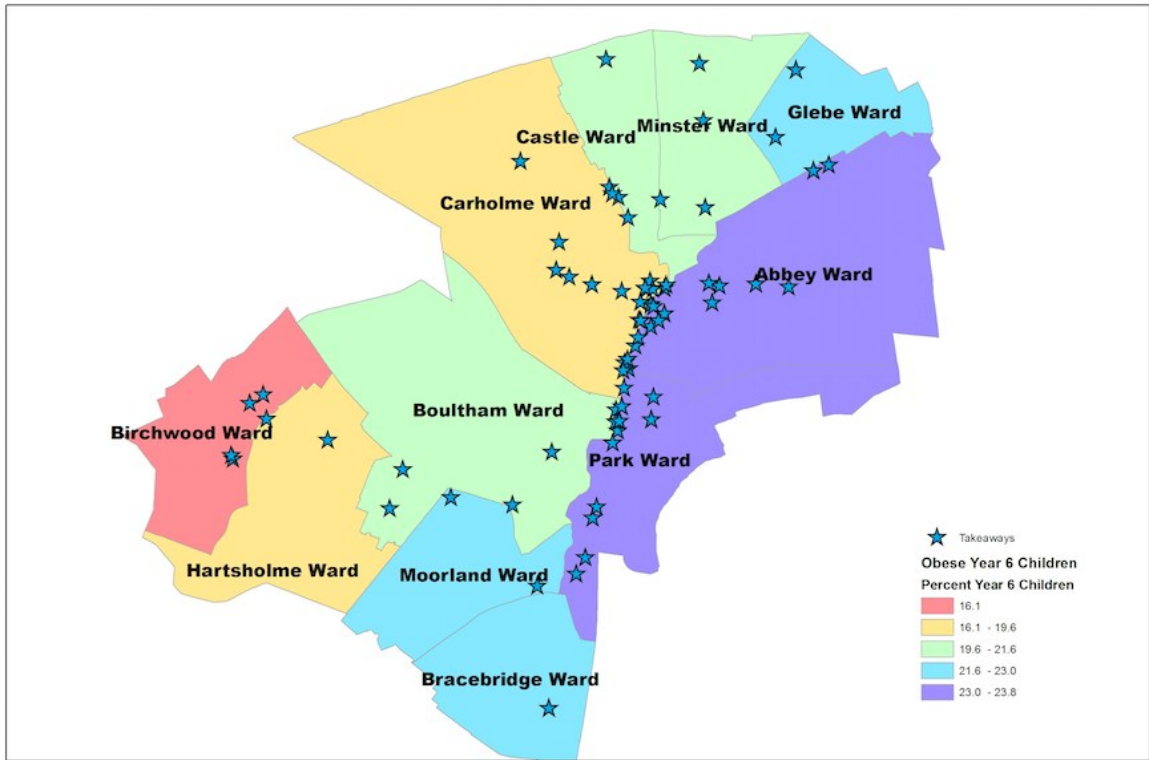
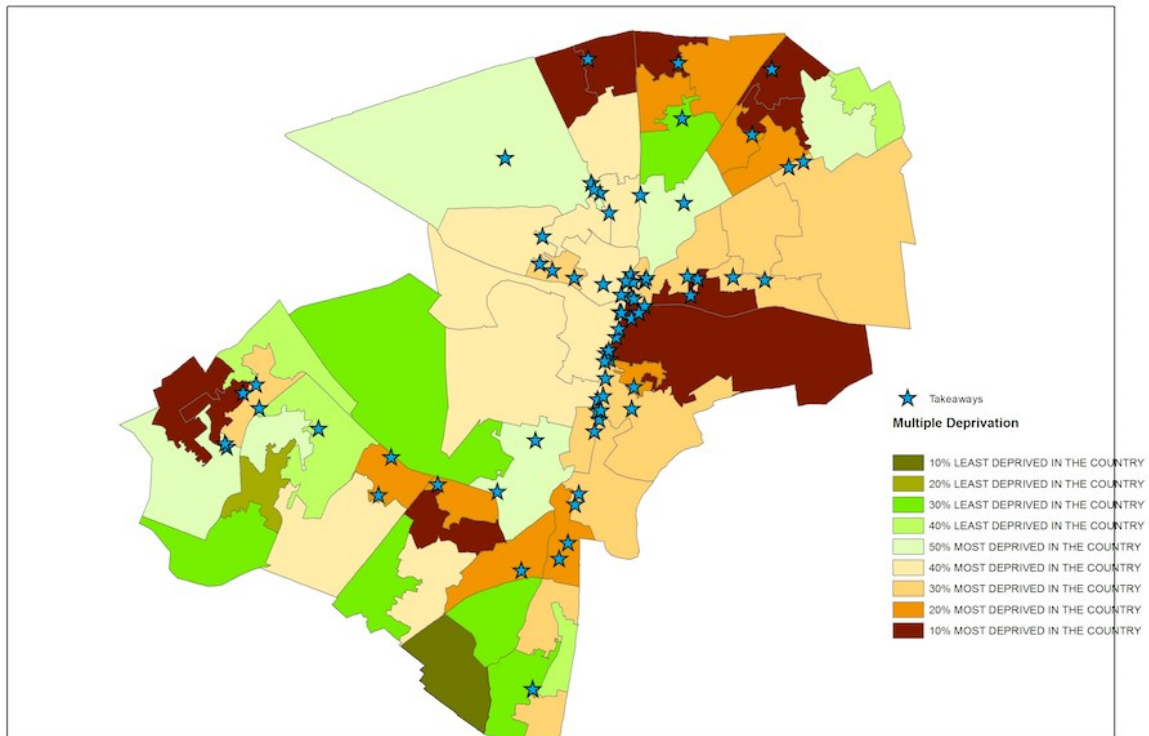


Figure 16 – distribution of takeaways by ward against levels of obesity in year 6 children.



Sources: both datasets are for 2015. Takeaway distribution is from the City hygiene ratings register and the IMD data is from DCLG (2015)

Figure 17 – relationship between takeaways and the Index of Multiple Deprivation (IMD) The City of Lincoln,

This does appear to offer a closer association between the distribution of takeaways and deprivation indices.

2.4 Local Food Production

In the development of a local food strategy, it is useful to have some broad notion of local food production systems and outputs.

Conventional Agriculture

At the county level, some of the most progressive innovations in the agriculture sector are to be found in Lincolnshire: 10% of English national agriculture by Gross Value added is to be found in the county (including 25% of all vegetable production) with GVA per employee being about £30,000, against £18,000 nationally. There are also some 53 large food processing companies in the county (including 70% of the fish processing sector) (Collison, 2014).

More locally, the contiguous districts to the City of Lincoln are classified into two areas in the Government's June agricultural census (Defra, 2014): the City of Lincoln and North Kesteven on the one hand, and West Lindsey on the other. The principal characteristics of agriculture in these two districts are set out in figure 18 below.

<i>Data</i>	<i>Lincoln and North Kesteven</i>	<i>West Lindsey</i>
Number of holdings (number)	533	649
Farmland area (total) (ha)	78,003	101,584
Farm area: cereals (ha)	35,194	45,608
Farm area: arable (ex cereals) (ha)	25,028	31,168
Farm area fruit and veg (ha)	2,231	1,592
Farm area grassland (ha)	8,908	14,701
Livestock cattle (number)	6,151	20,345
Livestock sheep (number)	20,624	32,202
Livestock pigs (number)	30,964	63,176
Livestock poultry (number)	4,422,631	3,588,319

Source: Defra, 2014 Notes: rows 4 – 7 sum to row 3. All land areas: hectares

Figure 18 – main agricultural data for the districts surrounding The City of Lincoln, 2013.

But there are constraints on production (water, land, climate change, energy) and, claims the University Exeter (South West Farming and Food, 2006), current farm payments in conventional agriculture thwart innovation as they deter risk. The Anderson Centre (2015) also suggests that farm productivity in the UK is low and conventional agriculture has lost its international competitiveness since about 1991.

Both the Anderson Centre and the Lincolnshire Agri-food Sector Plan assert that food production needs to address consumer demands and needs more directly through innovations in the food chain. A food strategy for the City of Lincoln has the potential to contribute to this innovation as well as to start to build a culture that is conducive to innovation.

In order to address some of these issues within the County, The Agri-food Sector Plan (Collison, 2014) proposes a National Centre for Fresh Produce in the county and whilst this is concerned with developing the commercial value of fresh produce (particularly with the County-based British Growers Association) it has the potential to buttress community agriculture in the City.

Food and drink

The Agri-food Sector Plan for Lincolnshire County (Collison 2014), notes that the food and drink sector (distinct from agriculture) in England and Wales as a whole has grown faster than any other major industry in the UK since 2008. It will continue to grow as populations and incomes rise and this will impact significantly on the County and the City.

Community Agriculture

The City of Lincoln has 18 allotments within the City boundary (see figure 20) and 3 allotment associations - Boutham Allotment and Garden Holders Association, the Monks Road Allotment Holders' Association, and the Wragby Road Allotments Association - all of which are involved in food production and community growing activities such as seed swapping, mutual support and advice swapping (The City of Lincoln Council, 2016c).

Additionally, Green Synergy is based in the Abbey Ward of the City (Green Synergy, 2014). This is perhaps the main community agricultural scheme in the City. Green Synergy is a "collaborative community based organisation which exists to create inspiring and therapeutic environments". As part of its work in the City, Green Synergy has gathered data on community growing projects and residents views towards them in the Abbey Ward. This has led to a number of different growing activities and projects. One example, is the Development Plus Community Garden, on Croft Street, where the organisation's back garden has been turned into a community garden. This project has run taster sessions for gardening and has gathered support amongst the local community. At present the project has 10 members who are actively involved in community growing. The project is getting bigger but funding is needed to expand it further. Green Synergy, should a grant be successful, plan to employ a Community Garden Project Officer with the plan of running, from the garden, programmes on practical gardening sessions, training and gardening events (Green Synergy, 2014).

Commercial and community compatibility

The Agri-food Sector Plan (Collison, 2014) is clearly oriented towards increasing the economic potential of the food sector (employment and Gross Value Added) in the county. This is not incompatible with the development of short food chains in the City of Lincoln for social, environmental and health purposes and both could feed off each other to mutual advantage.

The Greater Lincolnshire Local Enterprise Partnership (2013) aims to have a "World class food production and manufacturing sector recognised for its contribution to the UK" and a Lincoln City Food Strategy can make a contribution to this, particularly in addressing social and health issues concerning food, at a local level. Also the positive impact that a food strategy will have on the local tourism economy will be important for the LEP.

Of the seven main *trends* in food noted in the Lincolnshire Agri-food strategy (Collison, 2014), five have direct bearing on a City Food Strategy:

- consumers are seeking new food products and experiences through *innovation*;
- *health* considerations in food are becoming more important;
- *provenance*: consumers are becoming increasingly interested in where and how food is produced;

- *sustainability and ethics* increasingly influence food choices;
- food markets are becoming increasingly *fragmented*.

Glasshouse production offers particular potential, particularly if coupled with sustainable energy usage (biomass or 'waste' heat from other industries) (Collison, 2014).

Where local food chains can make a particular contribution here, is in productivity. With the Anderson Centre (2015) asserting that productivity is low in conventional agriculture, community agriculture productivity per unit of land is generally higher, because of the intensity of production. Thus, urban food growing in California claims to achieve outputs of 6,000 lbs of food on a 1/10 acre of land (Small Space Freedom 2015), which generates \$20,000 of garden gate sales a year. This compares with mean yields for United Kingdom agriculture of 3,600 lbs for Potatoes, 720 lbs for Wheat, 540 lbs for Barley, 271 lbs for Oilseed Rape (Defra, 2014a).

2.5 Food Spaces in The City of Lincoln

It is possible to estimate the extent of many open spaces within the City of Lincoln boundary that offer potential for food growing. Although the amount of available private land owned by private companies and institutions such as residential homes in the City is currently unknown, it would offer additional potential for food growing. Principal identifiable open spaces are shown in figure 20 below.

Allotments

The City of Lincoln Council (2016) data confirm that it is responsible for 19 allotment sites, 18 of which are located within the City boundary. At present there are approximately 900 allotment plots of varying sizes (City of Lincoln Council, 2016a). The average allotment plot in England is 250 square metres (National Allotment Society, 2016). Assuming that the average allotment size in Lincoln confirms to the national average, this means that approximately **22.5** hectares of allotment space exists within the City.

The distribution of allotments is uneven within the City – something that the allotment strategy (see below) is keen to address. Whilst the waiting list for allotments is not long overall, there are some that are more desirable than others because of their location and soil quality.

All but two of the allotments are Statutory (owned by the Council) but two are not – one is outside the City boundary – Canwick Hill, is owned by Jesus College, Oxford and South Common and Tritton Road also are privately owned. These are both non-statutory sites. The allotment portfolio in general, however, is fairly heavily subsidised – it is not a cost neutral portfolio, but there is an aspiration to make it so. The charge bands are quite complicated, however (19 charge bands) for both rental and for water.

According to interviewee 7, there are commonly *bye-laws* that prevent or discourage allotment holders from selling their produce commercially, but in the City, these relate only to 'selling on-site' for congestion reasons (buyer car parking, for example). There is no restriction on selling off-site.

The production profile of allotments is mainly vegetables and fruit. Livestock may be kept (only chickens and rabbits – not larger beasts). One or two have areas set aside for flowers but most are disposed to food produce. The standard 250

square metre plot size is commonly subdivided for new entrants. Most plots are well looked after. There is a difficulty in measuring the outputs of allotments, but some allotments are so active they are verging on a commercial operation.

There are a number of allotment associations in the City of Lincoln. The largest is the North Lincoln Horticultural Society, based at the Clarence A site. They have a stall there for other allotment holders. There is a Monks Road group that deals with the Wragby Road area.

Other open spaces

The City contains within it a number of public open spaces, play areas and playing fields. The seven largest areas of open space in The City of Lincoln extend to **269.5** hectares (City of Lincoln Council, 2016b; Visit Lincoln, 2016). These spaces are itemised individually in Figure 19 below. The amount of open space from play areas and playing fields is not known, however many of these are located within the seven main areas of open space in the City.

<i>Open Space</i>	<i>Size in hectares</i>
Arboretum	9
Boultham Park	20
Birchwood Natre Park	4.5
Cowpaddle	16
Hartsholme Country Park	40
South Common	80
West Common	100

Compiled from City Council, 2016b; Visit Lincoln, 2016

Figure 19: Open space by hectare in the seven largest open spaces in The City of Lincoln

The two large commons (South and West) have a management group run by the City Council which makes management decisions. This group historically has not encouraged food production – only amenity, recreation and grazing. The Council maintains the commons.

Garden spaces in the City of Lincoln

Lincoln has 21,932 owner occupied houses, 15,699 rented houses, and 179 shared ownership – (part buy part rent houses) (Census, 2011b). The 'Who Feeds Bristol? Report (Carey, 2011) used a 'baseline' average garden size of 10 square metres and assumed that half of this may be available for food growing. Applying these parameters to the City of Lincoln suggests that somewhere in the region of **19** hectares of garden space (public, private and social) might be available for food growing.

School land

There are no data for the amount of open school land in The City of Lincoln, Nevertheless, it can be imputed. There are 35 schools in the City (Lincolnshire County Council, 2016). Again, the 'Who Feeds Bristol?' report (Carey, 2011) suggests that an average area of 20 square metres per school might be deployed for food growing. Applying this yield an further **0.07** hectares of cultivable land.

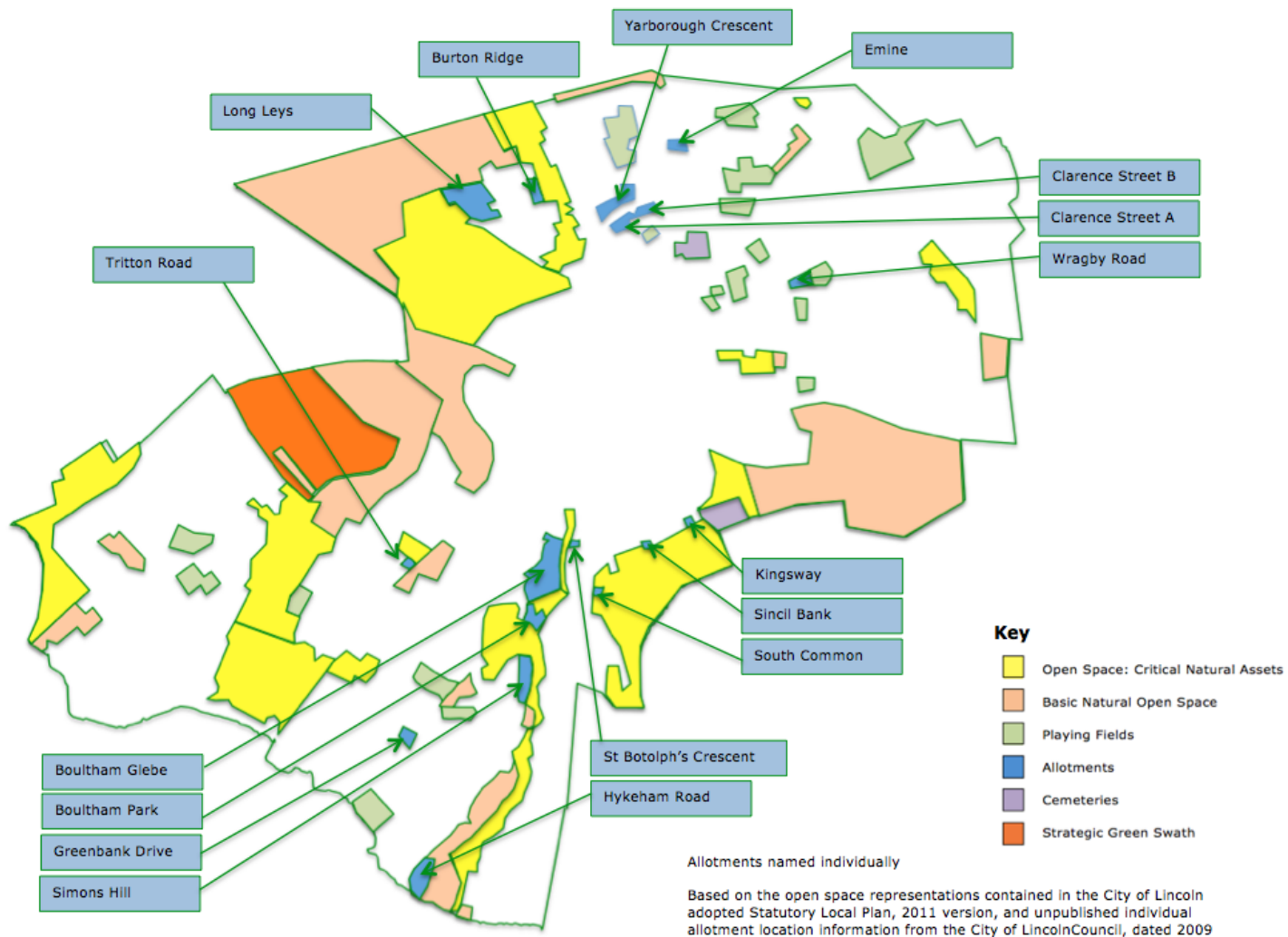


Figure 20 - Open spaces in The City of Lincoln

Other areas of land

In addition, there is a range of other smaller pockets of land that are used for community cultivation such as:

Liquorice Park (<http://community.lincolnshire.gov.uk/LiquoricePark/>)

St Giles' Garden (https://streetlife-uk-live-media.s3.amazonaws.com/conversations/9d/9d8415e7d1a6db3a29a7177e912318e95986e05b_o.pdf)

St Faith Church Community Garden

Croft Street
(<https://greensynergylincoln.wordpress.com/events/developmentplus-community-garden-croft-street-lincoln/>)

Tower Estate and Stamp End <http://www.lincolnshireecho.co.uk/Community-gardeners-Lincoln-look-forward-spring/story-27996706-detail/story.html>

Gaunt Street <http://www.lincolnshireecho.co.uk/New-community-garden-unveiled-Lincoln/story-26590533-detail/story.html>

Crowland <http://www.lincolnshire.gov.uk/news/crowland-community-garden-blooms/117155.article>

Overall estimates

Taking allotments, principal open spaces, gardens and school lands together, might yield approximately **312** hectares (771 acres) of cultivable land in the City of Lincoln. Based on the output estimates presented in section 2.4 above, this could yield a possible community food output of 46.25 million pounds of food. If this were all to be sold at 'garden gate' prices noted in section 2.4, it could yield an annual income of approximately £110 million. The multiplier effects of this sum could be considerable (see section 5.6 below).

2.6 Who works in the City of Lincoln food chain?

The 2011 census has 18 labour market categories, of which two are relevant to the Lincoln food chain: agriculture, forestry and fishing, and accommodation and food. No data are separately available for other parts of the food chain (The Office of National Statistics, 2011). In 2011 there were 310 people resident in Lincoln who were employed in agriculture, forestry and fishing sector and 3,197 people living in Lincoln, working in the accommodation and food sector (Office of National Statistics, 2011a). These two sectors together accounted for 7.8% of employment of those living within the City of Lincoln boundary.

It is unlikely that the 310 people employed in agriculture, forestry and fishing actually work within the City boundary. It is probable that they live in Lincoln and, in many cases, commute out to work in contiguous rural areas (interview 7). This could be due to more expensive house prices in adjacent rural areas, relative to many parts of the City (Lincolnshire Research Observatory, 2008).

City tourism also impacts upon employment within the food chain. Between 2012 and 2013 the visitor economy of the city grew to £168 million with a 10% growth in the food and drink sector (City of Lincoln Council, 2013). Farmers markets and

the production, and retailing of locally-produced food is an increasingly important part of the 'tourist offer' (Select Lincolnshire, 2016). Such activities are likely to account for a high proportion of people employed in the accommodation and food sector.

The distribution of those employed in accommodation and food and in agriculture, forestry and fishing by ward of residence is shown in figure 21 below.

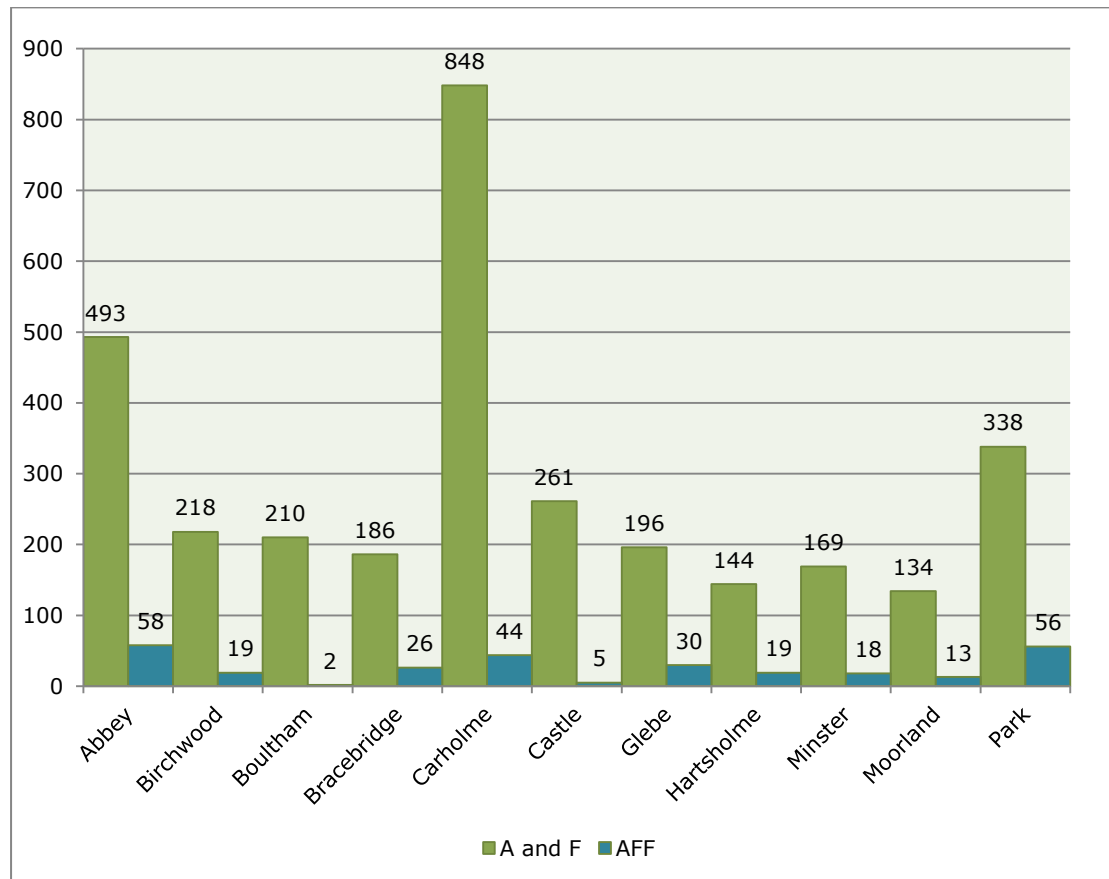


Figure 21 – numbers working in accommodation and food (A and F) and in agriculture, forestry and fishing (AFF) by City Ward in 2011.

2.7 Food Waste in the City

We have noted the scale of the food waste problem globally in section 1.1 where the UN FAO (2016a) has suggested that most of the solutions to waste problems are local ones. Waste comes from all parts of the food chain. Most waste in retail is because of food *appearance* rather than *quality* (BBC World Service, 2016). At the consumption stage, food is wasted, partly because it is relatively so cheap, because two for one deals cause over-purchase, and because of early 'sell by dates' (which are often confused with 'use by' dates). About 50% of all food waste comes from our homes.

The City of Lincoln Council has a commitment to reducing food and garden waste going to landfill and encourages individual households to compost it. A compost bin currently costs residents £19.98 (plus £5.99 delivery). Additional bins are half price (The City of Lincoln Council, 2016d). There are at present no data available on the number of households in the city which have adopted composting.

All other food historically has gone to landfill, and landfill waste in total (all landfill waste including food) amounted to half a ton per person in the County in 2012 (Recycle for Lincolnshire, 2013). No data are available for this period specifically for the City. Much of this landfill in the County is now being diverted into incineration and the North Hyeham incinerator has the ability to convert annually 150,000 tonnes of former landfill waste into electricity to power 15,000 homes (Recycle for Lincolnshire, 2013). The Lincolnshire Waste Partnership is responsible for overseeing the implementation of the Lincolnshire Waste Strategy, of which incineration is a central part. To a degree, therefore, domestic food waste currently is being recycled (Recycle for Lincolnshire, 2015).

It is not yet clear what happens to commercial food waste although it is likely that the majority of food waste from restaurants, cafes, and other food outlets in the City will go into landfill, on a commercial basis.

In respect of both food and non-food waste from the City's allotments, composting is encouraged as much as possible (interviewee 7).

2.8 Multifunctional finance and resources for the City food chain

The multifunctional food system posited for the City of Lincoln (see figure 22 below) is discussed in full in appendix 2. Within this, various enterprises (the bottom box in the diagram) will operate under a range of different financial regimes. A large number of these is available outside of conventional local authority funding. To provide a structure to these, a number of categories is presented below.

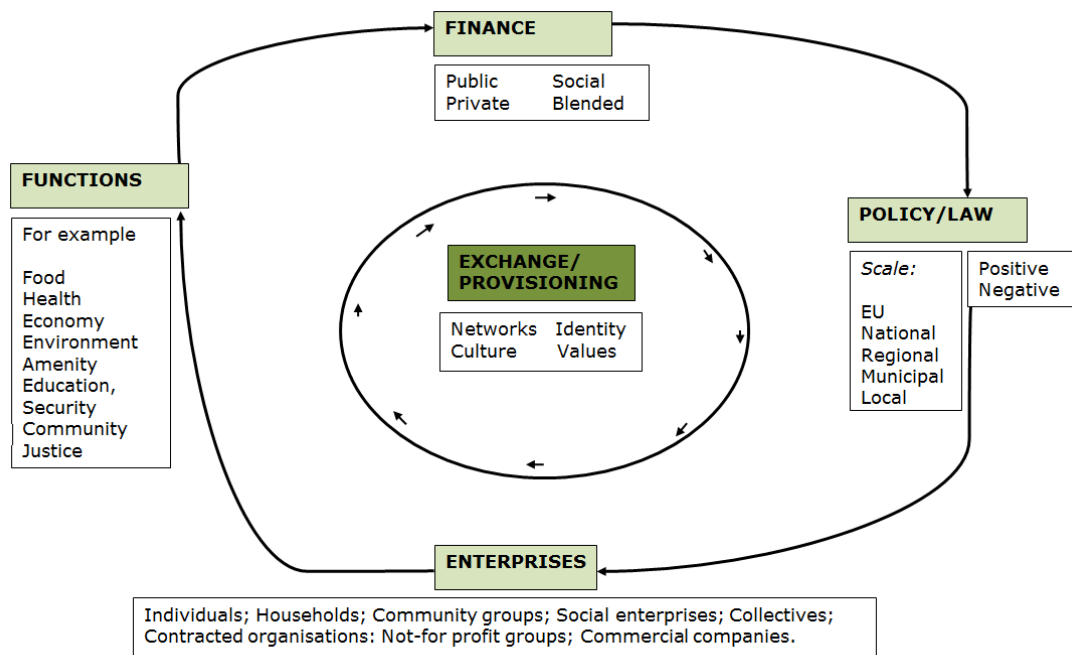


Figure 22 - Multifunctionality in urban food: a system of interdependence

Core funding for capital programmes through large grants:

The European Structural and Investment funds for Greater Lincolnshire: provide significant funding streams (up to £4 million per grant) for sustainable development, SMEs, resource efficiency and research and information, all of

which are relevant to the City of Lincoln Food Strategy. These are for individual projects

(<http://www.idoxopen4community.co.uk/lincolnshire/News/View/GRUKBP3!N57040>)

The Landfill Tax has a charity that administers landfill monies (Entrust – the Landfill Communities Fund, which administers to bodies enrolled with Entrust as environmental bodies (<http://www.entrust.org.uk/landfill-community-fund>). This would include several bodies concerned with environment in the food chain, particularly in respect of energy, waste and sustainable forms of food production.

Pillar II of the Common Agricultural Policy administers significant funds for 'rural development' projects through the Local Enterprise Partnership (LEP). These include LEADER II allocations and other environmental grants through the Rural Development Programme for England ([http://www.lincolnshire.gov.uk/business/lcc-services-for-business/economic-regeneration/funding/rural-development-programme-england`](http://www.lincolnshire.gov.uk/business/lcc-services-for-business/economic-regeneration/funding/rural-development-programme-england))

Smaller project grants

There is a large number of these, most readily accessed through the *Lincolnshire Funding Portal* (<http://www.lincolnshire.gov.uk/residents/community-and-living/community-and-voluntary-sector-support/grants-and-funding/lincolnshire-funding-portal/111946.article>). These are mainly for the voluntary sector but not exclusively so. Relevant grant streams are announced most months.

As a whole, the portal had approximately 3,500 source of funding over 23 categories at the end of 2015. There undoubtedly are sources in more than one category. Of the 23 categories, those most relevant to the food system described above are:

Community-facing

Community (247)
Families (183)
Older People (232)
Volunteering (22)
Young People and Youth (323)

Care-facing

Crime Reduction, Rehabilitation and Victim Support (86)
Disability (270)
Healthcare (276)
Social Relief and Care (350)
Sport and Recreation (127)

Education and Research-facing

Education and Training (278)
Social Research (18)

Resource-facing

Infrastructure Development (16)
Environmental and Animal Protection (183)
Regeneration (199)

Within the 'Community' strand,

<http://www.open4community.info/lincolnshire/O4Schemes.aspx?WCI=htmschemesearch>

there are 19 Possible Government funding pots and 26 charitable trusts funds relevant to food. One in each of these categories is relevant to food growing (one EU research grant – Horizon 2020, and the Esme Fairburn Trust).

Many of the grants require pre-qualification (for example, only charities and not-for-profit organisations may apply). The size of this database would suggest that funding is sought for a known project, rather than stating with a funding source and building a project around it.

In addition, the *Cabinet Office's Office for Civil Society's Local Intelligence Team* provide monthly updates on community grants of all kinds. Sometimes these can be quite large (in the £ millions). They are at:

http://www.communityimpactbucks.org.uk/data/files/role_of_local_intelligence_team_mf_v1.pdf

In addition, one off grants are often advertised for food chain work, not least by the supermarkets and by the Waste and Resources Action Programme (WRAP):

<http://www.wrap.org.uk>

Gifting

Gifting – where people give their time and other resources in a voluntary way – is at the core of the community characteristic of the local food chain. This is currently extensive in the City and many other opportunities can be developed. This would include volunteer labour but also donations of food to food banks and so on.

Service agreements

A range of these can be developed for services (particularly social, welfare and health ones) provided by the food chain. For example contracts could possibly be provided, along the Netherlands 'Care Farming' model, for:

- rehabilitation for armed services personnel;
- work with people with learning difficulties;
- work with the homeless;
- work with in-migrant communities;
- work with those in drug rehabilitation.

A range of education projects also could be carried out through service agreements.

Developing continuing income streams through capital projects.

The most obvious of this type of funding would be through renewable energy projects (principally anaerobic digestion (AD) and solar panels) where capital grants could be secured (see category one above) for projects that would secure continuing income streams.

Social Enterprise

Nearer to 'market' revenues is the notion of income generation through social enterprises. This would not maximise commercial rates of return but might allow projects that would maximise the objectives of the food chain. For example, 'eco' housing developments that had some form of food production tied to the tenure could provide on-going resources through rental incomes, payments in 'kind' and other forms of tenure innovation.

Assembling resources: the community right to buy.

There are circumstances under which communities can form groups to bid for land and buildings that are being sold by state bodies:

<https://www.gov.uk/government/publications/2010-to-2015-government-policy-localism/2010-to-2015-government-policy-localism>

it is not clear what the current arrangements are, for this, in 2016.

Commercial enterprises

These would be many and varied from box schemes through to the proposal for a large 'local food chain' garden centre at Riseholme

Loans

Some banks (for example, possibly Clydesdale) will be sympathetic to loans for projects with a social value.

Within the multifunctional food chain, it is likely that some of these finance and resources may be used to 'cross subsidise' others in the short term, but in the spirit of sustainable development it is an aspiration that the local food system as a whole should be free of continuing state support (distinct from one-off grants).

2.9 Relevant Policy and Law

There is a plethora of policy and law surrounding local food chains. We note some of these at the EU level in the context of current issues surrounding the development of local food chains in Lincoln, in Part 3 of this strategy. This section simply describes the scope of this framework.

National Policy

National policy for food, food security, farming and the environment appears to place little emphasis on short food chains and their multiple benefits. The purposes of Defra's (2015) most recent farming and food plan are to strengthen the farming industry (branding, investment, productivity, skills, branding, exporting) rather than see the food chain more holistically. Its broader single Departmental plan to 2020 (Defra, 2016a) has the same disposition towards the agriculture industry and makes little connection between food production and its wider environmental responsibilities.

National policy in the health domain addresses the health motivation for local food more directly. The 2011 Public Health Responsibility Deal, emanating from the Department of Health (2011) address a variety of public health issues including obesity, poor nutrition and alcohol misuse, but it is aimed at businesses,

organisations and institutions rather than individuals (Policy Innovation Research Unit, 2016). Alcohol and food pledges address actions of manufactures, retailers, restaurants, takeaways and pubs to help people lead healthier lives: labelling alcohol units, reducing salt, trans fat and saturated fat in takeaways, and putting calories on menus. There is as yet little public authority involvement with the Deal (although Thurrock District Council does adopt the Deal in its staff restaurants (Thurrock Council, 2015)): this could provide a developmental opportunity for Lincoln City.

Change 4 Life also encourages various groups, organisations and citizens to eat well, increase their physical activity levels, and reduce alcohol (Change4life, 2016a). As part of the Campaign there is an online resource [School Zone] for primary teachers, providing curriculum-linked materials and inspiration to help them teach pupils about healthy eating and being active (Public Health England, 2016b). This has relevance to multiple parts of the food chain and could be incorporated into a local food system to engage and educate local populations about food.

National Legislation

UK food policy works within EU legislation - General Food Law Regulation (EC) 178/2002 (Food Standards Agency, 2007). Within this framework, the Food Safety Act (1990) has been amended by i) The Food Safety Act 1990 (Amendment) Regulations 2004, ii) and the General Food Regulations 2004 (Food Standards Agency, 2009). The Food Safety Act covers various stages of the food chain including primary production, storing food, distribution, retail, and catering, and is concerned with food safety and consumer protection. There is a comprehensive set of regulations that accompany the Act most of which will impact on the local food system. More focused legislation embraces food labelling (the 1996 Food Labelling Regulations) and food hygiene (the 2006 Food Hygiene Regulations) (Food Standards Agency, 2009).

Waste food at the farm gate is at least in part caused by supermarkets changing their minds on orders at the last minute (interviewee 9). The Groceries Code Adjudicator Act, 2013, does try and tackle this by facilitating the redistribution of this rejected food. The Act can penalise short order changes by supermarkets. The Food Waste Bill 2016 has provisions to require all supermarkets in the UK to give their waste food to charity. This is particularly important for the Lincoln VCS as it provides both opportunities and responsibilities in the local food chain.

Company Policies

There is now an increasing range of policies from private companies, particularly the large supermarkets, that can provide significant advantages for the local food chain. Morrison's Lets Grow scheme, for example, aims to educate children about food and inspire them to get involved in parts of the food system through the growing, preparing and cooking of fresh produce (Morrisons, 2011a, Morrisons, 2011b). This has been adopted in Lincoln at schools such as St Peter and St Paul Catholic voluntary academy (SSPP, 2014).

PART 3 – LOCAL FOOD ISSUES IN THE CITY OF LINCOLN FOOD CHAIN

This section of the report is concerned to identify the salient issues that might most appropriately be addressed in the development of a food strategy for Lincoln City. It draws on the evidence presented in Part 2 of the report and on information garnered from some 18 interviews and meetings conducted or attended as part of this research. The process of assembling the Sainsbury's *Tackling Food Waste* bid (discussed in section 1.5) also has been used to inform this section. The issues outlined in this section also have been developed and honed as a result of a focus group to discuss the preliminary findings of the report, and the findings have been supplemented by evidence from the literature where this is pertinent.

From all of these sources, three 'big and broad' issues emerge for Lincoln City in respect of food: food culture; food infrastructure and food resources. These same sources also identify three more detailed issues that are important in the City: food poverty; food waste, and policy barriers. Each of these six issues is considered in this section.

3.1 Broad issues: food cultures in The City of Lincoln

3.1.1 Cultural attitudes

A number interviewees (see appendix 4) felt that there is a relatively small 'green collar' population in the City of Lincoln, making the population in general resistant to 'new' local food ideas. Food redistribution (Fare Share) and food box schemes have been set up in the City but have folded due to lack of support (interviewees 16 and 15). Some community growing schemes have closed due to a lack of on-going funding: for example, a mental health (illness and handicap) growing project based in Lincoln run by MIND. Some schemes, too, have experienced a lack of critical human skills (interviewee 11). All of this means that historically there has been a limited appetite for a radical food strategy in Lincoln. Interviewee 11 also felt that the traditional Co-operative movement in the City is not very visible in short food chain activity.

More optimistically, interviewee 7 noted a range of organisations concerned with food distribution, food poverty, breakfast clubs, luncheon clubs and the like in the City (see appendix 5), often more recently established, who are all likely clients for an alternative food system in the City. There will also be a need to respond systematically to new food legislation and regulation, and to the increasing commitment on the part of the supermarkets to redistribute food to save food waste. This kind of redistribution, it was felt, was likely to spread across a wider number of food retailers.

Interviewee 3 felt that because Lincolnshire is such a well known food-producing county (for vegetables and salads as well as more conventional arable and livestock crops) many of the City population feel that food issues should be left to the rural areas of the county. Many longstanding residents (interviewee 3) associate food production with 'old fashioned' and 'low skilled' employment and wish to disassociate themselves from it. The social path to 'development' is to move away from the agrarian heritage. Because of this, it was felt, many of those interested in local short food chains are county 'outsiders' who have brought their experiences from elsewhere.

In this regard, interviewee 8 noted that there are some tensions between conventional agriculture and community agriculture. Generally, the conventional agriculture community is fairly conservative in its views. This can lead to a

slowness to innovate. The idea of 'community' to conventional agriculture (outside of the notion of a village community) is quite alien as far as the food chain is concerned.

3.1.2 Need to tackle diet and obesity at the City level

From section 2.3 of this report, nearly two thirds of the Lincoln City population has 'excess' (overweight or obese) weight and only one third is deemed to be a 'healthy' weight. This issue is not expanded on further here, but we return to it in considering elements of a local food strategy in part 5 of the report.

3.1.3 Engaging the population.

Educating the local population about food is one of those ubiquitous issues that can improve local food systems, but commonly remains elusive in implementation. A number of interviewees stress the importance of educating children (and their parents) about food values for health and we return to a number of examples of good practice in this regard in Part 5 of this report.

There also is some potential for a community education in short food chain issues. The University of Lincoln, for example, hosts *permaculture* courses, with collaboration between the University and the City. The Grub Club, too, works directly with families, in their own homes, to help them understand about the impact of food on their physical and emotional health. Families receive bespoke support based on their needs through the Grub Club.

3.2. Broad issues: infrastructure

3.2.1 Lack of co-ordination between community, welfare, environmental and education food groups in the City

A number of interviewees suggested that there was quite a number of community groups doing good things within the short food chain (appendix 5), but many of them didn't know what each other was doing and they lacked co-ordination. Some interviewees also noted an unwitting duplication of effort or unnecessary competition.

This lack of co-ordination impacts on the setting up of new schemes as well. One interviewee (7) discussed the problems of setting up a Pay as you Feel Café in Lincoln along the lines of the Real Junk Food Project⁵: it is hard to find out what others are doing in the City; storage facilities are difficult, and a networking framework is lacking. It was felt that there was no shortage of volunteers to help run the project, and no shortage of offers of food, but it was hard to know how to build on existing community infrastructure.

Interviewee 2 noted that there has been some voluntary sector co-ordination in the County more generally. The SHINE⁶ organisation, for example, brings disparate groups together who have a concern for mental health. Other groups such as 'Integrate Lincolnshire', however, failed because VCS groups sometimes do not want to co-operate, fearing that they will lose their portfolio.

This lack of co-ordination (together with little certainty about funding) led interviewee 16 to feel that many of the 'social' food issues in the City ran on *crisis management* and needed to be more strategic.

⁵ <http://therealjunkfoodproject.org>

⁶ <http://www.lincsshine.co.uk>

3.2.2 Public Authority Involvement

Three interviewees (2, 11, 15) felt that it would be useful if there was a clearer statement from both the City and County Councils as to what their political attitude to food was. There is a considerable politics surrounding all food issues and public authorities need to be right behind a food strategy if it is to work – as they have been in Birmingham and Manchester and well as Brighton and Bristol for example, where City food policies are very well developed (interviewee 2).

Several interviewees noted an apparent absence, or at least low profile, of the local NHS⁷ in local food chain activity, where its potential to innovate was considerable. Others noted the lack of orchestration of public authorities in general, suggesting a particular disconnect between local authority public health and social services, and the NHS. Greater integration here could be achieved through the medium of a local food strategy.

There was also a clear feeling amongst interviewees that public authorities (education, health, local government) could take a much stronger lead in local procurement – despite the restrictions of ‘best value’.

3.2.3 Other Infrastructure

Three other aspects of local food infrastructure were given specific mention in the interviews. Firstly, *land availability* was considered an issue for local food production. In this regard, the possibility of identifying land for food growing at the planning stage, in larger housing schemes, was mooted. Interviewee 15 also suggested exploring the potential of ‘back garden’ produce schemes. We return to these ideas in section 5. One interviewee (7) also suggested that land availability contiguous to the City was often difficult to exploit because agricultural support through the Common Agricultural Policy unrealistically inflated land prices.

A second ‘other’ infrastructure issue was a perceived *lack of skills* to develop local food in all parts of the food chain, but in particular, local food growing in an environmentally benign way. Finally, there was felt to be a lack of appropriate *storage facilities* for donated fresh food (interviewee 7).

3.3 Broad issues: resources

3.3.1 Lack of access to agricultural support funding

Interviewees also discussed a perceived disadvantage for short food chain agriculture because it falls outside of the considerable support mechanisms of the Common Agricultural Policy (CAP). These payments to conventional agriculture were worth £2.9 billion in the United Kingdom in 2014 (Defra, 2014) and such levels of support, it was perceived, placed the development of short chain community agriculture at a considerable competitive disadvantage.

It has been suggested that urban food systems fall outside of the potential benefits of the Common Agricultural Policy (CAP) for two main reasons. The first Pillar of the CAP requires a minimum land area to be eligible and most urban production units are too small to qualify. The second Pillar of CAP is for *rural* development: urban areas do not qualify. As a European level policy, it does not offer much opportunity for *local* variation. As a food production policy, it gives insufficient attention to the other parts of the food chain (Pretty, 2008). Despite

⁷ United Lincolnshire Hospitals NHS Trust, Lincolnshire Partnership NHS Foundation Trust

this, urban food production does meet the EU definition of 'agriculture' (Curry *et al.*, 2014).

Some authors assert, too, that the CAP ignores both food security (John, 2006) and healthy food (Levi-Faur, 2011), the two principal thrusts of a growing interest in urban food chains, noted in Part 1 of this report. European policy, more generally, also ignores the role of food in urban regeneration (Weingaertner and Barber (2010), cultural policy (Lazzeretti *et al.* 2010) and climate change adaptation (Romero-Lankao 2012).

3.3.2 Need for a financial stream independent of the state sector

A number of interviewees suggested that longer term, a local food system should seek to be independent of simple transfer payments from the state. This would make the system more resilient. In the short term, state 'start up' grants would be useful, and within a local system, payment from the state for services (such as health therapies, environmental work, food poverty work and so on) is acceptable. Longer term involvement in other markets (food sales, energy conversion and so on) will be important, and certainty income from such sources will allow longer-term planning.

3.3.3 Need to tap into 'non-food' income in relation to the broader benefits of the food chain.

Related to this issue of state dependency on finance is a felt need to have a set of diverse and multifunctional income sources based around the benefits of the local food chain (see figure 3) rather than the food itself. This income streams from things such as drug rehabilitation, mental health, public procurement, care farming and the like will provide a broad base of income sources.

3.4 Detailed issues: food poverty

3.4.1 Food banks: operational issues

In terms of *demand*, some 99% of people who use food banks are on benefits. There are 120 organisations and agencies that make referrals to food banks (for example, housing officers, Jobcentre) and they all have a different emphasis. Such referrals, it was felt by one interviewee, were not a particular priority for GPs and dentists who could accord it a higher priority. In this pluralistic context, a number of clients go 'agency hopping'.

There are some people in the City population who are 'under-users' of food banks. The working poor, for example, tend to think that they are not eligible for such support. Food bank use by families also has diminished (despite a clear need) because, it was felt, of the stigma and fear that parents will lose their children through Social Services intervention (interviewee 16).

Much food bank use, it was felt, takes place between payments (income or benefits) when money temporarily runs out. Two interviewees felt there could be greater focus on food banks and the elderly. There seemed to be a relative paucity of food provisioning services for the elderly in Lincoln City and yet they are a significant core of the food problem. Commonly they are too proud to ask for food 'hand-outs'. They are hidden because pensions are universal and not targeted at the poor

As one food bank worker put it: "*We are trying to fish people out of the river downstream but we have no idea who is pushing them in upstream*".

In respect of *supply*, it was felt by interviewees that dependence on donations leads to vulnerability. The 'balance' of food cannot be controlled: there is a preponderance of dried and tinned food, which lasts longer but is not as nutritious as fresh food. But the latter requires chilled storage and is subject to more stringent hygiene ratings. Date stamped food can be problematic, too, as too much of it can arrive at once (bread was cited more than once here). The distribution of food *across* different food banks, too, can be uneven.

Tinned food in particular often can be problematic for recipients as they commonly require some form of heating or cooking and recipients may not have appropriate utensils and/or have had their gas and electricity cut off. It was noted by one interviewee that if recipients have no access to power for heating, they will go to takeaways for hot food, and this can exacerbate obesity problems.

In terms of *operation*, the two main food banks in The City of Lincoln, The Food Bank and Community Larder operate as short-term emergency food suppliers and they seek to discourage dependency. They discourage more than three referrals.

3.4.2 Variations in demand for food banks

As a result of the interaction of these operational issues, the demand for food bank services has been seen as variable within the City. *Lincoln Foodbank* suggests that there is a significant 'food bank' need in the City. In the past four years they have dealt with the following number of clients (*pers comm*, Foodbank)

2012: 1069 people
2013: 2054 people
2014: 2124 people
2015: 1301 people to October 2015

As November and December are their busiest periods (typically give 40% of the annual total) a significant increase by the end of the year is anticipated.

Lincoln Community Larder, on the other hand, has been operating in Lincoln since 1989. It has seen a noticeable drop in 'food bank' food demand over the past 2-3 years (a 26% drop in numbers between 2013 and 2014 – a trend continuing into 2015) coincident with a significant rise in donations.

3.4.3 Lack of a mechanism for those using food banks to 'pay back'

One of the perceived problems with the operation of food banks is the need to avoid food dependency. Some interviewees (4, 16, 7) suggested that it would be more productive, in solving food poverty but also broader associated social issues, if food-bank dependency were to be mediated through some form of reciprocation. Examples here were based around receiving food in exchange for work in another part of the local food chain (for example, working on a community food producing site, working in a community kitchen). A medium of exchange could be set up using 'vouchers' with exchange values (for example, one meal equates to three hours work) – some cities have developed local currencies for this purpose.

This has the potential of creating a 'virtuous circle' of food chain development but also is cost effective: if the food bank food is donated, then the labour given into the system for such food is a net resource to the system. This is seen as a more holistic or systemic approach to the local food system.

Others suggested, too, that 'pay as you can afford' cafes would not attract as much stigma as food banks might do.

3.5 Food waste

3.5.1 Means to ensure that all food waste is used either for human consumption or to be returned to the community

Interviewees saw this as a potentially significant issue for the City as retailers increasingly develop policies to recycle food waste. Whilst developing codes of conduct (for example, the Waste and Resources Action Programme (WRAP) Courtauld Commitment 2025⁸) currently remain voluntary, there was a feeling that increasing compulsion was inevitable. Constructive strategies were therefore now a priority to make best use of food 'waste' and surplus food.

Others also mentioned the significant proportion of food waste coming from individual households that commonly could not be put back into the food chain. Here, ideas for the use of truly 'waste' food centred on conversion of compost and energy and we return to these issues in part 5 of the report.

3.6 Detailed issues: policy change

3.6.1 A clearer focus to public procurement

This was popular amongst interviewees. It was felt that if local public organisations (schools hospitals, local authorities etc.) were able to dispose at least part of their procurement to local food, it would do much to change the eating habits and food cultures of those who were exposed to such regimes. It was recognised that this would not be straightforward from the point of view of existing franchise arrangements and for securing continuity of supply, but some incremental move in this direction would be useful.

3.6.2 Lots of 'small' regulations

A number of local rules and regulations was discussed in detail by different interviewees, that make it hard, they suggested, for small independent groups to compete (for example with supermarkets). These rules are based on 'accountability' but get in the way of localism. This can inhibit short food chain developments. Two examples illustrate their nature. Interviewee 15 has chickens but can't use the eggs in the public cafe because they are not registered with the Department of the Environment Food and Rural Affairs (Defra) (and therefore subject to regular checks). This is because they have only 20 chickens (Defra registration starts at 25). They can be sold as eggs to the staff and to the public but they can't be used in catering.

Interviewee 17 is 'off grid' in respect of water. The local authority Environmental Health Department is nervous about this because there is no precedent. The Department therefore tests the water once a month (even though nothing is ever found to be wrong with it), which is expensive for the interviewee (£150 a month for using 8 cubic metres of water). Others mentioned that public authorities tend to be risk minimisers because of the consequences of a 'bad press' if things go wrong. There should be much more encouragement, it was felt, to 'do things differently' on the part of local authorities and experiment a bit more.

⁸ <http://www.wrap.org.uk/content/courtauld-2025>

There is, in addition, a literature that has examined local food chains in relation to EU policy and regulation. The 2008 European Small Business Act, for example, covers all independent companies of fewer than 250 employees, which is 99% of all European businesses. The Regulations in this Act are perceived by many working in urban food chains unnecessarily to hamper small food-chain businesses (for example, dairy making, cheese making, abattoirs) and other activities in relation to food quality and food safety (Curry et al, 2014).

Competition policy, too, prevents the State from favouring some companies over others on any grounds other than 'competitiveness', as a means of ensuring 'best value' for taxpayers. This favours commercial rather than 'social' enterprise, where best value would be measured differently. It can often inhibit small local producers at the expense of more distant larger commercial organisations, which operate under considerable economies of scale. This also can damage local trust between state and community food producers (Weingaertner and Barber, 2010).

Whilst EU food safety policy, agricultural product quality and consumer rights policy have ensured high standards of both health and food safety for consumers, it has been noted by Kirwan *et al* (2013) that to achieve such standards, significant economies of scale are required to remain competitive and this works against smaller community-based organisations.

PART 4 – INNOVATIONS IN LOCAL FOOD

This part of the report is divided into three sections. The first examines good practice innovations in the short food chain in the City of Lincoln as a core for the development of a food strategy. The second briefly assesses the potential role that the University of Lincoln might have to play in a food strategy for the City. This merits a section because of the wide-ranging interest in local food in the University that came to light during the interview stage of the research, rather than because it is the origin of this report. The third section examines a selective range of good practice examples drawn from elsewhere (mainly other parts of the United Kingdom and Europe), filtered by the relevance that these have for addressing the issues identified for the City of Lincoln in part three of this report.

4.1 Good Practice Examples in the City of Lincoln.

In this section, we summarise some examples of the work that is already taking place in respect of components of the short food chain within, or impacting upon, Lincoln. This inventory is drawn from two principal sources: our own compilation of short food chain organisations in Appendix 4 (which has a larger number of organisations than are profiled here), and Lincolnshire County Council's (2015) annual County food and health review. This latter document itself reports on a cooking and growing programme at the county level, designed to address excess weight and reduce people's risk of diet and related co-morbidities. As it states (page 1):

"In line with NICE⁹ guidance 5, 6 it takes a community orientated approach to addressing poor dietary choices as these are strongly affected by social networks, families and entrenched cultural attitudes. Adopting a collective approach to healthy eating also allows the programme to address broader outcomes such as individual and community resilience and social isolation".

This county level programme is commissioned directly through Green Synergy within The City of Lincoln for growing (see below), and food and cooking work through Dimensions UK. Metrics for the 2014/2015 year (Lincolnshire County Council, 2015) note that the programme supported 15 cookery courses that together ran 87 sessions with a total attendance of 319 people during the year. The City also, through this programme, saw 10 peripatetic awareness events about cooking and growing and 39 community awareness events. It also contributed to the resources of five growing sites that recorded 52 volunteers working on them during the course of the year.

The programme is targeted at the most disadvantaged areas, linking with other services, and is mindful of the social benefits, as well as dietary benefits of good eating. The programme supports independent living. For example, the YMCA in Lincoln now has 16 volunteers with a range of issues including drug and alcohol dependence, who maintain its vegetable garden.

In compiling this 'good practice' we acknowledge that it is incomplete (we will not have tracked down everyone) and it will change over time as some projects have a fixed life or fixed funding. It is therefore offered as a set of examples of what is being developed (and what potential is being offered) on a continuing basis in the city. We use the short food chain diagram (figure 2), and its acronyms, as a framework for these examples, also recognising that most organisations have an interest in more than one part of the food chain. Where individuals are mentioned in the text, they have been done so only if their details are publicly available on

⁹ National Institute for Health and Care Excellence

the internet in the context in which they are named. These good practice examples are ordered, firstly, by category from figure 2 and, secondly, alphabetically within these categories.

Community Growing (CG) (and more): Age UK

Age UK Lincoln started the A-lot-'o'-men project in 2013 to help reduce social isolation amongst men over 50 (Age UK, 2013). Through promoting A-lot-'o'-men as a way to learn and share gardening skills, and meet likeminded people, the project has encouraged men to become more socially included in community activities. As a result of the project there is now a plot at Glebe Park Allotments where those involved can meet every Thursday and Friday to work together and develop new friendships (Daily Telegraph, 2013).

Community Growing (CG) (and more): Birchwood

Birchwood has been chosen as a Big Local area where a partnership of residents has been tasked with investing £1million in that community to address local priorities. Their green spaces subgroup has already expressed support for the nomination. One of their flagship projects, currently in development stage, involves community growing, particularly around food produce. There may be potential for developing a partnership project as part of this initiative. The new ***Birchwood Gardening Club***¹⁰ offers potential in this area, as does the ***Birchwood Children's Centre*** which has strong parent and children groups such as the ABC group and Mums on the Run.

Community Growing (CG) (and more): Boutham Park Restoration Project

Linkage Community Trust and City of Lincoln Council have been awarded £2.7 million in grant aid from the Heritage Lottery Fund and Big Lottery Fund, Parks for People programme, to restore Boutham Park. Costing a total of £3.7 million, the project includes developing a café, shop and horticulture centre as well as converting the stable block into an education centre and restoring key features of the 50-acre facility. The project also requires a major contribution by volunteers as part of the match-funding¹¹.

Community Growing (CG): Garden Organic's Master Gardener project

This is a national organisation with a presence in Lincolnshire¹², that offers local advice and support for growing food, in gardens, allotments and windowsills.

Community Growing (CG) (and more): Green Synergy

There is much information about Green Synergy in Lincoln¹³. It uses community horticulture, city farming and broader environmental initiatives to enable and enhance sustainable socio-economic and environmental well-being and development as well as to enhance community cohesion, mental and physical wellbeing (including tackling dementia), life skills, training and education. It thus pursues many of the multiple benefits of short food chains in figure 3. It has gathered data on community growing projects and residents' views towards them in the Abbey ward of the city.

¹⁰ <https://www.streetlife.com/conversation/2yldniorr26b2/>

¹¹ <http://www.bouthampark.co.uk/>

¹² <http://lincolnshire.mastergardeners.org.uk/find-a-master-gardener/gardeners-blogs/>

¹³ <https://greensynergylincoln.wordpress.com>

As examples, *Green Synergy* has worked with **Spring Kitchen** to develop an allotment project with The Fens Ward mental health rehabilitation unit in Lincoln. It is also transforming St Giles' Garden (behind Jubilee Hall, Lamb Gardens) into a community garden. This is developed in collaboration with St Giles' Parish Church and includes an intergenerational indoor & outdoor garden & play group. It also has a 2 acre site by the hospital to be developed as a city farm. It has converted the back garden of DevelopmentPlus into a community garden. This project has run taster sessions of gardening and has gathered support amongst the local community; at present the project has 10 members who are actively involved in community growing. *Green Synergy* also manufactures lip gloss and creams out of flowers. It has an active involvement with local primary schools and also has a mother and toddler group to educate about food in families.

Green Synergy was evaluated over the first two years of its life and found to have a range of benefits that conform to those outlined in figure 3 (Jackson, 2014)

Community Growing (CG) (and more): Lincoln Share (Abundant Earth Community)

This group is looking to take over a specific large kitchen garden next to a residential home, because it has not been looked after for 4 years or so. It is well established with infrastructure. This now has some funding for the project, working with 10 volunteers from **Addaction** who will be taught DIY skills to make the garden productive. This began development from March 2015. The Abundant Earth Community is seeking to be *multi-functional* in the community work that it does – exchanging work and goods, producing mutually, and so on.

Community Growing (CG) (and amenity): Liquorice Park

The Liquorice Park trustees are developing a management plan to involve the community in all aspects of the development of the Park. This has involved working with the following:

- *The Lincolnshire Co-op* Education and Volunteering Co-ordinator (Rachael Sampher) to help mobilise the local population.
- *TESS, a community interest company*, that helps to set up companies to work in the community interest (Phil Robinson)¹⁴. They have helped to restore the mosaic in the park, for example.
- *The City of Lincoln College* is working in a voluntary capacity to restore the steps in the Park.
- *Lincoln Conservation Group* also is working on the site (Nick Dunnett)¹⁵.

The management plan is also seeking to work with school children from St Faith and St Martin Church of England Junior School to develop a more systematic approach to both food growing and to the environment and positive environmental management. There are proposals for specific food growing projects for the school children. The Park's main *food crops* comprise long established bush and tree fruit, There are also walnut and hazel trees and horseradish.

¹⁴ <http://www.tess-cic.org.uk>

¹⁵ <http://www.lincolnconservationgroup.org.uk/about.html>

Community Growing (CG) (and more): Methodist housing association residential home for the elderly on Skellingthorpe Road

Here, volunteers grow food in the grounds and prepare it within the home. This began as a project in the autumn of 2014.

Community Growing (CG) (and more): The Moorland Neighbourhood Plan 2015-18

This Plan has both Cleaner & Greener community and economic wellbeing as local priorities. There is an established Neighbourhood Board in that area, which brings together residents and organisations to work in partnership on projects that address the local priorities. As part of the Neighbourhood Team that supports the Board and Neighbourhood Planning process, there is a Community Caretaker who is able to work proactively in communities on cleaner & greener projects.

Retail (RSH) (and more): Food for Thought

This was an event held at the University of Lincoln's Brayford campus on 5th May 2016. Students from various secondary schools around the county are being encouraged to design, produce and distribute, through a market stall, their own Lincolnshire food (Select Lincolnshire, 2016). Additionally, they are being given the opportunity to present their business plan and engage with interactive workshops. This pilot project is offering students the opportunity to develop their understanding of local food in an interactive and enjoyable way. Moreover, as a result of being mentored by local businesses, students are able to gain first hand knowledge and experience of running a small food business in and around the county, consequently helping to increase various personal and business skills including communication.

Retail (RSH) (and more): Morrison's Supermarket

Morrison's operates 'community' programmes in various parts of the food chain. It operates a 'let's grow' scheme for schools¹⁶ and also an academy of food: *Lets Farm, Let's Fish, Let's Bake*. It also has committed to give all of its 'safe' waste food to food projects¹⁷

Preparing And Cooking, Education (PCE) and more: the Grub Club

The Grub Club aims to work directly with families, in their own homes, to help families understand about the impact of food on their physical and emotional health. Families receive one to one support about cooking, eating and nutrition based on their needs. In addition, ***Priory City Academy*** (where the Grub Club Family Centre is based) has donated 3 large allotment beds within the school, to encourage the families to grow their own produce. At the time of writing, it was seeking community members to help cultivate the beds.

Preparing and Cooking, Education (PCE) and more: Hill Holt Wood

Hill Holt Wood (HHW) runs '*Branching Out*' which is about food preparation. With initial funding from Partnership North Kesteven (the old Local Strategic Partnership) the project focuses on older people and young people. In the

¹⁶ <https://your.morrisons.com/Kids-and-Baby/LetsGrow/>

¹⁷ <http://www.dailymail.co.uk/news/article-3298353/Waste-not-want-not-Morrisons-supermarket-donate-unsold-food-community-groups.html>

project, young people learn how to cook for older people (in their own village hall or at HHW) and how to serve at table. In return, the older people tell stories of their youth. HHW charges the older people, because money is not seen as a problem for this social group; it is social contact that is valued. HHW also grows much of the food for this project. The project goes from village to village and runs twice a month.

HHW would like to extend this to the young people growing food in the back gardens of old people.

Eating: Welfare (EW) (and more): Lincoln Market Kitchen

This has been a collaboration between The City of Lincoln Council and Lincolnshire County Council Public Health designed to offer vulnerable, city residents a safe place where they can learn about cooking good healthy food on a budget as a means to help address the issues of poverty and deprivation in the city (District Councils' Network, undated). Project funding came to an end in September 2015. It has achieved its aims by converting several of the stalls in Lincoln Central market into a fully functional kitchen where interactive workshops and one-to-one sessions can be run (Lincolnshire Echo, 2014, The Lincolnite, 2014). Since it was launched in June 2014 the Market Kitchen has provided residents with the opportunity to socialise whilst gaining new skills, thus helping to increase their health and wellbeing.

Eating, Welfare (EW): Lincolnshire Businesses for Breakfast is a charity that supports local primary schools with breakfast food provision. It supports all schools that ask for it in the City; these are the following:

Bracebridge School Breakfast Club
Bishop King Breakfast Club
Monks Abbey Breakfast Club
The Great Escape Kids Club
Sir Francis Hill Cp School Breakfast Club
Chad Varah (Myle Cross) Primary School
Ermine Junior Breakfast Club
The Lancaster School Breakfast Club
St Peter At Gowts C E Primary School
Hartsholme Primary School
St. Christopher's School
Woodlands Infant School
Birchwood Junior School
Leslie Manser Primary School
Our Lady Of Lincoln Catholic Primary School
The Meadows Primary School
Lincoln Carlton Academy

Eating: Welfare (EW) (and more): Super Kitchen (Edumonia)

This is a successful community café, currently based in Gainsborough but seeking to move into Lincoln. Super Kitchen¹⁸ is the national movement and there are 25 of these currently in Nottinghamshire. The café takes surplus food from *Fare Share*, local supermarkets and growers and uses it to set up community based social eating venues where people can get a healthy meal for a small donation of money or time. A recent evaluation of Super Kitchen in Nottinghamshire (Luca, 2015) found it to have particular value in developing social cohesion and ethical

¹⁸ www.superkitchen.org

consumption practices. It also was found to be better than food banks as they were not so stigmatised and would allow people to eat free if necessary, but also allowed people to pay modest sums if they could afford it.

Eating: Welfare (EW): University of Lincoln Food Bank Project

This is a collaborative project between the University of Lincoln Chaplaincy (the contact point) and various University faith groups. The project collects food for the food banks and shelters in Lincoln, and raise awareness about these charities around campus. During the academic year 2015/2016 the project has had 8 donation collections. In the university library, for example, has been a collection box where staff and students have been able to donate any non-perishable foods goods they do not want. The project is not seen as a permanent solution to addressing the issue of food poverty but it is making a positive contribution.

4.2 The Possible Role of the University of Lincoln and the Showground in Developing a Local Food Strategy

In interviews with various local food stakeholders in the City, the University of Lincoln and the Showground were perceived to have a number of potential roles in the development of a local food strategy for the City. The interests of the University can be divided broadly into three areas as in figure 23 below: direct action; academic interest, and resource potential and this informs the structure of this section.

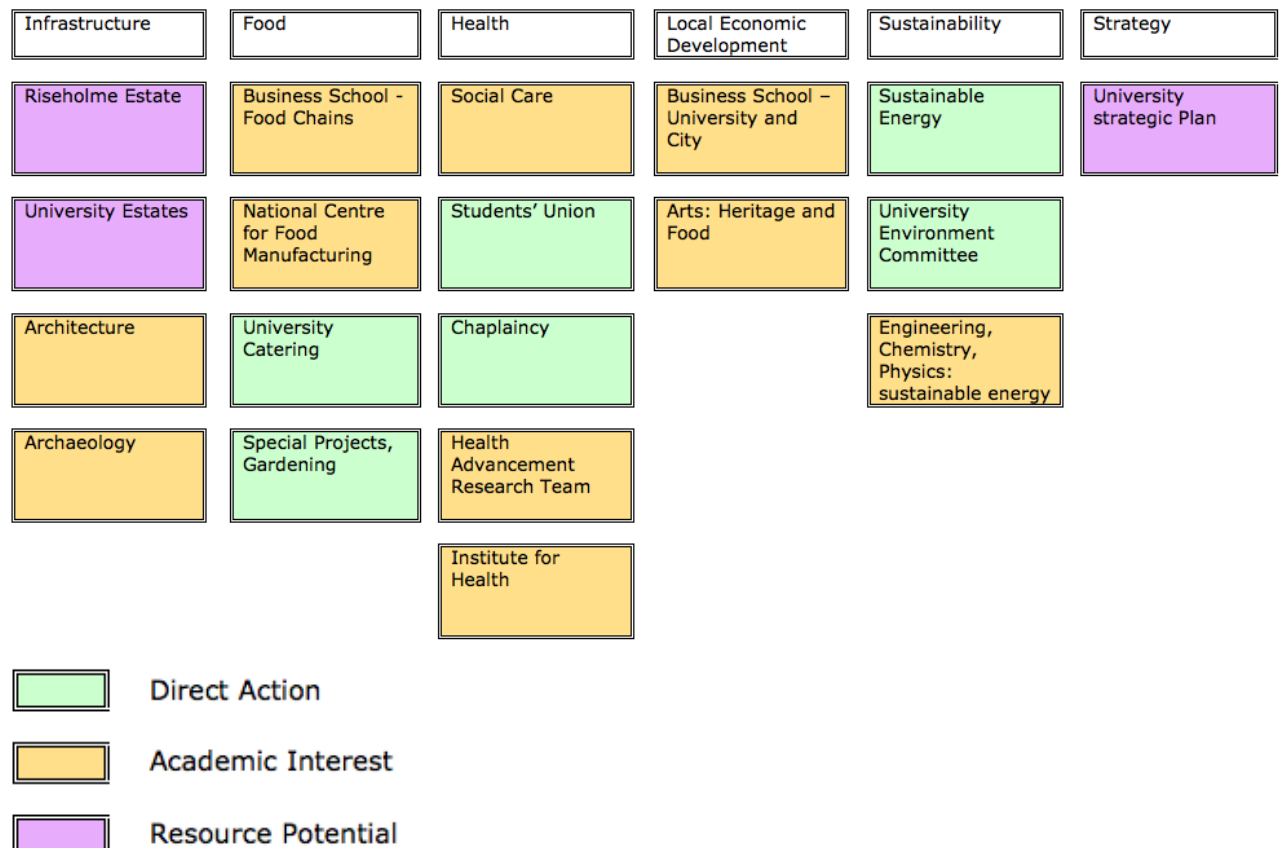


Figure 23 – Areas of interest in the local food chain: University of Lincoln

4.2.1 Direct Action

A number of action projects are either actively under consideration or being implemented within the University.

- The '*Apples' project* is taking place in the student village. An historic nursery in Leicestershire holds a large number of old Lincolnshire varieties and these are being reintroduced on the Brayford campus using student volunteers. Walled garden varieties, for example, are being planted by bike shelters with south-facing backs. The fruit will be ready for students when they arrive in September each year. This system is now very extensive at places such as Loughborough University.
- Membership of *The Soil Association's "Food for Life" scheme* is currently under consideration by the University catering manager. This is a set of guidelines for institutional catering in general. It includes guidance on the local provenance of the food served. This is well developed at Lancaster University, for example. *The Sustainable Restaurants Association* has a similar scheme.
- Attempts are being made at the University to develop *local produce* in the University cafes. Currently vegetables come from Lancashire and meat from Staffordshire, for example. But there is a perceived need to buy more local produce to get the message across about local food miles. Plymouth University is currently a national leader in local food sourcing. Fair Trade food and other goods are now well established in the University but not exhaustive.
- Volunteers from the Students' Union, are developing a *roof terrace garden* in the Architecture Building. Fruit and vegetables are being grown to be used in the University food outlets or given away to students. This has been sanctioned by the University Environment Committee.
- The Architecture department of the University runs a *summer school on sustainable development* and would welcome the opportunity to develop live projects as part of this.

4.2.2 Academic Interest

Figure 22 indicates clear academic interests in the short food chain and food more generally at the University. The nature of these interests is not expanded upon here save to say that food is a strategic academic priority for the University but also, short food chains have a much wider concern than just food, as the benefits from short food chains, outlined in figure 3, testify.

4.2.3 Resource potential: Riseholme and the Showground

Discussion in the interviews commonly made reference to the location of the University's Riseholme campus and farm in respect of its proximity to the City and the Lincolnshire Showground. Both were felt by several interviewees to offer an excellent resource 'potential' for the development of local food projects and even systems. A 'sustainability' plan exists for both Riseholme and the Showground and this could be built on in the food context. It was felt that Riseholme and the Showground offered real potential to become national leaders in the development of a 'sustainable campus', particularly if they became linked.

Renewable energy

It was suggested that Riseholme or the Showground would make excellent locations for renewable energy creation through an *anaerobic digester* (AD) not only for surplus food from within the City (in line with WRAP priorities) but also for waste food (post-consumption) and garden or plant-based residue waste. The latter already is collected by the City Council and the former could be (see Part 5). The St George's Lane Farm site at Riseholme would be a suitable location, and this could be developed in collaboration with two other digesters locally – the Branston Potatoes one feeds directly into the gas grid. WRAP currently has a fund for both the development of business plans for such a venture, but also will make contributions to the construction of such a facility. These funds are restricted to farm businesses, and both Riseholme Park Farms and the Showground are eligible.

Individual interviewees note the potential for the collection of commercial food waste for AD, for example, from Stokes Coffee and Walkers Crisps. One suggested that a Riseholme/Showground AD could act as a hub for public authority waste too. For example, a road verge system could be developed (commonplace in Germany) where the low density biomass of grass verges can be fed directly into AD. Currently the cost of an 'on-farm' AD plant would be in the order of between £1.5 and £2 million (see Section 3.3 for fundraising).

Riseholme also was mentioned as a possible site for large-scale *green-based composting* using the same raw material inputs but also making use of the residue that comes out of anaerobic digestion. Some revenues generated from such a resource could be fed back into local food projects.

Wind turbines already exist at the Epic building at the Showground and these could be developed more widely (possibly as part of the renewable energy research and development at the University) on the campuses as they have adopted a technology compatible with siting near to Scampton airbase. It was noted too, *solar panels* could be developed at Riseholme and the Showground, not only on buildings, but appropriately placed on the ground and on the Riseholme lake. The Carbon Trust already has done a feasibility study into the development of *biomass boilers* at Riseholme (again, these already are installed at the EPIC centre at the Showground). Such biomass could embrace farm waste, coppiced willow and the like.

Some income from these could be returned to the local food system but also energy could be used directly within the local food chain, for example for food storage refrigeration and heating greenhouses. We discuss how capital costs for such developments could be secured, in section 2.8.

Sustainable Technologies

In addition to the development of sustainable energy, the campuses could be used for live projects in other sustainable technologies, according to interviewees. Of particular mention here was the possibility of the development of *zero carbon housing* and other housing innovations, led by the Department of Architecture at the University. Riseholme has a ready-made infrastructure for a 'community', and the lake on the campus offers clear potential for a reed bed sewage system.

Other interviewees noted the potential for the development of *sustainable transport* modes. Certainly the campuses are close enough to the City for access by cycling and walking. Discounts could be offered to those using Riseholme and

Showground services for those arriving by these means. For 'load carrying', the development of sustainable energies would provide a good platform for the development of *electric powered vehicles* possibly, suggested one interviewee, using 'old' technologies such as old milk floats.

Radical food innovation

Some interviewees noted that Riseholme and the Showground could provide useful complements to the 'agri-business' work of the University by being a site for more *radical food innovation*. Noted here were things such as *novel crops* (for health as well as nutrition) and novel production techniques such as hydroponics, aquaponics and vertical gardening. These tend to be under-researched within conventional agriculture because they have a concern for commercial viability on very small land areas. Developmental projects in relation to urban gardening also were mentioned as worthy of development on the site.

Retail

It was suggested, too, that the campuses would be a suitable location for an '*alternative*' garden centre. This would focus on food growing specifically (the sale of vegetable, fruit and salad plants), but also would have a *café* (possibly a pay as much as you can afford café) built around local seasonal food. Local food produce also would be available (commonly from community sources) and other local 'artisanal' goods could be sold. It was suggested, too, that such a retail outlet potentially could become a regional centre for the *sale of sustainable technologies* more generally. The outlet could provide *employment* for a range of people (see below). Loose precedents were mentioned in the Tebay and Gloucester motorway services which are run on sustainable principles using local food¹⁹.

It was proposed, too, that such a centre could be used for the development of practical education courses for growing, cooking, health and sustainability.

One suggestion was that this might be termed *The Edible Garden Centre*.

Social Welfare

One idea put forward in this regard is that Riseholme and the Showground could be developed as a *National Centre for the Reintegration of Forces Veterans*. It could provide a 'staging post' for those leaving the forces (possibly making use of student resident accommodation and, longer term, Lawress Hall), offering the development of skills in all parts of the food chain (with a possible focus on growing) but also in the caring professions. As an example, forces personnel could develop both food growing skills and those of custodianship of those in drug rehabilitation, those with mental health problems or those with physical disabilities. Design skills for special needs (for example raised beds) could be part of the training in this context. These could then be linked in to other parts of the local food system both in the City but more widely. 'Back garden' food production businesses, for example, could be established from such a training base.

It was also mooted that the development of eco-housing at Riseholme and the Showground (see above) could take place in tandem with novel forms of tenure in the use of such dwellings. Examples from elsewhere suggest that part of the

¹⁹ <http://www.westmorlandfamily.com/about-us/our-story>

rental of such housing could take the form of an obligation to work a certain number of hours in various parts of the food chain.

Archaeology, land and landscape

The parklands and buildings at Riseholme (but not the farm) are listed, because they were landscaped in the 19th Century. The campus part of Riseholme is generally underused – experimental beds, the walled garden and so on – and a number of the buildings face an uncertain future. There is much potential for developing the campus in an environmentally sensitive way.

The archaeological value of much of the campus, too, is considerable, and whilst this might restrict 'aggressive' development of the site, it offers considerable potential for archaeological education to be integrated into the 'sustainability' ethos of the campus.

PART 5 – A FOOD STRATEGY FOR LINCOLN

The overall purpose of this strategy is to pursue as many of the multiple benefits of local food chains as possible (figure 3) through addressing the two core issues associated with food – *food security and health* – that were outlined in Part 1 of this report. We do this by making specific proposals of relevance to all parts of the food chain (figure 1) but mindful that they should be as integrated or systemic as possible, of the whole food chain: each should relate to, and have a positive impact on the other, as part of a larger view of the local food chain as a system.

In making proposals in this context, we also seek to address the core issues of Part 3. But we do this in the light of a significant number of good practice examples already taking place in the City, outlined in section 4. Any food strategy must build on these existing strengths, rather than thwart them.

5.1. Food Cultures

5.1.1 Starting in school

Each school in the City should seek to develop an allotment adjacent to the school to be developed by students and their parents working together and also seek to involve 'older people' possibly from local care homes or other forms of sheltered accommodation. The land used could be part of the school playing field or the care home or both.

These allotments should be used as vehicles for various learning processes within the curriculum. It was suggested in the interviews that such a City-wide scheme might be called *Down to Earth*.

Armed forces rehabilitators (see section 5.1.6 below) to provide the skills and the EPIC Centre at the Showground could be used to orchestrate the schemes.

Benefits to achieve (figure 3): providing education; a medium for learning and other social skills; promoting physical health; changing lifestyles

Existing good practice in Lincoln: Sir Francis Hill Primary School (<http://www.lincolnshireecho.co.uk/Lincoln-pupils-expert-advice-creating-allotment/story-15609254-detail/story.html>). Priory City Academy (in association with the Grub Club).

Good practice elsewhere: the Royal Horticultural Society (RHS) runs a campaign for school gardening (<https://schoolgardening.rhs.org.uk/school-stories?page=1>) and funding is available from a number of different sources, both state and voluntary (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7594/2203634.pdf). There are also a number of competitions for school allotments, and advice and costings on how to set them up

(<http://www.theguardian.com/teacher-network/zurich-school-competition/schools-communities-reputation-allotment-gardening>)

Parts of the food system: growing/production, but also potentially the whole of the food system as a learning resource.

5.1.2 Educating about food

There are already good systems in place to educate people about cooking and healthy diets. The Grub Club and Hill Holt Wood in particular offer good services and these should be developed more systematically in the City.

Benefits to achieve (figure 3): providing education; a medium for learning and other social skills; promoting physical health; changing lifestyles.

Existing good practice in Lincoln: The Grub Club (<http://familyfocuslincolnshire.org.uk/grub-club/>) : Hill Holt Wood (<http://www.hillholtwood.co.uk>)

Good practice elsewhere: Stoke on Trent City Council is educating local fish and chip shops about how to cook more healthily (salt reduction, healthier oils, semi-skimmed milk). Some 50 of the 53 fish shops in the City have joined the scheme.

<https://responsibilitydeal.dh.gov.uk/salt-and-fat-reduction/>

Thurrock District Council, too has introduced healthier staff restaurants (lower fat and salt and more fresh food) and has replaced vending machines with fresh fruit. Calorie and nutritional information is now displayed and there are more water coolers.

<https://responsibilitydeal.dh.gov.uk/thurrock-council-case-study-h4-healthier-staff-restaurants/>

The Eat Out, Eat Well Awards were developed in Surrey for customers to make informed healthy choices whilst eating out. Healthy options and changed cooking techniques on the part of restaurants are then judged and duly awarded. Healthy menus have become more accessible as a result.

<https://responsibilitydeal.dh.gov.uk/eat-out-eat-well/>

Love Local in Peterborough is a project tackling health inequalities through educational courses on food nutrition, food growing, and cooking skills. It targets deprived areas. There are groups for ideas sharing and community events featuring local food. It also has extended into working in schools in a similar way.

<http://www.pect.org.uk/working-with-us/local-communities/love-local>

The Kitchen, in Great Moor Street, Bolton is a multifunctional project where communities can eat local, healthy food at an affordable price, buy locally grown food at affordable prices, learn (through outreach education programmes) about healthy eating, and partake in the veg exchange – this is where excesses or spare home grown produce can be exchanged for vouchers to spend in the Kitchen café.

<http://thekitchen.coop>

Part of the food system: potentially all parts

5.1.3 Food in public open spaces

Public awareness of food can be increased if it is seen to be growing more prominently. The City Council should consider growing food rather than amenity

of ornamental plants and trees in all public open spaces. This has been seen to be successful in Brighton and Hove where it has even been extended to the custodianship of sheep on council estate land by the residents of these estates.

Benefits to achieve (figure 3): providing education; a medium for learning and other social skills; promoting physical health; changing lifestyles.

Existing Good Practice in Lincoln: none detected.

Good practice elsewhere: there is a good discussion of the benefits of this and how to do it for Oakland in California here:

(<http://oaklandfood.org/2013/07/15/growing-food-in-public-spaces/>).

In the UK, Brighton and Hove provide the most systematic approach and there is even a planning advice note in their Local Development Framework that makes open space food growing a consideration in new housing developments

(http://www.brighton-hove.gov.uk/sites/brighton-hove.gov.uk/files/downloads/ldf/PAN6-Food_Growing_and_development-latest-Sept2011.pdf).

The Permaculture Association has done much to develop food growing in public parks and other public open spaces in Brighton (if you are going to plant a flower, make it a flowering vegetable, if you are going to plant a tree, make it a fruit tree) and there is even sheep grazing on urban amenity land – residents can apply to become shepherds or Lookers

(<https://www.brighton-hove.gov.uk/content/leisure-and-libraries/parks-and-green-spaces/lookers-volunteer-shepherds>)

Parts of the food system: production/growing

5.1.4 Public procurement

Cultural change can be driven 'from the front' by public authorities, if they adopt 'local food' policies in their institutional catering. The most common barrier to this nationally is existing sub-contracts to private catering companies that are quite often governed by price rather than food quality. Most of these were set up under 'best value' policies, but it is increasingly recognised that "cheapest" does not necessarily mean 'best value' (<http://www.theguardian.com/sustainable-business/food-blog/uk-government-food-procurement-plan-buy-local>).

Despite this, inroads can be made into public authority catering gradually, with contract reviews designed to 'favour' local food wherever possible. If public authorities eschew the importance of local food, others will not follow. Opportunities should be sought wherever possible. Some 60% of public sector food procurement spend is in education establishments (Defra, 2014b)

Benefits to achieve (figure 3): learning, providing education, creating employment, shortening food miles, reducing environmental impact.

Existing good practice in Lincoln: none uncovered.

Good practice elsewhere: The Current Government's 'Plan for Public Procurement' (Defra, 2014b,

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332756/food-plan-july-2014.pdf) has, as two of its four aims, "Tackling health

issues by enabling people to eat well across the public sector, including in our hospitals, and contributing to wider societal wellbeing” and “helping our school children to value their food by knowing where their food comes from, and how to cook healthy meals”. It also explicitly includes food producers, distinct from farmers. Prime Minister Cameron states in his foreword that “all food that can be bought locally, will be bought locally”.

Sussex Partnership NHS Foundation Trust has developed a local market garden hub to develop and extend their range and season of foods. The hub now collects food from smaller suppliers and now supplies a range of other public sector bodies, including Sussex and Brighton Universities

Parts of the food system: retail, preparing and cooking, eating.

5.1.5 Helping the disadvantaged

Many of the benefits of local food chains (figure 3) are associated with improving health, reducing disadvantage and deprivation, as well as offering skills. These associations were common in the City of Lincoln survey. A number of interviewees noted that food growing is a great vehicle for people with learning difficulties or who might have problems with social skills where repetitive work can be soothing. It was also seen as a valuable vehicle for the homeless and those in drug recovery, for example.

Some interviewees also saw the local food system as a means of getting the disadvantaged to work together as a social focus in certain parts of the City. Volunteering can be used as a vehicle for community cohesion.

As an example, there is a group of handicapped deaf people in the City who would be keen to learn how to grow food. (see also Tess – a community interest company that deals with disabled people’s rehabilitation - <http://www.tess-cic.org.uk>) Learning functions could take place at Riseholme and the Showground as part of a learning and social community. In general, different parts of the food chain can be used for a range of rehabilitation programmes.

Benefits to achieve (figure 3): promoting physical health, promoting mental health, changing lifestyles, drug rehabilitation, linking other forms of deprivation.

Existing good practice in Lincoln: Green Synergy exists to create therapeutic environments through community horticulture and city farming to enhance mental and physical well-being making use of eco therapies.

<https://greensynergylincoln.wordpress.com>

The Grub Club works directly with families, in their own homes, to help families understand about the impact of food on their physical and emotional health (specifically introduced to tackle obesity and diabetes). Families receive bespoke support from qualified nutritionists, based on their needs.

<https://grubclub.com>

Good practice elsewhere:

Care farming is well-developed in the Netherlands. Typically, those who use care farms need quite a lot of guidance - people who are mentally challenged, people with psychological problems, people with psychiatric demands, (ex) prisoners and (ex) addicts, youngsters with problems, people who have difficulty with access to

the labour market, elderly who want to be looked after in a quiet, trusted surroundings.

http://www.carefarminguk.org/sites/carefarminguk.org/files/Nuffield_Report.pdf

In Bristol, The Severn (sowing the seeds of hope) Project was set up by one person on a disused plot of land in the centre of Bristol to grow salad produce as a means of helping recovering drug users to gain skills and to work in an outdoor 'growing' environment. To begin with he had nothing and even the land was just 'borrowed' rather than owned in any sense (often known as guerrilla gardening). Eventually the City Council agreed to a short term lease for the project and because it was poor quality land, topsoil was imported. Today the project supplies about 30% of Bristol's salad consumption through 80 local partners and has developed satellite growing areas including a local prison. Income from the sale of food goes back in to the business to extend the growing areas and to broaden the base of vulnerable people who can be helped.

<http://www.thesevernproject.org>

The Whitney Yellow Submarine café is run by people with learning disabilities and won the Witney restaurant of the year in 2015

(http://www.oxfordmail.co.uk/news/14223759.Witney_charity_caf_praised_for_five_star_service/)

Nourish is a social enterprise which runs a farm at Stanmer Park and the 2020 Cafe at Brighton General Hospital in the Mental Health Wing. It was set up nine years ago specifically to give opportunities to vulnerable adults and those with mental health issues and learning disabilities. The volunteers at the cafe and the farm learn social and practical skills and for some, valuable professional qualifications.

<http://www.rosyleproductions.co.uk/gallery/nourishand2020cafe/>

Botton Hall was created in the 1950s (with generous donations from the Macmillan family) to offer full community living for adults with learning disabilities and other special health needs. Over 230 people live there and its livelihood is based around growing organic food (vegetables and fruit and a walled flower garden). Each person is able to work to their own ability. In support of food production, there is seed processing, food processing (juices, jams, cheese, yoghurt) and a bakery producing organic bread and biscuits. This is all complemented by community assets (housing, health centre, a village hall, café, shop, church, and a school) and a structured social life with music and drama at its core.

<http://www.cvt.org.uk/botton-village.html>

Parts of the food system: potentially, all parts

5.1.6 Reintegrating the armed forces

It was suggested by one interviewee that Riseholme offers great potential to be developed as a national centre for the reintegrating of armed forces personnel into civil life. It has an appropriate physical infrastructure (halls of residence accommodation, a physical working environment) well suited to this purpose.

The term reintegration is used to be distinct from rehabilitation which, in armed forces terms usually means recovery from physical or mental injury sustained during the course of conflict. Reintegration is a term used by the United Nations (http://unddr.org/what-is-ddr/introduction_1.aspx) and is concerned with offering support networks for ex-combatants to help them reintegrate into civil life and secure meaningful livelihoods. We have found no examples of this kind of service elsewhere in the United Kingdom: there is a focus in reintegration for those with specific mental health problems, but for more general social integration, the focus seems to be on guidance and 'self-help' notes (<http://www.army.mod.uk/welfare-support/23590.aspx>). The Army Welfare Service (<http://www.army.mod.uk/welfare-support/welfare-support.aspx>) does offer advice to individuals.

Benefits to achieve (figure 3): promoting physical health, promoting mental health, changing lifestyles, social learning, creating employment, providing education.

Existing good practice in Lincoln: none

Good practice elsewhere: none of this type

Part of the food system: all parts of the food chain

5.1.7 The food chain as part of community service

Working in the food chain could be part of community service activity for young offenders and even a transition from prison back into the community. Some interviewees suggested, too, that the unemployed could be given basic benefits in exchange for working in part of the local food system and then increasing this sum as they progress to skills acquisition and more responsibility. Progression and exit strategies will be important. They could progress, for example, to minimum wage to living wage to a market job. This is an exit strategy.

This could develop into a kind of social conscription: public services with the development of skills and discipline, and something at the end of it that is of value in 'civil' life.

Benefits to achieve (figure 3): Potentially all benefits.

Existing good practice in Lincoln: none uncovered

Good practice elsewhere:

In Southern Arizona, USA, the Courts are ordering community service, specifically directed to working in community food banks:

<https://www.communityfoodbank.org/get-involved/court-ordered-community-service>

In South Africa, community service in nutrition is compulsory in several university courses in dietetics and human nutrition:

<http://www.sajcn.co.za/index.php/SAJCN/article/viewFile/120/114>

In 1999, the province of Ontario made it mandatory for high school students to complete a period of 40 hours of community service as a condition of graduation

(including food projects) and this commonly had as positive impact on their subsequent life involvement in civic engagement:

http://www.imaginecanada.ca/sites/default/files/www/en/library/kdc-cdc/wlu_mandatoryvolunteering_feb07_2007.pdf

Both the Labour Party for the young:
(<http://www.theguardian.com/education/2009/apr/12/young-people-compulsory-voluntary-work-community-service>)

and the Conservative Party for the unemployed (<http://www.bbc.co.uk/news/uk-politics-31500763>)

have proposed some form of mandatory community service over the past decade.

Part of the food system: all parts

5.2. Infrastructure

5.2.1 Co-ordination

A number of interviewees alluded to problems with most issues around community agriculture being that government works in silos (or even bunkers) and the main issues to do with community food are more systemic or integrated. This departmental division extends to local government as well as national government. But, according to the surveys, working holistically, when there are problems in one domain there are often solutions to be found in another domain and if they are harnessed together, problems can be resolved.

It is necessary to have a systems thinking approach to local food. Much could be learned from the study of ecology, which is the study of complex systems and how they work together. It is about interactions. Look at local food through a multifunctionality lens.

The implementation of this strategy requires co-ordination and orchestration. It is suggested that the Lincoln Café be developed for this purpose. A full 'food council' along the lines of the Bristol one would be good, with 'key players' from a number of sectors.

Benefits to achieve (figure 3): potentially all

Existing good practice in Lincoln: the Sainsbury's 'Love Food hate Waste' bid in October 2015 illustrated how such a system might work.

Good practice elsewhere: Zack Goldsmith has put £250,000 of his own money into setting up FARM as an alternative to the NFU for smaller and more innovative farmers who want to be more community orientated.

(<http://www.conservativeanimalwelfarefoundation.org/431-2/>) and (<https://corporatewatch.org/content/national-farmers-union-history-and-membership>)

Part of the food system: all parts

5.2.2 Back garden growing schemes

There is a small amount of this at present , associated with Brattleby Farm, just north of Scampton:

<http://yurtinthewoods.weebly.com/brattleby-farm.html>.

This has the potential to be developed systematically. A subscription service could be developed so that people could commit to buying regular produce from the back garden scheme as a means of funding it. Back garden food growing can solve problems for older people who are no longer able to tend their gardens. It also leads to social engagement to combat isolation. The Boultham Park area offers much potential in this respect.

Benefits to achieve (figure 3): Promoting community cohesion, changing lifestyles, creating employment, shortening food miles, as a medium for learning other social skills.

Existing good practice in Lincoln: North Kesteven DC has given a contract to Hill Holt Wood (HHW) to manage the back gardens of elderly people and this could have been used to grow garden produce rather than just mow the lawn. A lot of villages have former council housing that has large gardens because they were originally built with agricultural workers in mind. Now many are lived in by elderly people but still have a third of an acre of land at the back. HHW put fruit bushes in the back garden of an elderly person in Branston and she picked them using her Zimmer frame. The Co-op has said that if this fruit could be turned in to jam they would sell it in their shops as a locality product. This solves the problem of older people looking after their garden. This illustrates well the multiple benefits of a local food system.

Good practice elsewhere: Curtis Stone, who lives in British Columbia, began producing food in other people's back gardens. With income from this he then was able to buy a small plot of his own land to produce food and to teach others about growing. He now claims to generate over £50,000 a year from his third of an acre. His story is here:

<http://www.goodshomedesign.com/urban-farming-growing-for-profit-75000-on-13-acre/>

Stroud community farm has a successful subscription service:

(<http://www.stroudcommunityagriculture.org>)

Back garden growing schemes are well developed in Totnes in Devon:

(<http://www.transitiontowtotnes.org/groups/food-group/gardenshare/>)

and a number of other schemes and guidelines can be found here:

(<http://www.theguardian.com/money/2011/sep/02/garden-sharing-growing-vegetables>)

Part of the food system: growing/ producing.

5.2.3 'Vacant land' gardening

Vacant land within the City could be used for short term gardening purposes. Sometimes known as 'guerrilla' gardening because of its opportunistic nature, this can nevertheless be done with the blessing of all parties, whilst land is seeking alternative uses. In some places these areas have been developed as 'get on my land' hubs where the general public is encouraged in to 'have a go', even on a casual basis.

Benefits to achieve (figure 3): combatting food poverty, linking other forms of deprivation, as a medium for learning other social skills, promoting community cohesion.

Existing good practice in Lincoln: none uncovered.

Good practice elsewhere: the Severn Project in Bristol has undertaken this form of development - see section 5.1.5 above. There is a range of practical advice about guerrilla gardening here, together with a wide range of examples:

<http://www.guerrillagardening.org>

Part of the food system: growing/producing, retail.

5.2.4 Novel housing schemes

These could be based around the skills of the *University Architecture Department* with experimental technologies developed as live projects, at Riseholme/the Showground. These could include the development of eco-housing with some parts of tenures being tied to working the land. This is an area of interest of the *Lincolnshire Rural Housing Association* (and the County Council Economic Development Office) who could offer planning, legal and tenure skills.

Benefits to achieve (figure 3): as a medium for learning other social skills, providing education, promoting community cohesion, changing lifestyles, creating employment, reducing environmental impact.

Existing good practice in Lincoln: The City Council is now talking about a mixed use development where people both live and grow their own food. The Abundant Earth Community has put a proposal to the City for an area of land behind Morrisons (the western growth corridor – Squibids Land Fill Site) for such a purpose. This would be a mixed use co-operative providing services for the City, including cash crops. Students in the University of Lincoln Architecture Department have helped with this design. These students also have done a master plan for Liquorice Park in earlier years. The City's Transition Movement also is involved.

Good practice elsewhere: A good example of how such developments can be established can be found in Findhorn in Scotland:

(<https://naturalbuild.wordpress.com/2013/07/24/findhorn-eco-village-forres-scotland/>).

Guidance on developing such housing schemes integrated with food growing that are compliant with the planning system can be found here:

<http://www.bluefingeralliance.org.uk/wp-content/uploads/2014/05/Sustain-Planning-Sustainable-Cities-for-Community-Food-Growing.pdf>

Part of the food system: growing/producing

5.2.5 Allotments

It would be of value, if allotment holders were agreeable, that to some degree these could become part of a more integrated food system in the City. There is already a City strategy in place to develop them, stemming from a 2012 consultants' report. They offer the potential to provide food produce into the City (and promote a positive food culture that goes with this) but also with over 800 registered allotment holders in the City, this represents a significant skills resource for food growing, as well as a strong community of interest. Some form of recompense (in kind or cash) could be developed for the sharing of these skills.

The City Council also is exploring the development of 'natural' toilets on the allotment sites (currently there are no toilets at all) so that human waste can be used in the waste cycle, as well as amenities being provided.

Benefits to achieve (figure 3): potentially all benefits in figure 3. This can be achieved through integrating allotment allocation more closely with novel housing schemes: developing food growing land as part of Planning Gain (Section 106 Agreements) on larger scale developments. Revenues from and Planning Gain could be used to reinvest in community food infrastructure.

Existing good practice in Lincoln: the City of Lincoln Allotment Strategy

Good practice elsewhere: *St Anne's Gate Allotments and Community Orchard, Nottingham* – is an old Victorian walled garden with a two room building, managed by volunteers from the allotment association on behalf of the City Council. They have had Lottery money to build an education centre:

<http://www.staa-allotments.org.uk>.

As a council, *Stoke on Trent* is considered to be particularly progressive in the development of allotments:

<http://www.stoke.gov.uk/ccm/navigation/leisure/parks-and-open-spaces/allotments/>

Part of the food system: producing and growing: allotment food growing has been connected to the City food system through the City Council asking allotment holders to donate food to the City's food banks. This will continue to be promoted. Also, whilst much waste from City allotments is used for composting in the summer, winter waste and surplus could be used to feed an anaerobic digester.

5.2.6 Fare share for Lincoln

A Fare Share for Lincoln to act as a hub for 'waste' food has not been successful in the past. If, however, the distribution of such food is to be more readily orchestrated, such a hub will become necessary. To overcome problems of food distribution, such a Fare Share organisation could be tied more directly to 'downstream' food enterprises such as 'pay as much as you can afford' cafes, food banks and institutional catering. In Bristol, for example, Fare Share has developed a 'high class' catering company that provides peripatetic 'business lunches' (at premium prices) trading on the fact that these are made from 'waste'

food. Local food and waste food could be more fully integrated in this kind of scheme.

Benefits to achieve (figure 3): combatting food poverty, linking other forms of deprivation, promoting community cohesion, changing lifestyles, reducing food waste

Existing good practice in Lincoln: an on-line version of Fare Share is being explored by Community Lincs.

Good practice elsewhere: Fare Share is a national organisation and a number of examples can be found on their web site:

<http://www.fareshare.org.uk>.

The Bristol example, can be found at:

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

Part of the food system: Distribution.

5.2.7 Rekindling 'Meals on Wheels'

A large number of older people in the City (both in an institutional setting and living independently) would benefit from a comprehensive meals on wheels service. This could be another 'outlet' for local food catering, either commercially on a pay as you can afford basis. Food could be delivered to homes (see sustainable transport below) or to local social focal points such as church halls.

Benefits to achieve (figure 3): promoting physical health, combatting food poverty, linking other forms of deprivation, changing lifestyles.

Existing good practice in Lincoln: there is a number of breakfast and luncheon clubs in the City such as the Cherry Willingham Lunch Club, Life Church at Birchwood and the Retired Elders Activity and Lunch Club (see appendix 5).

Good practice elsewhere: In Toronto, Canada, a bus has been converted into a mobile food market explicitly to bring fresh food (for cooking, and ready meals), into low income neighbourhoods. It is run out of a food bank. More can be seen here:

<http://www.goodshomedesign.com/bus-converted-into-mobile-food-market-brings-fresh-produce-to-low-income-neighbourhoods/>

In Portsmouth, the City Council encourages people to cook healthy balanced food in larger quantities than they would normally eat and then freeze the surplus. These are then used on another day, exchanged, or donated to others.

Part of the food system: retail/eating welfare.

5.2.8 Pay as much as you can afford (and other) food outlets

A number of proposals have been made in the surveys as part of this research, for the development of retail outlets using only or predominantly local food. These include City centre street food markets, mobile food lorries for areas of food poverty, pay as much as you can afford cafes. Others have suggested 'pop

up' mobile kitchenettes (for example in church halls), 'guerrilla' lunches and 'cook for a neighbour' schemes.

These should reflect, in their food choices, the ethnic diversity of the City. One limiting factor here is the lack of availability of food storage facilities, and it should be a priority to develop one of these for communal cross-city purposes.

For all of these, the Real Junk Food project has access to food waste and supports local projects. The project excludes animal protein from its delivery.

Benefits to achieve (figure 3): combatting food poverty, linking other forms of deprivation, promoting community cohesion, changing lifestyles.

Existing good practice in Lincoln: we have come across a number of proposals here but none is yet known to be implemented.

Good practice elsewhere: Panera Bread pay as you can afford cafes are reviewed here:

<http://www.dailymail.co.uk/news/article-2342230/The-restaurant-chain-lets-YOU-choose-pay-eat-believes-businesses-same.html>

And the Real Junk Food project is reviewed here:

<http://www.hulldailymail.co.uk/Real-Junk-Food-Project-cafe-plan-Hull-8211/story-26444083-detail/story.html>

St George's market in Belfast is a model:

(<https://www.facebook.com/StGeorgesMarketBelfast/>)

and it will be useful to see how they manage it so successfully on a day to day basis.

Part of the food system: retail

5.2.9 A Riseholme/Showground hub

There is much potential to develop new community food producing schemes within the City at schools (see section 5.1.1), back gardens (section 5.2.2), vacant land (section 5.2.3) and elsewhere (see figure 20). These would be assisted by the development of a 'hub' for advice, seed propagation, allocating community effort and so on. This could be one of the functions of a Riseholme/Showground hub, together with other possible developments outlined in section 4.2 ('food' garden centre, local food café, sustainable technology shop etc.). A 'food' garden centre in particular could work well at the Showground.

Already on the Riseholme estate there are a number of enterprise starter units. There is potential for a local food café and there is a large number of underused glasshouses. There is also a walled garden and an allotment-type area. The compost business is also buoyant.

Taste of Lincolnshire and *Select Lincolnshire* would be keen to assist in the development of a farm shop and there is some interest in running this as a community resource.

At the Showground, too, the Epic Centre has much that is relevant:

<http://www.lincolnshireshowground.co.uk/our-facilities/the-epic-centre/>

This offers particular potential in terms of its education work. Currently, some 56 schools (about 40 primary schools) come to the Schools Challenge to learn about food, environment, sustainability and marketing. There is an ambition to increase the number of schools visiting the site, significantly. Understanding food chains is central to this programme.

Benefits to achieve (figure 3): creating employment, shortening food miles, reducing food waste, reducing environmental impact, as a medium for learning other social skills, providing education

Existing good practice in Lincoln: to be developed north of the City

Good practice elsewhere: Tukes in Grimsby is a kind of 'sustainable garden centre' along the lines envisaged:

<http://www.navigocare.co.uk/tukessite/>

They are linked in with the local hospital and their café has only seasonal food. They have a dementia café and people with learning disabilities and mental health issues, They help people in their own homes (a pay for system with a guaranteed standard). They also have an ethos of local food. **Green Futures** is their garden centre:

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

which also has a vegetable box scheme.

Part of the food system: potentially all parts of the food chain

5.2.10 Research and Development: Hydroponics, Aquaculture, Vertical Gardening and more

There was an appetite amongst some interviewees for the development of a research and development function in the local food chain around the area of alternative production. Different approaches are not explored fully here, but there was a common theme around the production of food without the traditional dependence on land.

Vertical gardening (<http://www.verticalveg.org.uk>) was mentioned as one approach – growing on a number of different levels at once in small spaces and often indoors:

<http://verticalharvestjackson.com>

Underground gardening is a variant on vertical gardening using existing disused tunnels. Vertical shelving is used to produce crops and the first of these was set up commercially in London in 2015:

<http://www.sciencealert.com/world-s-first-underground-urban-farm-opens-for-business-in-london>

Hydroponics is a method of growing plants using mineral nutrient solutions in water, without soil and again, therefore, reduces the traditional dependence on land:

<http://www.growthtechnology.com/growtorial/what-is-hydroponic-growing/>

Aquaculture concerns the farming of aquatic animals (snails, fish, crayfish, prawns) in tanks:

http://www.nmfs.noaa.gov/aquaculture/what_is_aquaculture.html.

When developed in tandem with hydroponics this is known as aquaponics:

<http://www.theaquaponicsource.com/what-is-aquaponics/>

Benefits to achieve (figure 3): all benefits but particularly promoting learning and other social skills, providing education and creating employment.

Existing good practice in Lincoln: none currently known.

Good practice elsewhere: all of the above web links provide these.

Part of the food system: production and growing.

5.2.11 Archaeology

The Riseholme site is rich in archaeology. There are many Mediaeval fields (there is a Medieval village on the opposite side of the lake to the house) and a tumulus in the far field with a Roman villa underneath. There is Roman pottery in the top three fields. This is seen as a positive set of attributes that can 'draw in' a community interest in archaeology and the land. Archaeological digs, for example, could be used to learn about 'old' methods of food production and consumption. County Historic Monuments will require full surveys will require surveys for any new developments at Riseholme, and these could be part of the 'whole system' learning process. Other environmental assessments for development (for example, bat surveys) could be part of this learning process too.

Benefits to achieve (figure 3): health benefits and learning and education benefits.

Existing good practice in Lincoln: the University of Lincoln has considerable experience in this area.

Good practice elsewhere: very widespread

Part of the food system: related to production and growing

5.2.12 Rainwater harvesting

This was mentioned by a number of interviewees as being useful for food production, particularly in the vicinity of greenhouses. Systematic rainwater harvesting at Riseholme, for example, could be developed not only for greenhouse growing, but could be used to reduce water usage significantly even without entering the food chain (toilets, washing horses, watering amenity plants).

Benefits to achieve (figure 3): Reducing environmental impact; contribution to growing.

Existing good practice in Lincoln: UK alternative energy in Lincoln provides rainwater harvesting systems (<http://www.ukalternativeenergy.co.uk/Rainwater-Harvesting.aspx>) and there are a number of local examples of their installations.

Good practice elsewhere: this is now widespread practice in the UK. A good source of general information including grant aid can be found at:

http://oasis-rainharvesting.co.uk/rainwater_harvesting_grants

Part of the food system: growing and production.

5.2.13 Sustainable transport

Sustainable transport was noted by some interviewees as being an important part of the food infrastructure 'system'. Given the number of proposals in this strategy for the development of renewable energy as part of a local food system, it seems logical to use such renewable energy within the transport system. Electric vehicles are an obvious choice here, where load carrying is a requirement, but walking and cycling also should be encouraged wherever possible.

Benefits to achieve (figure 3): shortening food miles, reducing environmental impact, creating employment, promoting physical health

Existing good practice in Lincoln: In respect of electric vehicles (which can be very expensive) there is potential for the refurbishment of milk floats at a 'green' garage near Wigsby, which could also help to source them.

Good practice elsewhere: Torfaen Community Meals Service caters for people living in their own homes who are unable to prepare their own meals. The service uses Rieber's Thermoport insulated food transport boxes in conjunction with electric vehicles:

<http://www.bglrieber.co.uk/blog/2015/09/28/torfaen-meals-wheels-enjoy-tasty-savings/>

The London Borough of Tower Hamlets has introduced electric vehicles in their meals on wheels delivery service:

<http://www.bglrieber.co.uk/blog/2015/06/14/meal-delivery-tower-hamlets-goes-green-electric-vehicles/>

Part of the food system: potentially all parts.

5.3. Resources

5.3.1 Resources and the local state

We are mindful, as a general principle, that the implementation of a food strategy for the City of Lincoln should not increase the cost burden to the local state (City and County Councils, health authorities and so on) on a *continuing* basis, other than for one off projects (for example, for start-ups) and for services provided. A truly sustainable strategy should not be 'subsidy' dependent and therefore should be built on commercial income streams for goods and services as well as on contributions from the community in money and in kind.

Benefits to achieve (figure 3): promoting community cohesion, changing lifestyles, creating employment.

Existing good practice in Lincoln: Appendix 5 illustrates the large range of organisations that operate with some, or complete, independence from state funding. Resources for the local food chain in Lincoln have been considered for the City of Lincoln in Section 3.3 above.

Good practice elsewhere: One of the most common means of securing income streams independent of the state is through community energy projects. Government advice on the development of these can be found here:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/275163/20140126Community_Energy_Strategy.pdf

There is a good case study of the Banister House Estate community energy project in Hackney, here:

<http://www.repowering.org.uk/projects/hackney-energy>

and of the Bath and West community cooperative here:

<http://www.bwce.coop>

Part of the food system: potentially all parts but with a particular focus in energy.

5.3.2 Multifunctionality and systemic cross-subsidy

It will be important, in the development of effective resources for a systemically integrated local food chain, to cross-subsidise some enterprises with others to keep the system as a whole, buoyant. It will therefore be important to develop a range of 'commercial' income streams within the food chain. For example, there may be income streams coming from health authorities for working with people with health problems that allow the consequent production of food to be given away to those in health poverty.

Benefits to achieve (figure 3): potentially all benefits.

Existing good practice in Lincoln: pay as you can afford cafes provide a simple example of this kind of cross-subsidy, but such an approach offers even greater potential when viewed across the whole of the local food system.

Good practice elsewhere: many of the 'welfare' parts of the local food system such as Fare Share and Food Banks are part of the cross-subsidy process.

Part of the food system: all parts of the food system

5.3.3 A systematic bid-writing service

The Lincoln Café provided a useful example of how a 'community' bid process can be put together, and this could be continued in an *ad hoc* basis. Importantly, this strategy provides a good basis against which to write funding bids as it places them in a strategic context. Bid sources such as the Lincolnshire Funding Portal and the Office for Civic Society are discussed in Section 3.3. Co-ordination (discussed in 5.2.1) will be an important part of such bid writing, and agency support also will be useful (local government, LEPs).

Benefits to achieve (figure 3): potentially all

Existing good practice in Lincoln: Lincoln Café but there are many other bid writing skills in the City.

Good practice elsewhere: there is a number of bid writing services available within the region, for example from the Nottinghamshire Community Foundation:

<http://www.nottscf.org.uk/bid-writing-services/>

And a large range of free advice, for example:

<http://www.theguardian.com/voluntary-sector-network/2011/mar/21/perfect-funding-bids>

Part of the food system: potentially all.

5.3.4 Developing a local 'currency' and other exchanges

Community food schemes develop well through reciprocation, integration and mutuality. One way of doing this is to develop some form of 'medium of exchange' within the food system so that currency can be exchanged, for example, for consuming food (say at a pay as much as you can afford café) using a currency (token, coin, voucher) earned through working on a community growing scheme (from Plot to Plate). Such currencies have seen local food systems move from cultures of dependency to cultures of opportunity. And the use of such local currency has very high multiplier effects (see section 5.8 below) because the currency continues to circulate in the local economy *ad infinitum*.

Benefits to achieve (figure 3): potentially all

Existing good practice in Lincoln: none uncovered

Good practice elsewhere: local currencies operate, for example in Bristol (<http://bristolpound.org>), Totnes (<http://www.totnespound.org>), Stroud (<http://www.stroudlife.co.uk/Stroud-pounds-worth-times-face-value/story-20440462-detail/story.html>)

In terms of other informal exchanges, the Food Assembly:

<https://thefoodassembly.com/en>

is a national organisation for local community food buying and selling. Currently there are over 700 local assemblies in England.

There is also a range of local schemes that offer discounts for buying local food in any of a number of local outlets. A good example is in Ludlow:

<http://www.ludlowfoodcentre.co.uk/Content.aspx?ID=8>)

Part of the food system: potentially all parts of the food system

5.4 Proposals for Food Waste

In respect of developing an appropriate food waste system, we propose adopting the Waste Resources Action Programme (WRAP) food waste hierarchy as in Figure 24 below.

<http://www.wrap.org.uk/content/courtauld-2025>

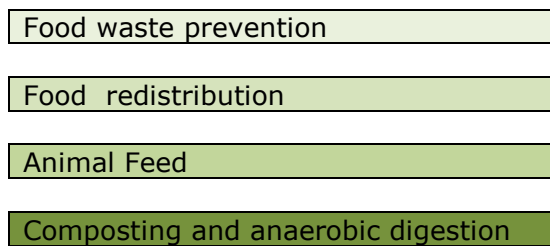


Figure 24 – the WRAP food waste hierarchy.

In the light of the increasing propensity for supermarkets to donate their surplus food (and increasing EU legislative requirements) all of these levels of food redistribution are likely to offer potential. Currently, this food waste hierarchy is a voluntary 'industry' protocol and there is great potential for it to be adopted by municipalities too. No local authority has adopted it yet.

Food redistribution should be focussed on the two Lincoln City food banks and also on the homeless, sheltered accommodation for the disadvantaged, and the elderly. This might include the reintroduction of a city-wide 'meals on wheels' scheme on a 'pay as you can afford' basis.

We propose that the use of redistributed food for **animal feed** is limited to that within the local food chain. In an urban context, this is likely to be slight. Moving away from animal-based foods will have a positive impact on food security.

Composting need not be undertaken to any greater degree than producing the amount of compost that can usefully be used within the local food chain.

In particular, we propose the introduction of an **anaerobic digester** so that it acts as a baseline for food waste. We propose that this is sited at Riseholme or the Showground and is funded through an early application to the EU SRIF fund and other sources. There are, at the start of 2016, approximately 130 AD plants in England, with another 80 at the planning stage. There is a network of AD operators (AD Net, based at Southampton University).

Importantly, we propose that once costs are covered, any surplus income generated from fuel production is returned to the community food system in the City for reinvestment in projects that develop the local food chain (as is common in Germany). This allows a constant longer-term stream of income independent of state support. In particular, this longer income stream will allow strategic planning – invariably blighted when short term grant applications are the only source of income.

Further, we propose the introduction of waste food collection from domestic and commercial sources. This can be used only for composting or anaerobic digestion and we propose that this too should be used for digestion to enhance the community local food fund pot.

These proposals are part of a more general policy approach that we have called *Completing the circle*. This would involve looping food waste back into the food chain: AD can be used to feed energy requirements back into the food chain and into composting for food growing. Redistribution of surplus food can be returned to the preparing and cooking part of the food chain.

Benefits to achieve (figure 3): reducing food waste, reducing environmental impact, creating employment, promoting community cohesion

Existing good practice in Lincoln: Locally, *Branston Potatoes* has an AD plant that generates methane from food waste. Rather than using this to generate electricity the gas is pumped into the national gas grid. This is the first of its type in the country.

Good practice elsewhere: In *South Shropshire District* at Burford Water Gardens an anaerobic digester was set up and the District agreed to collect food waste with separate bins. There was then a bigger AD built near Ludlow. Greenfinch was the company and they have now developed other sites.

Glasgow City Council now collects both commercial and domestic food waste (it is currently about a third of general waste) and also encourages food waste reduction through a series of specific measures:

<https://www.glasgow.gov.uk/index.aspx?articleid=16560>

In Seoul in South Korea a similar system was introduced but it was charged for. This reduced food waste by 2/3 with the introduction of charging but still provides 13,000 tons a day from the City, which is used for composting:

<http://www.asiatoday.com/pressrelease/south-koreas-food-waste-solution-you-waste-you-pay>

In France, restaurants are being encouraged to let customers take their uneaten food home with them. It is called 'le gourmet bag' to encourage its increased use. France is the first country in the world to force supermarkets to give their waste food to charity. The law was passed unanimously in January 2016.

A small scale 'Rocket' composter, which can be used to process low levels of food waste, has been installed at a school in Halifax. The compost is used in the School allotment:

<http://www.tidyplanet.co.uk/our-products/the-rocket/a500-rocket/>

Part of the food system: waste

5.5. Proposals for energy

The development of an *anaerobic digester* is a central part to the development of this strategy and is discussed in Part 4.2 in some detail in relation to Riseholme and the Showground. It also has been suggested that the development of *solar panels* as a land use might be worth consideration as a renewable energy source for the local food chain. There is potential, to float these on the lake at Riseholme.

Benefits to achieve (figure 3): potentially all.

Existing good practice in Lincoln: see section 3.1 above.

Good practice elsewhere: The dominant German model for local renewable energy sources is that they are community owned. This might be advantageous in that a community group could have access to capital funding, such as the Community Energy Fund:

<https://www.gov.uk/guidance/urban-community-energy-fund>

The Department of Energy has reviewed Community AD successes here:

<http://energy.gov/eere/about-us/community-renewable-energy-success-stories-webinar-net-zero-energy-communities-text-version>

There are many good examples of community-owned AD facilities, from primary schools in Cumbria:

<https://www.gov.uk/government/news/500000-investment-energises-renewable-energy-community-groups>

To the Leominster community AD:

<http://www.shareenergy.coop/wp-content/uploads/2011/07/ShareenergyCaseStudyLeominsterAD.pdf>

There is a manual on how to develop community-led anaerobic digesters in the UK context here:

http://www.nef.org.uk/themes/site_themes/agile_records/images/uploads/WP4A12 - Energy Farms - Anaerobic Digestion.pdf

Community-led **micro** AD's (in London) are explored here:

<http://r-urban-wick.net/blog/r-urban-wick-blog/751/leap-micro-anaerobic-digestion>

Part of the food system: energy.

5.6. The Multiplier Effects of Local Food Systems.

If you spend money in the local economy, a proportion of it gets re-spent (Swenson, 2009). The more that things are purchased locally, the more the money circulates within the local economy. The more, and faster it circulates, the more income, wealth and jobs it creates (Shuman and Hoffer, 2007).

So if we buy food that has been produced and prepared through the City of Lincoln local food chain the economic benefits for the City will be much greater than if we buy food from afar or even just from national retailers because our spending will be lost to the local economy (known as a leakage) and will not therefore have a chance to be re-spent locally. It makes little economic sense to purchase food from afar that can be produced locally as it simply takes money out of the local economy. But there are also environmental benefits as buying locally saves a huge amount of 'food miles'.

As we have noted in section 2.4, local food production can be higher per unit of land area, too, than conventional agriculture, adding to the positive multiplier effects. Using a *local currency* (see section 5.3.4 above) to trade within the local food chain has phenomenal multiplier effects as the money can be spent *only* locally and therefore, in principle, circulates indefinitely.

The New Economics Foundation (2005) found that with Northumberland County Council's current procurement policies, whilst the goods that they bought were the cheapest for the Council to buy at point of purchase, they were mainly bought from outside the local area. This meant that every pound that the Council spent, 64 pence went outside of the local economy immediately and only 36 pence was

re-spent in the local area. If procurement had been all within the local economy, £1.76 would have been spent within the local economy per pound that the Council spent. They concluded that if the proportion of the Council's procurement budget spent locally went up by 10% there would be an extra £34 million circulating in the local economy on an annual basis.

Estimates of multiplier effects specifically of local food systems in Canada and the US vary between 1.4 and 2.6, which is claimed to have a significant impact (Meter, 2008). It is estimated that if every household in Ontario spent \$10 on local food it would push \$2.4 billion into the local economy and create 10,000 new jobs, both per year (Ogryzlo, L. 2012). Shuman (undated) suggests that if Detroit were to shift 20% of its food expenditure to local sources it would create 4,700 jobs and the city would receive nearly \$20 million more a year in business taxes. In Temiskaming district in Ontario, it has been calculated that for every dollar spent on local food, between \$2.80 and \$3.60 is generated elsewhere within the local economy.

Further New Economics Foundation research has shown that for every £1 spent from the Nottinghamshire school meals budget on seasonal, local ingredients a further £1.19 of economic activity was generated:

(<http://www.theguardian.com/sustainable-business/food-blog/uk-government-food-procurement-plan-buy-local>).

5.7. Timeline for Implementation

It was the clear feeling from a number of interviewees and for the Focus Group of May 11 2016, that the strategy should begin its implementation phase with a 'big win' of seeking to secure a revenue stream to fund projects developed within the auspices of this strategy, through a community energy project. From this point the strategy should be implemented responsively to community effort, albeit within the framework of the strategy.

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Appendix 1 – Examples of the Multiple Benefits of Local Food Systems

Case Study: Bovey Tracey community food garden as a tool for learning

In partnership with the National Trust, members of the local community of Bovey Tracey in Devon, maintain and manage a Victorian walled community garden at Parke, the headquarters of Dartmoor National Park Authority, for the production of local food. It is open to everyone (in the local area) for growing their own fruit and vegetables, sharing knowledge and learning new skills. It is about *learning* about gardening and the value of eating different types of food as much as food production *per se*, based on minimising the carbon footprint through organic production. Work is exchanged for food.

Case Study: using food to integrate ethnic minorities in Ghent, Belgium

In Ghent in Belgium, the De Site food project was used to encourage local ethnic minority groups from the deprived Rabot Quarter of the city to get involved in local food production and consumption, particularly of their own ethnic foods and ways of cooking. They were allowed to use an old factory site and the idea was to bring all locals together, from lots of different ethnic backgrounds, to learn about each other and each other's cultures. The project has generated its own employment from food growing and wages are paid in a local currency (the Toreke) which can be spent in local restaurants and stores, but cannot be used to buy drugs or alcohol.

Case Study: using food to develop cultural traditions in Riga, Latvia.

Kalniciema Quarter (KQ) is an old renovated wooden district in Riga that has developed the retail side of the food chain by introducing a traditional farmers' market. This is one of a range of cultural events and activities that are designed to promote the heritage of the area both for cultural and tourist reasons. The farmers' market has now grown such that it operates more often, now at a range of different sites, than envisaged. The traders' networks that have arisen as a result of the market have allowed new 'traditional' food and food combinations to be developed and market tested. Customers have benefitted from a range of cultural activities, many of which are free and also, of course, from access to good local food.

Case study: community farming to improve food quality in Stroud

Stroud Community Farm was set up by a small group of residents who were keen to improve the quality of their food and not be so dependent on supermarkets. They researched food quality and different aspects of growing and managed to lease a plot of land from a local college where they set about growing vegetables and salads and learning to cook and eat seasonally. They now have an annual membership capped at 200 families and these pay an annual membership fee which funds two agricultural workers on the farm. Additional money is paid for food and many of the families also work on the farm.

Case study: food growing as drug rehabilitation in Bristol

The Severn (sowing the seeds of hope) Project in Bristol was set up by one person on a disused plot of land in the centre of Bristol to grow salad produce as a means of helping recovering drug users to gain skills and to work in an outdoor 'growing' environment. To begin with he had nothing and even the land was just 'borrowed' rather than owned in any sense (often known as guerrilla gardening). Eventually the City Council agreed to a short term lease for the project, and because it was poor quality land, topsoil was imported. Today the project supplies about 20% of Bristol's salad consumption through 80 local partners and has developed satellite growing areas including a local prison. Income from the sale of food goes back in to the business to extend the growing areas and to broaden the base of vulnerable people who can be helped.

Case Study: improving food in the hospitals of Brighton and Hove.

One of the prime movers in the development of local food action in Brighton and Hove was the NHS trust, which was concerned about the quality of food in its hospitals. It, together with the City Council, set up an independent food partnership of local producers, processors, cooks and restaurants to improve the quality of food in the City. Since that time, the Brighton and Hove Food Partnership has not only examined issues relating to the quality of food in hospitals but has launched a number of other food projects relating to health. One of the City hospitals now has a restaurant run by mental health patients under a project called Nourish. They prepare food as well as serve it and manage the restaurant. The Partnership now has over 200 individuals and groups working on local food within its membership.

Case study: Botton Village - food as community, identity and belonging

Botton Village, in the North York Moors National Park, was created in the 1950s (with generous donations from the Macmillan family) to offer full community living for adults with learning disabilities and other special needs. Over 230 people live there and its livelihood is based around growing organic food (vegetables and fruit and a walled flower garden). Each person is able to work to their own ability. In support of food production, there is seed processing, food processing (juices, jams, cheese, yoghurt) and a bakery producing organic bread and biscuits. This is all complemented by community assets (housing, health centre, a village hall, café, shop, church, and a school) and a structured social life with music and drama at its core.

Case study: food growing as part of affordable housing in Cashes Green

Gloucestershire Land for People, a community land trust, was concerned to identify land for affordable housing based on both community ownership and local community involvement. In negotiating for land at an old hospital site at Cashes Green, the Trust sought to introduce land for growing food as part of the overall development (as well as a range of environmental criteria). With a development of 78 homes (half in social ownership and half in private development), much of the site is to be allotment land for community horticultural use with a community building to support a food hub. The intention is to develop as much edible landscape across the site as possible.

Case Study – food as social care: care farming in Holland

Many food projects in Holland provide support, employment and a secure physical environment for vulnerable people. 'Care farmers' as they are known, allow people to work to their full potential whatever this might be. There are care farms for people who are mentally challenged, people with psychological problems, people with psychiatric demands, (ex) prisoners and (ex) addicts, youngsters with problems, people who have difficulty with access to the labour market, elderly who want to be looked after in quiet, trusted surroundings. On many care farms a combination of these target groups occurs. Participants attend these food projects on a part time basis as they engage in re-socialisation

Case Study – Fare Share: turning waste into food

With centres in many larger cities, Fare Share takes surplus or 'waste' food through its partnerships with the food industry and then delivers it to more than 1,711 charities and community projects across the UK, helping to feed 82,100 people a day. The majority of these charities and projects cook the food they receive on site so that they can provide vital and nutritious meals to vulnerable individuals, families and children. By receiving food from Fare Share, its charity partners save an average of £13,000 per year, money which is then reinvested into support services such as counselling. Around 3.9 million tons of food are wasted each year by the food and drink industry. Fare Share is making use of this, turning what otherwise would be an environmental problem into a social asset.

Case Study – Todmorden Incredible Edible develops multifunctionally

The food project in Todmorden in West Yorkshire has become fully multifunctional. A few people in the community began a herb garden as a means of 'getting people together' for a bit of company. They now grow all manner of vegetables and salads, have planted orchards and use the land of public bodies, social enterprises and private companies (including the fire station, the railway station and the social landlord Pennine Housing), to grow food. Every school in the town grows food and these plots are used to promote food-based learning (growing, processing, cooking and nutritional value) for the community as a whole. They have lottery funding to fund a 'food inspirer' post.

Appendix 2 - Multifunctionality in urban food chains: more than just food

Multiple functions

'Multifunctionality' is a term used to describe the way in which urban food systems (UFS) develop a wide range of functions, and provide benefits, that go beyond just the production and consumption of food. Some examples of these have been considered in the introduction to this report.

Various authors have described these functions and benefits. They have been seen as relating, firstly, to *food*, including production, consumption and food quality (Kremer and DeLiberty, 2011, Metcalf and Widener 2011) but also "*food citizenship*" (Hassanein 2003). *Health* provides a second function in respect of good nutrition to improve both physical and mental health (Freeman et al. 2012) but also the health benefits of physical activity and recreation associated with food production (McClintock, 2014). *Economic* functions also have been articulated (market revenues, job creation) and *environmental* functions (storm-water retention, greenhouse gas mitigation, urban ecological citizenship) also are widely reported (Travaline and Hunold 2010).

Further functions are discussed in respect of *amenity* (green space (Viljoen 2005, van Veenhuizen 2006), neighbourhood beautification, the gentrification of derelict urban land (Hackworth, 2007), *education* (food growing skills, sustainability), *security* (Alimo et al 2008's "eyes on the street"), *community cohesion* (Wakefield et al, 2007, Robinson-O'Brien et al, 2009, Bellows et al 2003, Lyson, 2004) and *social justice* (Milbourne 2012) including the delivery of food to the poor (McClintock, 2014). This list is not definitive, but as exemplars of the multifunctionality of UFS, they are presented in the left hand column of figure 1.

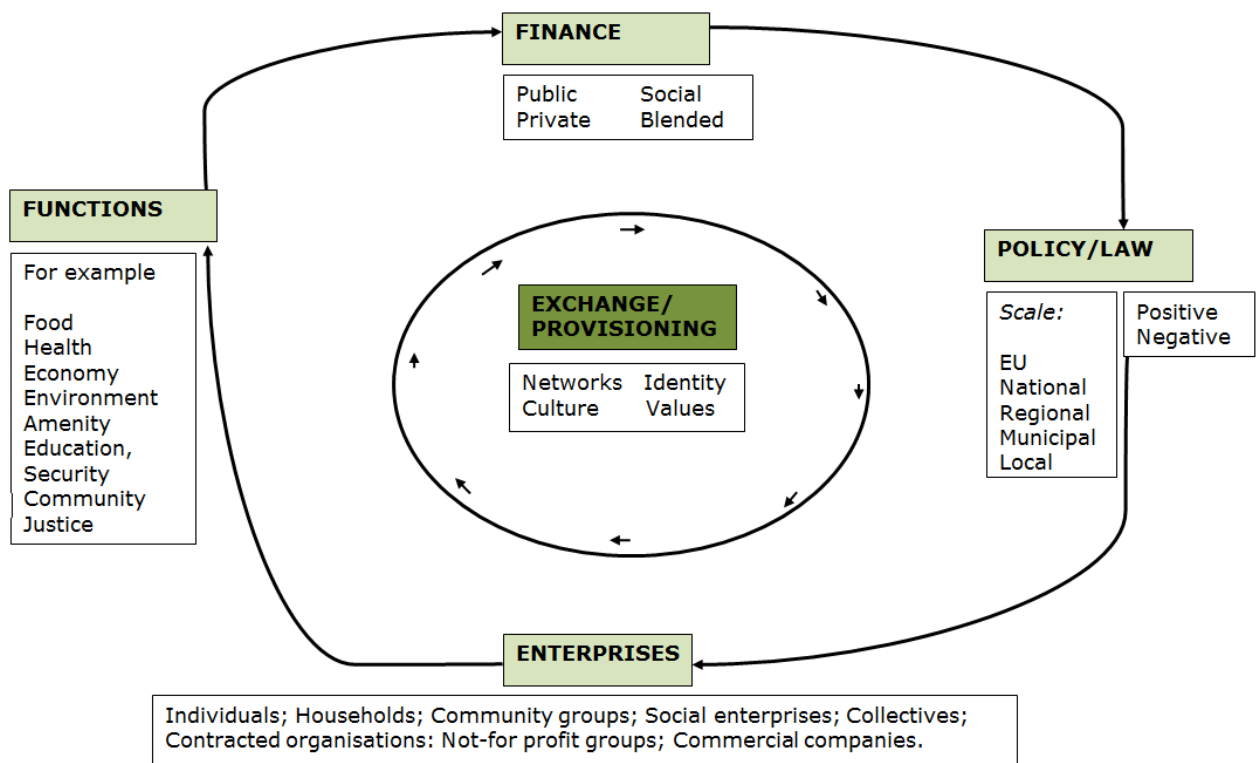


Figure A1 - Multifunctionality in urban food: a system of interdependence

Multifunctional finance

Research suggests that these multiple functions are commonly developed through multiple finance models as well (for example, private, public, social, blended) (Jarosz, 2000) and these are represented in the top box in figure 1. In respect of food, for example, McClintock (2014) reports on City Slicker Farms in Oakland, California which offer the same produce at differential prices that individuals feel they can afford: free if you have no money, some money if you can afford it, or pay more than you could get the produce elsewhere as a direct means of helping others. There is an overt redistributive element to the financial structure of the organisation, as food is seen as a public good: equitable distribution comes above profit.

Funding streams from any one source (including market incomes) can be volatile and public grant funding streams frequently change their priorities. Skills are more important at unlocking public funding than need (Curry, 2012), and there is commonly considerable resource dependency on voluntary effort. Commonly, too, commercially viable functions within the UFS organisation are used to subsidise non-market ones (Kremer and DeLiberty, 2011). For all of these reasons multiple finance models are commonly used in UFS projects, invariably correlating with the different functions of the project.

Multifunctional Policy and Law

In the contexts of multiple functionality and finance, the policy and legal framework for UFS is inevitably multifunctional (the right hand side of the diagram). Different functions will be subject to different policy instruments. Policies for UFS in general are growing (Lerner 2012) as municipalities increasingly realise the potential that they offer as a means of providing food security (McClintock et al. 2012), and in a neo-liberal tradition at times of austerity, as well as offering welfarist provision at no cost to the state, they provide:

“a means of quelling the unrest of the unemployed and hungry” (McClintock, 2014, p 158)

Thus at the municipal level, UFS policies such as zoning ordinances to allow the keeping of urban livestock, preferential planning policies for greenhouses and tax incentives to encourage urban food production, have grown, at least in the American context (McClintock, 2014).

But more distant policies relating to health, the environment, business, food standards and the like also bear down on the UFS and in the European context these can originate at the European, national, regional or local levels, or commonly, from several at once. They can have both positive influences (as in the American examples above) or impose additional bureaucracies and burdens (European public procurement regulations create difficulties for UFS) (Thibert 2012). They might even be problematic because of their *lack* of influence over UFS (no UFS access to the funds within the Common Agricultural Policy, for example).

The multifunctional policy and legal basis might therefore help or hinder the development of UFS and is another cause of UFS adjustment – to find the most appropriate development path within the policy and legal framework.

Multifunctional enterprises

Within the model presented in figure 1 UFS of various legal forms will adapt their functions in different phases of the lifecycle of the enterprise. Thus, it might be realised, through the enterprise activity, that a different combination of functions, in the second cycle, will allow the enterprise to be more financially commercially self-sustaining (or more successful at attracting public grants). This shift in finance might expose the enterprise to a different set of laws or policies and so the cycle continues.

McClintock (2014) identifies at least eight different types of enterprise observed to exist in UFS and some of these will exist simultaneously within the same UFS: individuals, households, community groups, social enterprises, collectives, contracted organisations, not-for profit groups, commercial companies.

Multifunctional exchange and provisioning

Within this model, *exchange* and *provisioning* are at its core (the centre of the diagram): the UFS works within market and non-market systems to provide and receive goods and services through all of the mechanisms on the perimeter of the diagram. Critically, this exchange and provisioning, according to McClintock (2014), is determined by the values, cultures, networks and identities of UFS and these too, are multifunctional: they vary according to all of the choices made elsewhere in the diagram. And because different values and cultures can operate according to the choices made, they can be seemingly contradictory: not all functions are necessarily compatible, either commercially or ethically. They will also change over time as the UFS cycles through different rounds of the diagram.

Thus, UFS may appear to be *radical* in their approach. Freeman *et al* (2012) consider that the very multifunctional nature of UFS, in successfully combining multiple objectives, is radical. This radicalism is described by other authors as relating to the way in which they reconnect people with food (Jarosz, 2000) and challenge the precepts of conventional agriculture (Maye *et al* 2007). Building community cohesion (Traveline and Hunold, 2010) and re-localising production and consumption (Donald *et al* 2010) also are characterised in radical terms. UFS also comprise novel forms of 'civic' agriculture (Lyson, 2004).

McClintock (2014) suggests that this radical position characterises UFS as putting food in the 'citizenship;' and 'public good' arena, with values of inclusiveness and equity to the fore, rather than 'profit'. In this way, it connects UFS with networks of other 'public goods' such as health, environment and social care, making it part of the architecture of radical 'new' urbanisation, where radical acts include guerrilla gardening (Crane *et al* 2012).

But McClintock (2014) suggests that UFS exchange and provisioning also can be seen, somewhat paradoxically, as *neoliberal*. Not-for-profit, voluntary and faith-based UFS organisations provide food to the poor without any need for state welfarist intervention. They fill the gap created by state withdrawal in terms of both food poverty and social safety nets. But such provision is 'patchy' often not reaching those in greatest need and thus exacerbating inequalities (Pudup, 2008). This can be exacerbated by the distribution of UFS state grant funding where the most successful recipients tend to be the most experienced or competent, rather than the most needy. Further neoliberal values are developed as UFS 'green' the urban landscape, achieving the environmental goals of municipalities for them (Hackworth, 2007). In neoliberal terms, too, many UFS's sell food (at farmers' markets and through box schemes) at premium prices pursuing profit maximisation at the expense of any social goals.

Cycling and temporality

The model presented is a dynamic one and UFS cycle through it making adjustments in both proactive and reactive ways according to changes in financial circumstances, policy changes and shifts in enterprise structure. Each part of the model continually impacts upon the other as these adjustments take place. The introduction of new functions to the UFS will cause adjustments in the characteristics of the others.

Thus, the four boxes in the outer circle and the circle itself are where multifunctional activities develop but also constantly change as the circle iterates. So both inputs and outputs change as a multifunctional enterprise go around this circle. And all of the outputs and inputs influence each other iteratively. For example, lack of appropriate finance can cause a function to be abandoned, but a new law or policy could make a new function appropriate. In turn the portfolios of function can influence each other just as laws and policies adjust through their own interdependence.

The exchange/provisioning 'engine' of the model drives the *direction* of these continual adjustments, and McClintock (2014) suggests that the apparent contradictions that may be evident in the networks, identities, cultures and values of the UFS are of no great concern.

Such a range of values is an inevitable part of multifunctionality: there is a mixture of opportunism and of principle and these will shift over time as the model in the diagram cycles. The contrasts in these values also can play off against each other in a constructive way and internal contradictions can be helpful in moving the urban food movement forward and helping the understanding of structural change. In this sense urban food is a journey rather than an end in itself.

Appendix 3 – Research approach and methodological considerations

The research approach in respect of methods used has been described in section 1.5 in the body of the report. This appendix outlines the research approaches specifically in relation to the use of the food hygiene ratings in identifying organisations in The City of Lincoln with an interest in food. It also sets out the main assumptions made in the development of the mapping exercises developed in part 2 of the report.

Food organisations in Lincoln from the Food Hygiene Rating at January 2016 – explanatory notes

1. A number of organisations have an active role in a number of parts of the food chain. They have been allocated into the category in which they have been judged to have their main activity. Invariably this is also the category in which they have been placed in the Food Hygiene data ratings.
2. In some cases there are a lack of data in one or more categories. These have been indicated appropriately.
3. In places, judgements have had to be made about the allocation of organisations into categories. This is not (and cannot be) an exact science!
4. Organisational form:
 - VCS – voluntary and community sector
 - Private – private sector
 - Public – public sector
 - Co-operative – co-operative sector

Churches have been classified as VCS
Church Schools have been classified as Public
'Social' clubs (Scouts, working men's sports, hospital etc) have been classed as VCS

5. Which part of the food chain?

Seeds	S
Commercial Production/Growing	CP
Community Production/Growing	CG
Personal Production/Growing	PPG
Manufacture/Processing	MP
Distribution	D
Retail: supermarkets and Hypermarkets	RSH
Retail: general	RG
Preparing and Cooking: Education	PCE
Preparing and Cooking: Welfare	PCW
Eating: Welfare	EW
Eating: Institutional	EI
Eating: Hotels	EH
Eating: Pubs and Restaurants	EPR
Eating: Mobile and Other Catering	EMOC
Eating: Takeaways	ET
Multiple Parts of the Food Chain	M

Hospital tab notes

Care homes for the elderly have been coded as Private EI unless there is evidence to the contrary. Children's centres and nurseries have been coded according to available web site evidence.

Nearly all of these bodies also have an interest in preparing and cooking, but not as an end in itself.

The vast majority of organisations falling into the health hygiene rating are private homes for older people and private pre-school provision

Hotels tab notes

These are all private sector and fall into the EH category. All have an interest in preparing and cooking but it is not their primary purpose.

Data Mapping Issues

We are aspiring to map Indices of Multiple Deprivation on all food outlets that have a hygiene rating. The three main problems are temporal, spatial scale and digital representation

Timescales

Hygiene ratings: these change every month both as a result of people starting and ceasing trading and as a result of outlets being classified into different categories over time.

Ward boundaries: these changed in 2015/16.

Census points: the range of data being used has been collected at different times and is therefore not absolutely commensurate in time.

Solution: be transparent about all data – when it was collected and what limitations it has. In some cases, estimates will have to be used (pinpointing postcodes for example) and these should be stated when used. We should avoid trying to update data on a continuing basis as this will stall analysis.

Spatial Scale

The 2015 Indices of Multiple Deprivation are published by ONS by Lower Layer Super Output Areas (LSOAs). These are subsets of Wards but boundaries are coincident. Different data sources (IMD Data, Ward data) use different codings for LSOAs so it is difficult to know which LSOA is which from different datasets.

Solution: Use Ward data to identify each LSOA manually (with the City interactive map) and add the different coding into the IMD LSOA data. This should allow IMD data to be mapped by LSOA within the city.

Hygiene ratings are available by postcode only (and these are not complete). As yet there is no known means of digitising these into LSOAs

Solution: try and find a software package that will map postcodes electronically on a range of different base maps.

Digital Representation

ArcView seems to allow the representation of administrative boundaries in units other than Wards and LSOAs (Enumeration Districts?). We need to find some software that will allow LSOA representation.

Solution: try and find a software package that will map postcodes electronically on a range of different base maps.

Appendix 4 – I Schedule of interviews (I) undertaken and meetings attended (M)

Interview/Meeting	Date	Status at March 2016
Abundant Earth Community (I)	February 10 2015	Written up
Transition Lincoln (M)	February 10 2015	Written up
Fabian Commission of Food and Poverty meeting (M)	February 12 2015	Report available
Hill Holt Wood (I)	February 17 2015	Written up
Lincoln Seed Swap (M)	February 21 2015	Written up
Lincoln Against Poverty Conference (M)	February 24 2015	Written up
Meeting The City of Lincoln to discuss data (I) 14:30,	March 3 2015	Written up
Lincolnshire Co-op meeting (M)	March 4 2015	Written up
Sainsbury's tackling food waste initiative (M)	October 27 2015	Written up
University Estates Department (I)	November 2 2015	Written up
Agriculture Chaplaincy for Lincolnshire, North and North East Lincolnshire (I)	November 27 2015	Written up
Riseholme Estates (I)	November 27 2015	Written up
WRAP (I)	December 17 2015	Written up
Real Junk Food (I)	December 17 2015	Written up
Liquorice Park (I)	December 23 2015	Written up
Lincoln Against Poverty Workshop (M)	February 10 2016	Written up
Allotment Office, City Council (I)	February 22 2015	Written up
Lincolnshire Co-op meeting (M)	March 8 2016	Written up

These all have been coded in the report to ensure anonymity

10 interviews

8 meetings

Appendix 5 – Summary of Organisations with a Community, Welfare, Environmental or Educational interest in food in The City of Lincoln at October 2015

These have been classified broadly according to the main focus of the organisation in each part of the food chain. Many organisations however, have an holistic view of their involvement and would have a legitimate claim to have an interest in all parts of the chain. Personal details have been provided only where these are already publicly available on the internet or elsewhere. All information in this appendix is correct at the beginning of 2016 only.

Multiple Parts of the Food Chain (16)

Abbey Access Centre. Community Training Centre. Gail Dunn, g.dunn2@ntlworld.com

Development Plus a community development charity that also does some individual life skills training. Denise Benetello
Denise.benetello@developmentplus.org.uk

Greetwell Quarry Residents' Association

Community Lincs. Fiona White, Chief Executive, fiona.white@communitylincs.com

Food and growing programme Lincolnshire County Council 01522 552276
communitycooking@lincolnshire.gov.uk

Green Synergy. Mary Hollis mary@greensynergy.org.uk

Hill Holt Wood. 01636 892836 admin@hillholtwood.com

Lincoln Café c/o Nigel Curry, nrcurry@hotmail.com

The City of Lincoln Council Jose Bruce, Neighbourhood Programme Lead, jose.bruce@lincoln.gov.uk James Wilkinson, Principal Policy Officer, Lincoln Against Poverty, james.wilkinson@lincoln.gov.uk Paul Carrick, Neighbourhood Manager, Central, paul.carrick@lincoln.gov.uk Caroline Bird, Community Services Manager, caroline.bird@lincoln.gov.uk Noel Tobin, Neighbourhood Manager, North, noel.tobin@lincoln.gov.uk Kate Bell, Environment Co-ordinator, Kate.bell@lincoln.gov.uk

Lincolnshire County Council Sarah Chaudhary, Public health, sarah.chaudhary@lincolnshire.gov.uk Carly Willingham, Programme Officer, Public Health, carly.willingham@lincolnshire.gov.uk

Lincolnshire Food and Health programmes (County Council)
<http://www.lincolnshire.gov.uk/residents/public-health/your-health/eat-well/>

Lincoln University Dr Jacqueline Allen Collinson (Health Advancement Research Team), jallencollinson@lincoln.ac.uk Dan

Lincoln Share. PW, 1peacefulwarrior1@gmail.com

Lincolnshire Forum for Food and Agriculture agriforum@lincolnshire.gov.uk

[The Local Enterprise Partnership \(Forum for Food and Agriculture\)](#) Ursula Lidbetter: chair, a Director of Lincolnshire Co-ops
enquires@greaterlincolnshirelep.co.uk 01522 550540

[Select Lincolnshire for Food](#). Gillian Richardson, Gillian.Richardson@Lincs-Chamber.co.uk

Seeds (1)

[Lincoln Seed Swap](#)

<http://www.lincolnseedswap.co.uk/lincolnseedswap.co.uk/Home.html>

Guy and Rachel Petheron, email: info@lincolnseedswap.co.uk, tel: 07986 001853.

[The District Herbalist](#): Hannah Sylvester – www.thedistrictherbalist.co.uk

[The Hardy Plant Society](#) (Lincolnshire Group): www.hpslincolnshire.btck.co.uk

Production/Growing (20)

[Abundant Earth Community](#) info@abundantearthcommunity.co.uk

[Age UK](#) – allotment, but also a busy restaurant and community cafe

[The City of Lincoln Allotments](#).

<http://www.lincoln.gov.uk/attachments.aspx?height=auto&width=617&storycode=111188&attype=P&atcode=36125>

[Birchwood Big Local](#). Yvonne Griggs, Chair – Green Spaces Subgroup, y.griggs@ntlworld.com

[Boultham Park Restoration Project](#). Linkage Community Trust and City of Lincoln Council have been awarded £2.7 million in grant aid from the Heritage Lottery Fund and Big Lottery Fund Parks for People programme to restore Boultham Park. Costing a total of £3.7 million, the project includes developing a café, shop and horticulture centre as well as converting the stable block into an education centre and restoring key features of the 50-acre facility. The project also requires a big contribution by volunteers as part of the match-funding.

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

[Master Gardener project \(Garden Organics\)](#). Rick Aron.

raron@gardenorganic.org.uk

www.gardenorganic.org.uk. This group offers free support at home for growing organically for up to a year. It has 70 volunteers across the county. Coventry University has done a study of Master Gardener.

[Lincolnshire Organic Gardeners' \(Growers\) Organisation](#): w: www.logo.org.uk. T: Jenny Hudd: 01673818805. This group is part of Garden Organic. These people are involved in the Farmers' Market in Castle Square on the 3rd Saturday of each month. The membership of the association (£7 a year) gives all members access to selling on their market stall. They also do apple grafting and bee keeping.

[East of England Apples and Orchards Project](#). E - info@applesandorchards.org.uk
W: www.applesandorchards.org.uk

Hartshome Park

Licorice Park. 01522 539828, n.watson77@yahoo.co.uk. They are having great difficulty getting volunteers for amenity planting. See here: <https://www.streetlife.com/conversation/56xfhdrvwdk6/#comment-6>

Lincoln Permaculture

<https://www.facebook.com/groups/712323865466137/?pnref=lhc>

Lincolnshire Agricultural Society. Lincolnshire Showground, Grange de Lings
admin@lincolnshireshowground.co.uk

Linkage Community Trust - Boultham Park restoration project. Project manager – Claire Eldred claire.eldred@linkage.org.uk, The City of Lincoln Council Contact : Verity Kirk - Community Development Worker, 01522 503197, verity.kirk@linkage.org.uk, 07436 539936

The Monks Road Allotment Holders' Association 01522 539487

The North Lincoln Horticultural Society 01522 543687,
nlhssecretary@googlemail.com

Stone Place Care Home ran a project that brought a disused Victorian cottage garden to care home residents to enable them to grow their own produce - Manager Anna Golightly - 01522 684325 see : <http://www.lincolnshirecho.co.uk/CASE-STUDY-Stones-Place-Care-Home/story-11217036-detail/story.html>

Spring Kitchen (linked with/to Master Gardeners) Rick Aron – 07584474779,
aron@gardenorganic.org.uk

Transition Lincoln. David Greenop, david@greenop.net

The Wildlife Trust (Mark Schofield), according to interviewee 7 has been helping to create wildlife meadows around churches. Mark is in charge of **Life on the Verge** which now covers most of Lincolnshire in terms of mapping and examining what is in Lincolnshire's road verges. These become wildlife corridors.

Wragby Road Allotments Association. denisr.jones@ntlworld.com (see appendix 2)

Distribution (2)

His Church <http://www.grimsbytelegraph.co.uk/crucial-food-pallets-really-make-difference/story-20735015-detail/story.html> and Richard Humphrey: His Church, Old Hanger at Binbrook.

<https://www.linkedin.com/pub/richard-humphrey/48/51a/bba>

Lincoln Baptist Church – MASH

Retail (3)

Fair-trade Lincoln geoffstrat@phoncoop.coop garythewson@hotmail.com >
(Councilor, The City of Lincoln) sMishra@lincoln.ac.uk

The Food Lorry Steve Ralph (via Sarah Chaudhary)

Lincoln Farmers' Market. contact Lincoln BIG 01522 54523, info@lincolnbig.co.uk

Preparing and Cooking: Education (11)

Community Kitchen Elsbeth Liberty (Baptist Church)

Cook Connect

Cooking Lessons for Kids in Lincoln (see appendix 2)

Development Plus is a community development charity that also does some individual life skills training Denise Benetello: 01522 533510, The Old Vicarage, Croft Street, Lincoln, LN2 5AX. Denise.benetello@developmentplus.org.uk

The Grub Club. Hilary Sharp, hilary.sharp@familyfocuslincolnshire.org.uk
Rachael Linstead Rachel.linstead@familyfocuslincolnshire.org.uk

Kiddy Cook Lincoln. Laura Northage, 07947 675 113 or lincoln@kiddycook.co.uk

Lincoln Market Kitchen also the contact for city community cooking programmes more generally: Marijke Chamberlain at marijke.chamberlain@lincolnshire.gov.uk, 01522 55659, 07786028881

Morrison's academy of food: Let's farm, Let's Fish Let's Bake

Morrison's let's grow scheme: <https://your.morrisons.com/Kids-and-Baby/LetsGrow/>

Priory Witham Academy (including Family Centre). a 0-19 yrs school in close proximity to the Sainsbury's store. (no contact details but they have been sent the questions)

School Governor. Anna Belczynska, ankabee@gmail.com

Preparing and Cooking: Welfare (31)

Breakfast Clubs in Lincoln

St Peter at Gowt's CE primary school

Luncheon Clubs in Lincoln

Cherry Willingham Lunch Club (Age UK - Jan Cowan 01526 354255 or Sue Stennet 01526 352703

Young parents lunch club, SureStart Lincoln North Children's Centre (LincolnNorthChildrensCentres@lincolnshire.gov.uk)

Retired Elders Activity and Lunch Club Ltd (REAL Club). Welton (01673 862716)

Life Church, Birchwood. Runs a Oasis lunch group. Bill Turton bill.t@life-church.co.uk

Homelessness Centres in Lincoln

BeAttitude – Lincoln. Provide a breakfast (8am to 9.30am) and, in partnership with YMCA/Nomad, an evening meal to the homeless (4.30pm to 8.30pm) every day of the year to between 25 and 40 people. They also offer drinks, sandwiches and hot soup during the week. beattitudelincoln@yahoo.co.uk

The Nomad Trust – Lincoln. On entering the shelter, individuals will be given a hot drink, and a snack will be provided at 10:00pm. Service users should have received a meal at Beattitude, however if for some reason they have not, then a hot meal can be provided. office@nomadtrust.org.uk

Framework HA emergency assistance - across Lincolnshire; Lincoln and Boston (Young People), The Corner House in Lincoln (alcohol), Pathways Centre, Lincoln. 01522 535383

Lincolnshire YMCA. 01522 888200, admin@lincsymca.co.uk

The Cedars (NACRO) Lincoln. Single homeless people aged 16-25. 01522 53 46 46, lincolnshirereferrals@nacro.org.uk

LEAP Ltd, Lincoln, Single homeless people aged 16-25. 01522 56 35 30, info@leap.uk.com

Young Person's Accommodation (Framework), Lincoln. Single homeless people 16-25. 0800 030 4699 ypaslincoln@frameworkha.org

NACRO Housing East (Lincoln). Single, homeless ex-offenders, or those who are at risk of offending. Aged between 18 and 65. 01522 52 53 83 lincsadmin@nacro.org.uk

NACRO Windmill House (Lincoln). Single, homeless ex-offenders, or those who are at risk of offending. Aged between 18 and 65. 01522 52 53 83 lincsadmin@nacro.org.uk

The Pathways Centre (Lincoln). Homeless, single people and couples over the age of 18. 0115 850 4136 pathwayscentre@frameworkha.org

Young People's Services, Lincoln

Birchwood Children's Centre. This group has strong parent groups such as the ABC group and Mums on the Run who could be involved. Information sent and to Children's Links who do their parent participation. Lynda Whitton. Lynda.whitton@lincolnshire.gov.uk

Children's Food Trust. 0114 299690, info@childrensfoodtrust.org.uk
Cheyanna.OConnor@childrensfoodtrust.org.uk

Elderly Services in Lincoln

AGE UK - Lincoln. 01522 527694 or info@ageuklincoln.org.uk

Lincoln Age UK, Park Street Activity Day Centre; 'Restaurant in the Park' 01522 696 000

Age UK (Lincoln Head Office) A-lot-'o'Men project Lincoln. **01522 561508,m**
helena.burt@ageuklincoln.org.uk

Royal Voluntary Service (RVS) Steve Amos, Head of Support and Development, steve.amos@royalvoluntaryservice.org.uk Cheryl St Hilaire, Operations Manager Lincolnshire & Nottinghamshire, cheryl.sthilaire@royalvoluntaryservice.org.uk

Women's Services in Lincoln

Lincoln Women's Aid. 01522 510041 info@lincolnwomensaid.org.uk

Other support services

The ACT trust – Joy Blundell

Addaction, Lincoln. 01522 301307 s.hewish@addaction.org.uk

Framework Housing Association Graham Rowntree, Graham.rowntree@frameworkha.org

Bailgate Methodist Church – Andrew Burrows

HIS Church. 01933 623236, hisfood@hischurch.org.uk

Lincoln Community Larder. Tina James, lincolncommunitylarder@hotmail.co.uk

Lincoln Food Bank (Trussell Trust) Jamie Stevenson jamie@lincolnfoodbank.org.uk or 01522 542166 info@lincolnfoodbank.org.uk
The Nomad Trust office@nomadtrust.org.uk 01522 883703

Lincoln Food Bank Forum

Lincoln University Food Bank (see appendix 2)

Eating (6)

Bread and Roses. A community interest company café in Worksop, but with an interest in developments in Lincoln. Steve Ralf <http://www.breadandrosescic.co.uk/>

Tastes of Lincolnshire (Love Food select Lincolnshire) select@lincs-chamber.co.uk 01522 846931. Interest in locally sources food.

Super Kitchen community cafe and outside/event catering business using surplus food: www.superkitchen.org or twitter @superkitchening. Steve Ralf steve@eudaimonia-hmk.com. Also run a food lorry

Real Junk Food - Suzanne Lewis. According to interviewee 7 this would be a 'pay as much as you can afford café This can also develop an infrastructure and link up with Green Synergy and others, so that the whole food system becomes joined up. She believes that there is the potential in Lincoln.

Life Church in Birchwood runs the Oasis lunch group – Bill Turton – bill.t@life-church.co.uk

University of Lincoln Food Bank Project – Subash Chelliah, University Chaplain, schellaiah@lincoln.ac.uk

Waste (1)

Lincolnshire Waste Partnership. A key focus is on tackling food waste (01522) 782070, tacklingwaste@lincolnshire.gov.uk