

DELIVERING A HEALTHY AND SUSTAINABLE FOOD ECONOMY IN LETCHWORTH GARDEN CITY

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TABLE OF CONTENTS

ABSTRACT	8
ACKNOWLEDGEMENTS.....	9
USEFUL INFORMATION TO NAVIGATE THE THESIS.....	10
List of Tables and Figures	10
Participants' codes and pseudonyms	13
Acronyms	14
Sub-headings	15
 CHAPTER 1: INTRODUCTION	 16
 1.1 INTRODUCING THE DOCTORAL RESEARCH.....	 18
Rationale and aim of the doctoral research.	18
Outlining the doctoral research: scope and key terms of reference	21
 1.2 WHY FOOD AND THE GARDEN CITY	 23
Food and garden city in research today	23
Methodological tools to explore food in Letchworth.....	25
Contribution to knowledge	26
 1.3 THESIS STRUCTURE.....	 28
Chapter One to Three: inputs	28
Chapter Four to Seven: findings.....	28
Chapter Eight: discussion and conclusion.....	29
 CHAPTER 2: BRIDGING THE FOOD AND GARDEN CITY LITERATURE	 30
 2.1 GETTING STARTED WITH THE LITERATURE REVIEW	 32
Literature review process.....	32
Where the garden city and food literature meet	34
 2.2 LOOKING FOR THE GARDEN CITY FOOD PRINCIPLES	 36
A decisive influence on urban planning: dissemination and interpretations	36
2.2.1 Physical patterns and food landscape: 'diagram only'	37
Food in the agricultural and the town estates	37
Industry, transportation, trade, consumption, and the myth of self-sufficiency	39
Social city: the ward and the regional planning	40
2.2.2 Social drivers for independent communities.....	42
A healthy and decent living for communities: an environmental concept.....	42
Local administration and publicly owned land for food community benefits	43
2.2.3 Economic and political model underpinning the garden city food system.....	43
Unearned increment: the rate-rent reinvestment.....	43
Governance structure and local democracy.....	45
Garden city model: towards the current food-systems approach.....	45

2.3 LOOKING AT THE URBAN FOOD SYSTEM APPROACH	47
Food system paradigm for food security	47
2.3.1 Shaping the multi-faceted framework of food economy.	50
Alternatives to the modern food systems: localising the foodshed	50
The multi-agency food governance: including new stakeholders in the food system.	53
2.3.2 Grounding the foodscape.	54
Defining the foodscape	54
The different spatiality of food in cities	55
Green spaces and food.....	56
2.3.3 Social drivers in food systems.....	57
Communities for food resilience and sustainability: co-governance, food democracy	57
Accessing food: from availability to convenience	59
Acceptability and food practices.....	60
2.4 CONTEXT OF THE STUDY AND LITERATURE REVIEW CONCLUSION	62
2.4.1 Context of the doctoral project	62
Overlapping 2020s' crises	62
Administrative organisation in the UK and the unique role of the Foundation in Letchworth.....	63
2.4.2 Knowledge gap: the research problem.....	67
Summing up the literature review	67
The research problem and arising research questions.	68
 CHAPTER 3: EXPLORING FOOD IN LETCHWORTH GARDEN CITY	 71
3.1 THE RESEARCH FRAMEWORK	72
3.1.1 Conceptual framework: food seen through three factors.....	75
Strategy: food governance, the socio-political and economic drivers.....	75
Tactics: food practice, the everyday life	77
Place: foodscape, the city layout	77
3.1.2 Theoretical background: critical constructivism, practice pragmatism	78
Constructivism and pragmatism: fitting into two philosophies of knowledge.	78
Critical theory and practice theory: two perspectives	79
3.1.3. Study design: combination of approaches.....	81
Using a case-study.....	81
Ethnography to underpin the case-study.	82
3.2 METHODS USED WITHIN THE CASE STUDY AND DATA COLLECTION PROCEDURES.....	85
Use of mixed methods	85
Logistical considerations: access to data and adapting fieldwork during a pandemic.....	85
3.2.1 Quantitative methods.....	88
Food mapping: locating food places.	88
Urban Morphology Analysis (UMA): characterising food spaces.....	89
3.2.2 Qualitative methods	90
Observations: scoping the site, taking part in the local life	91
Semi-structured interviews (SSIs): understanding the different food agendas.....	94
Group discussion: exploring others' perspectives.....	95
3.2.3 Visual methods, linking Qual and Quant.....	97
Documenting food geography and food practices	97
3.3 PROCESSING THE DATA	99
3.3.1 Data analysis	99
Spatial analysis: identifying the geographic features.	99
Transcript and coding: inductive process for Thematic Analysis (TA).....	104
Drawing the datasets together	106

3.3.2 Ethical consideration	107
Acknowledging the epistemological approach	107
Ethnographic approach and visual data	108
3.4 SUMMARY	109
 CHAPTER 4: FOOD LANDSCAPE	 110
4.1 SNAPSHOT OF THE FOOD LOCATIONS IN LETCHWORTH.....	112
Howard's spatial organisation of the garden city model	112
Food in Letchworth today: built footprint and example of food outlets.....	113
Food in Letchworth: UEI and the non-built layout	117
4.2 GARDEN CITY LEGACY: TOWN DEVELOPMENT AND SPATIAL FEATURES.....	121
4.2.1 Early twentieth century, the onset	121
Three hamlets for a new settlement	121
Letchworth's development	127
4.2.2 Food in the early garden city (1900s-1950s).....	131
Growing food.....	131
Food in the town estate: vegetarianism and the co-operatives momentum.....	137
4.2.3 Food and the different urban configurations and patterns.....	143
Configurations, types, and patterns to characterise urban form in Letchworth Garden City.....	143
Configurations and typologies: green spaces for food.....	148
4.3 NEIGHBOURHOOD MORPHOLOGY	150
4.3.1 Green space characterisation in a later neighbourhood of Letchworth	150
Using the Radburn layout to identify UEIs.....	150
UMA techniques to prepare close-ups on six e urban configurations.....	154
4.3.2 Close-ups on specific configurations, exploring the role of food.....	156
Three dimensional representations.....	156
Fieldwork and participants' descriptions.....	158
4.4 FOOD SPACES: LANDSCAPE & LAYOUT SOCIAL REPRESENTATION OF FOOD.....	164
4.4.1 Some account of the perception of food in Letchworth.....	165
The residents' perception of Letchworth Garden City	165
Linking green spaces with food: the residents' perspectives.....	166
4.4.2 Developing the foodscape	169
Gardens and allotments: a space to grow food of one's own	169
Café and whatnots	171
4.5 SUMMARY	173
Topics explored and methods used in the chapter	173
Key findings	174
Discussion and contribution to knowledge	175
 CHAPTER 5: LAND ECONOMY FOR FOOD	 177
5.1 THE LAND VALUE CAPTURE PRINCIPLE UNDER SCRUTINY	179
Howard's land economy vision in the Garden City model	179
5.1.1 What is land value capture principle today?	181
The Foundation's portfolio and sources of incomes	181
The LGCHF's landlord status today and its economic implication	184

Land value capture scheme applied today in Letchworth Garden City	184
5.1.2 Some challenges and limitation to the land value capture system in Letchworth	186
Understanding the land value capture principle	186
The impact of the Covid pandemic on the Foundation's stream of incomes	186
Local food production seen as a "missed opportunity"	187
Economic pressure and farming scales.....	189
5.2 LAND OWNERSHIP AS A LEVER FOR THE FOOD ECONOMY.....	190
5.2.1 Land ownership potentials for urban food production	190
Access to the agricultural land and land pressure.....	190
Urban food production: small scale capacities and international trade.....	192
Food economy on a small scale: output conundrum	193
5.2.2 Land ownership and the local option.	196
Is there a local option today in Letchworth?	196
Local option: land ownership as a lever for food-related business opportunities	197
The potential of a charitable umbrella for a food procurement and local option	199
5.2.3 Land stewardship, an influential tool for sustainability?	200
Land stewardship to protect landscape and biodiversity.	200
Can land stewardship encourage sustainable agricultural methods?	202
5.3 LAND USE FOR FOOD PRODUCTION AND URBAN RESILIENCE	205
5.3.1 Productive land availability.....	207
Land availability for potential food growing.....	207
5.3.2 Allotments embodying a form of the garden city resilience.....	209
Allotment price, dimensions, and maintenance policy	209
Allotment enthusiasm over the pandemic	213
5.4 SUMMARY	216
Topics explored and methods used in the chapter	216
Key findings	216
Discussion and contribution.....	217
 CHAPTER 6: GARDEN CITY CO-GOVERNANCE	 219
6.1 IDENTIFYING FEATURES FOR LOCAL FOOD GOVERNANCE IN THE UK	221
Learnings from food partnership in the UK	222
Collaborative and place-based approach for urban food partnerships.....	224
6.2 THE UNIQUE ADMINISTRATIVE SETTINGS IN LETCHWORTH	226
Howard's administrative vision in the Garden City model.....	226
The evolution of Letchworth Garden City governance model.....	226
6.2.1 The self-funded charity governance model	227
The charity organisation for independence, long-term view, and leadership.....	227
Charitable services, the land value capture outputs	229
6.2.2 Local governance in Letchworth.....	230
Evidence-based approach of the Foundation.....	230
Multi-agency approach in Letchworth.....	230
Democratic dilemma	232
6.3 FOOD PARTNERSHIP: A HIATUS IN JOINT EFFORTS	234
6.3.1 Understanding a charitable foundation as a local institution.....	234
Residents' perceptions of the Foundation	234
Shift of objectives and strategy, the Foundation as a catalyst for community actions.....	235
Key stakeholder or mere support to the community?	236
6.3.2 Working together for food community benefit and inclusion.....	238

Streamlining local food-activity network: local governance bodies as catalysers	239
Community-led food project fostering inclusion.....	240
6.4 BEYOND THE LOCAL FOOD GOVERNANCE.....	243
6.4.1 Disconnection between food and local institutions	243
Two limits of organisational structure: the silo and red tape effects	245
Multi-level political spheres of influence.....	246
6.4.2 Global upheavals and impacts observed in Letchworth.	247
6.5 SUMMARY	252
Topics explored and methods used in the chapter	252
Key findings	252
Discussion and contribution.....	253
 CHAPTER 7: FOOD AND SOCIO-SPATIAL EXPERIENCE	 255
7.1 GARDEN CITY AND NEW COMMUNITES.....	257
Howard’s community vision in the Garden City model.....	257
7.2 FOOD CONVENIENCE: FOOD ETHOS IN DAILY LIFE	260
7.2.1 “Good food” and procurement.....	260
Food choice: a combination of criteria	260
Some food procurement routine	262
7.2.2 “I like the idea of a Farmers’ Market”: fitting sustainability in everyday life.	264
Convenience and readiness	265
Sustainable food expectation in daily life, adjusting practices and disappointment.	266
7.3 FOOD SCOPE: ACCESS, SCALES OF LOCAL, AND VARIABLE FOODSHEDS.....	269
7.3.1 Reaching food outlet options.	269
Food deliveries: readiness, digitalisation, sense of place, and dissociation	269
Closeness of food, mean of transportation and walkable distances.	270
7.3.2 The confusing local food.....	272
The flexible dimension of local and short.....	272
Distinct values and permeability of the different food streams	274
7.4 FOOD KNOWLEDGE: VISIBILITY & EDUCATION, PLACEMAKING THROUGH FOOD.....	276
7.4.1 Bringing food to the fore in Letchworth.	277
Visibility of food growing: the example of the community garden in town centre.....	277
Advocating through food, values, belief, and fulfilment.....	280
7.4.2 Place making through food.....	281
Display and demonstration	281
Land ownership and community empowerment.....	284
7.5 SUMMARY	287
Topics explored and methods used in the chapter	287
Key findings	288
Discussion and contribution.....	289
 CHAPTER 8: DISCUSSION & CONCLUSIONS.....	 291
8.1 CONNECTING THE FINDINGS FOR DISCUSSION, OVERVIEW OF THE CHAPTER	292

8.2 ADDRESSING THE RESEARCH QUESTIONS	293
8.2.1 An instrumental governance for a collaborative approach to food system	294
The challenge of engaging with stakeholders new to the food economy	294
Local option in Letchworth: food opportunities and limitations	296
8.2.2 Expectations and realities of the food principle in Letchworth	297
A layout that serves a resilient food city	297
Acceptability and convenience: accessing healthy and sustainable food economy.	299
8.2.3 Grasping the garden city food principles for health and sustainability	300
Re-localisation of food and place-based governance.....	301
Resilient food city: missed opportunities, available option	303
8.3 THESIS CONTRIBUTION.....	306
8.3.1 Contribution to academic knowledge.....	306
Methodological contributions.....	306
The garden city model's contribution to the urban food agenda.....	307
8.3.2 Policy implication.....	309
Suggestions specific to the Foundation and local authorities operating in Letchworth	309
Learning from the garden city model for food governance	311
8.4 REFLECTING ON THE WORK	313
8.4.1 Methodology framework: learning curve.....	313
The unexpected inputs from the participants	313
Making use of qualitative research time	314
Reproducibility and validity.....	315
8.4.2 Limitations and grounds for future research	316
The segmented respondents' profile.....	316
Post-scriptum and follow up on dataset.....	317
New research avenues	318
REFERENCES.....	319
APPENDIX.....	361
Appendix 1.1: An applied doctoral programme: springboard to the academic research.....	361
Appendix 2.1: Literature search criteria	363
Literature search – key terms for topic garden city	363
Literature search – key terms for topic food economy.....	364
Literature search – key terms for topic urban planning.....	364
Appendix 2.2: Map of Counties and Unitary Authorities - Source ONS 2018.....	366
Appendix 2.3: Map of Local authority: District, Counties, and Unitary Authorities - Source ONS, 2018.....	367
Appendix 3.1: List of the participants and their profiles	368
Appendix 3.2: Ethics	374
Ethics approval notification.....	374
Question grids	376
Appendix 7.1: Table of criteria of good food for the residents who participated.	380
Appendix 8.1: Table summarising the findings in the light of the literature review.	381

ABSTRACT

While the Garden City movement has had a major influence on urban planning, Howard's emphasis on integrating town and country in food terms has often been overlooked as a core feature. Today, the urban agenda tends to include food systems to support a place-based approach to food. To link the Garden City legacy with today's urban food agenda, this doctoral research uses a case study of the world's first Garden City, Letchworth, in England. The study delves into the Garden City guidelines applied today to examine interplays between the unique local governance and its spatial and social environment for a sustainable food economy.

The research uses mixed methods to link the local food economy with the socio-cultural practices on site. Food mapping as a groundwork process is combined with an ethnographical approach, including fieldwork and interviews with key stakeholders. This overall approach outlines a characterisation of food spaces while providing insights into the socio-political factors influencing them.

The food mapping, first, shows that the shape of the town encompasses areas and setups that are characteristic of the garden city blueprint. As a result, today Letchworth offers a spatial infrastructure for local food procurement, albeit dormant in places. The second theme investigates Howard's economic principle of public land ownership and land-value capture implemented in Letchworth. This precept, combined with the third administrative aspect, outlines a unique governance framework for food-purpose strategic decisions regarding the stewardship, use, and protection of the land for the local community's benefit. Lastly, if some residents report on a foodscape that could encourage sustainable practices, specific hurdles in implementing them on a daily basis suggest tensions between sustainable food catchment, individual practices, and the town's offers or potentialities.

The garden city model, as applied in Letchworth, demonstrates how edible landscape, land stewardship, and community empowerment are three critical levers to underpin placemaking that support food governance and create resilient food cities. In that sense, the project contributes to the explorations of the urban food systems by highlighting how a place-based approach is critical to support sustainable food systems.

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To Ernest. My ultimate drive in achieving this PhD was to make you proud of your mum, even if right now you don't mind much.

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¹ <http://www.herts.ac.uk/business-services/access-our-expertise/knowledge-transfer>

² <https://www.hertfordshirelep.com/>

³ <https://www.hertfordshirelep.com/what-we-do/projects/erdf-projects/>

USEFUL INFORMATION TO NAVIGATE THE THESIS

List of Tables and Figures

CHAPTER 1

Figure: 1.1: Diagram No7 – Social Cities.

CHAPTER 2

Figure 2.1: Diagram No1 – The Three Magnets.

Figure 2.2: Concept map of the main topics of the literature review.

Figure 2.3: Diagram No5: City's growth and open country.

Table 2.1: Some terms contributing to food security discourse.

Figure 2.4: Archetypes for a centralized food distribution network.

Figure 2.5: Short Food Supply Chains (SFSCs) schematic.

Table 2.2: Structure of sub-national government in England.

Figure 2.6: Board of Governance and Board of Trustees.

CHAPTER 3

Figure 3.1: Research design map.

Figure 3.2: Diagram of the conceptual framework.

Table 3.1: Comparison of case study research and ethnographic research.

Figure 3.3: Flyer to broadcast the research on social media.

Figure 3.4: Guy Debord, 1955 - Psychogeographic guide of Paris.

Figure 3.5: Map of the derives in Letchworth.

Table 3.2.: GIS layers to food-related location in Letchworth.

Figure 3.6a: UMA - Relationship between the different dimensions.

Figure 3.6b: UMA - Three dimensions of aspects, resolution and time frame.

Table 3.3: UMA elements to identify land uses and food elements.

Figure 3.7: Data collection stages and analysis process.

Figure 3.8: Five tensions identified from group discussion to explore food practices.

CHAPTER 4

Figure 4.1: Diagram No2 - Agricultural land.

Figure 4.2: Map of buildings' footprint, private gardens, and residential estates.

Figure 4.3: Map of food outlets in Letchworth and close-ups on the town centre.

Figure 4.4: Heatmap of the food outlets – hospitality and retail.

Figure 4.5: Photographic survey in town centre.

Figure 4.6: Different size of the four main green spaces

Figure 4.7 Map of productive spaces and green spaces.

Figure 4.8: Plan of Estate and Proposed Town - R. Unwin & B. Parker, 1903

Figure 4.9: Plan of Estate and Proposed Town – key plan R. Unwin and B. Parker, 1903

Figure 4.10: Aerial photograph taken over West View showing Broadway Gardens

Figure 4.11: Letchworth site circa 1900 - overlaying with existing building.

Figure 4.12: Letchworth site circa 1900 - close-ups on Letchworth, Willian and Norton

Figure 4.13: Town overall building footprint evolution

Figure 4.14: Productive spaces development-based development plans of Letchworth

Figure 4.17: Haymaking in the field later to become Town Square Gardens, circa 1910s

Figure 4.18: From left to right: farmland: plot of growing vegetables, circa 1940s to early 1950s.

Figure 4.19: Postcard showing man in cloth cap holding a kohlrabi in front of a vegetable field.

Figure 4.20: Haymaking at Letchworth Hall Farm, 1915

Figure 4.21: Photograph of an agricultural view, 1919-1929

Figure 4.22: “A Letchworth Small Holding”, Photographs, Barry Parker collection

Figure 4.23: Photograph of the fruit farm, Willian, date unknown

Figure 4.24: Photograph of a house on Letchworth Lane 1955

Figure 4.25: Photograph of house on Sollershott West no date

Figure 4.26: Gardening at the ‘Noah’s Ark’ cottages on Birds Hill, c1950

Figure 4.27: The Simple Life - Mr Baker and his ducks in a back garden on Nevells Road c1910

Figure 4.28: Evacuees Pixmore School boys helping out farmers in the local fields

Figure 4.29: Photograph of Letchworth Allotment and Horticultural Association, date unknown

Figure 4.30: Photograph of women who can be linked to the Haven Social Club, 1940s

Figure 4.31: The Letchworth Allotment & Horticultural Association, circa 1940

Figure 4.32: Pupils and their teachers gardening class c1911

Figure: 4.33: Bexhill County School collecting nettles to make soup or shampoo

Figure 4.34: Simple Life Hotel, circa 1915,

Figure 4.35: Workers relaxing with lunch in a field, c1905

Figure 4.36: Dinner in a garden, c1920

Figure 4.37: Opening day of the Garden City Co-operators Shop on Leys Avenue in 1907

Figure 4.38: Exterior of the Co-op Creamery building on Letchworth Gate

Figure 4.39: Exterior of the Co-operative Society Ltd. Fish Department

Figure 4.40: Plan and Photographs of Homesgarth Quadrangle

Figure 4.41: Central Dairy milk carts, c1915

Figure 4.42: Letchworth Hall Farm milk horse-drawn two-wheeled cart, date unknown

Figure 4.43: Co-op milk delivery, date unknown

Figure 4.44: Photograph of lady next to Co-operative van, c1950s.

Figure 4.45: Postcard of Star Supply stores on Leys Avenue, date unknow, likely c1910s

Figure 4.46: Cheetham Bros grocery shop along East cheap c1972 established in the 1920s

Figure 4.47: Leys Avenue (one of the high streets of Letchworth Garden city, c1923

Figure 4.48: Westholm and Eastholm Estates

Figure 4.49a: “Byelaws” and garden city principles housing layout, Unwin, 1909

Figure 4.49b: Diagram: open space may be secured to a large number of houses, Unwin, 1909

Figure 4.49c: Birds’ Hill Estate & Pixmore Hill in Letchworth Garden City, Unwin, 1909

Figure 4.50: Map of characterisation of housing configuration in Letchworth Garden City

Figure 4.51: Photograph of unused green space in between houses

Figure 4.52: Characterisation of green typologies in the Southeast state

Table 4.1: Green and community space categories/layers after mapping

Figure 4.53 UMA close up locations for three-dimensional models

Figure 4.54: Six three-dimensional close-ups on neighbourhood

Figure 4.55: Photograph allotment between houses

Figure 4.56: Postcard of Common View

Figure 4.57: Support for visual elicitation during the group discussion – geography of food

Figure 4.58: Blackberries picking, pictures sent by residents

Figure 4.59: Karin’s apple tree and her apple pressing in bottle

Figure 4.60: Adrian’s picture of inside an organic food store in Letchworth – Adrian

CHAPTER 5

Figure 5.1: Diagram No 6 - The vanishing point of Landlords Rent

Figure 5.2: Land owned today by the LGCHF, land sold and privately owned freehold.

Figure 5.3: Land ownership and proportion of wealth reinvestment.

Figure 5.4: Scheme of Management spatial scope, Letchworth Garden City

Figure 5.5: Annual Financial statement of the LGCHF from 2018 to 2021

Figure 5.6: Rural Estate north, commercially leased field

Figure 5.7: Leek flower, unkept allotment

Figure 5.8: Map and proportion of green spaces in Letchworth

Table 5.1: Managements of the allotment sites in Letchworth

Figure 5.9: Evolution of plot vacancy over the 2020 – 2022

CHAPTER 6

Figure 6.1: Diagram No5 – Administration.

Figure 6.2: Adrian’s picture of high street during the second lockdown

Figure 6.3: Gary’s food collection at Aldi.

CHAPTER 7

Figure 7.1: Diagram No3 - Ward and town centre

Figure 7.2: Participants’ residence locations – names are pseudonyms

Figure 7.3: Emily’s food shopping in Morrison’s

Figure 7.4: Sophie’s milk delivery

Figure 7.5: Support for visual elicitation during the group discussion – community

Figure 7.6a: Community Garden in the town centre, beetroots planted in the raise-beds

Figure 7.6b: Community Garden in the town centre, volunteering and signs in the raise baed

Figure 7.7: Food growing project in front garden, a local initiative.

Figure 7.8: Market stall to swap organic grown food.

Figure 7.9: Food & Drink Festival

Figure 7.10: Apple pressing stall during an event in Letchworth

Figure 7.11: Food rescue crates placed in the front of the entrance gardens

Figure 7.12: Social media page advertising locations of food stalls

Participants' codes and pseudonyms

Forty-nine people took the time to help the study, for that I am grateful. To ensure their anonymity I use pseudonyms and codes to refer to their capacity. Codes for representatives of the different categories are as follow:

L.00: LGCHF representative

O.00: Public Officer in Hertfordshire

G.00: Community Group in Letchworth and North Herts (sometimes pseudonyms).

F.00: Farmer

H.00: Housing Association representative in North Hertfordshire

E.00: Expert in food economy, partnership, or garden city

B.00: Business owner or employee

R.00: Resident of Letchworth or close surrounding (sometimes pseudonyms).

A table with the list and description of each participant is in the Appendix 3.1.

In addition, two local institutions are mentioned frequently as they are critical stakeholders in the doctoral research: the Letchworth Garden City Heritage Foundation (LGCHF), and the North Herts District Council (NHDC). In the thesis, these two key organisations will be respectively referred as the Foundation and the District Council, or by their acronym where more appropriate.

Acronyms

AFN: Alternative Food Network

CAD: Computer-aided Design

CAP: Common Agricultural Policy

CSA: Community Supported Agriculture

Defra: Department for Environment Food & Rural Affairs

EC: European Commission

EU: European Union

FAO: Food and Agriculture association

GD: Group Discussion

GI: Green Infrastructure

GCC: Garden City Collection

GCA: Garden City Association

GIS: Geographic Information System

HCC: Hertfordshire County Council (also the County Council in the thesis)

LFS: Local Food Supply

LGCHF: Letchworth Garden City Heritage Foundation (also the Foundation in the thesis)

LRC: Learning Resource Centre

LVC: Land Value Capture

NHDC: North Herts District Council (also the District Council in the thesis)

SFSC: Short Food Supply Chain

SFS: Sustainable Food System

SFP: Sustainable Food Places

SSI: Semi Structured Interview

TA: Thematic Analysis

UA: Urban Agriculture

UEI: Urban Ecological Infrastructure

UH: University of Hertfordshire

UK: United Kingdom

UMA: Urban Morphology Analysis

Sub-headings

The thesis was developed using thematic coding to process data and establish a rationale. Over time, these codes have evolved into subheadings to interconnect and highlight key concepts, offering a summary of the content, visible in the table of contents. Nevertheless, since each paragraph is logically structured, it is feasible to comprehend the thesis without these subheadings.

CHAPTER 1: INTRODUCTION

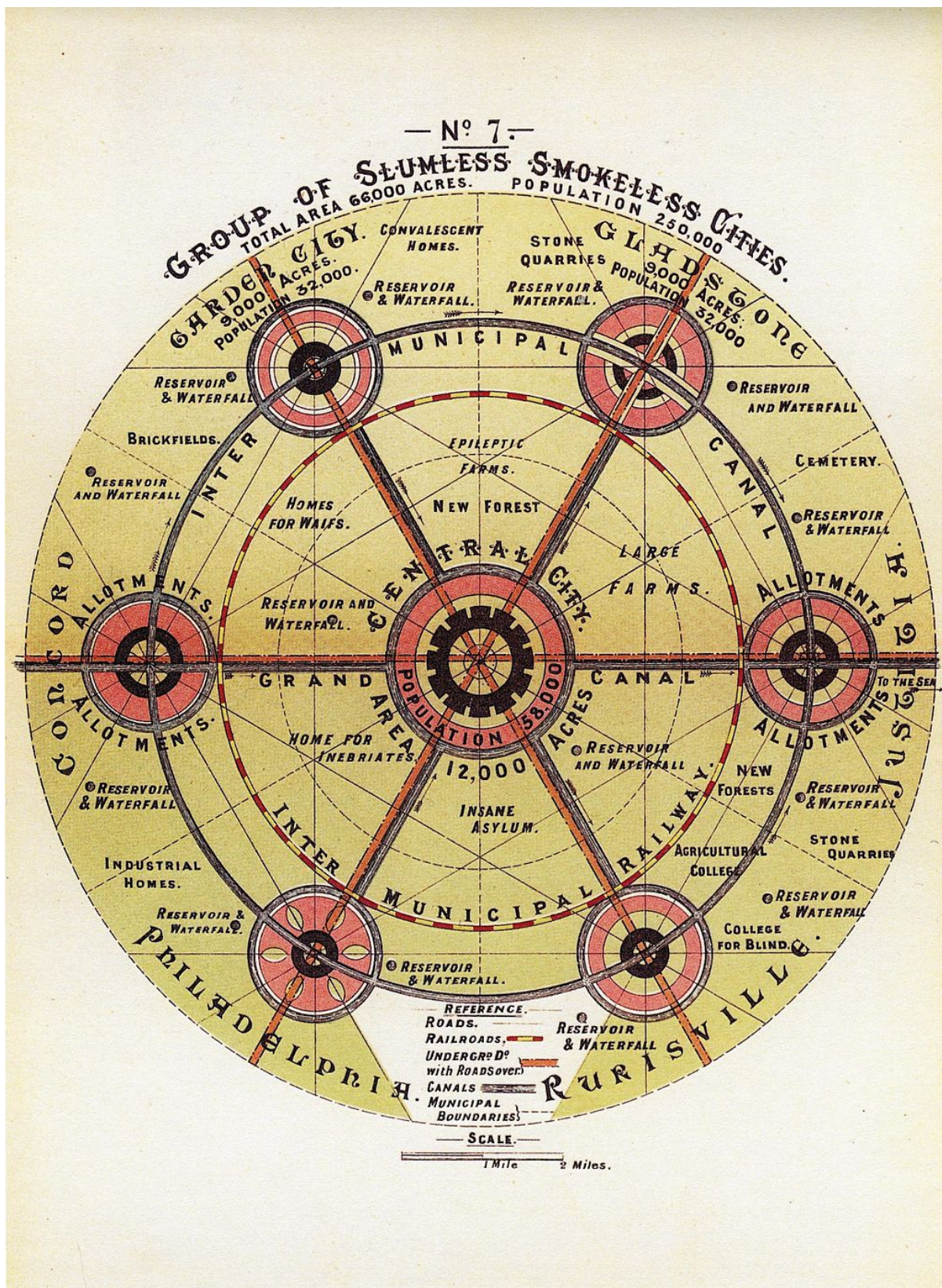


Figure: 1.1: Diagram No7 - Social Cities, Howard, 1898

1.1 INTRODUCING THE DOCTORAL RESEARCH

In this thesis, I argue that the garden city is a ground-breaking urban model that could contribute to today's urban food system framework. Based on Howard's book (1898), this doctoral research explores four dimensions that can have an impact on the local food economy: the spatiality of food-related locations, the land economy at the core of the garden city independence, the local governance resulting from its administrative organisation, and the role of the community in supporting these aspects. I argue that the world's first garden city, where some features of these principles are implemented and visible, Letchworth Garden City, can teach valuable insights for urban food governance. Using a case study, the doctoral research project identifies the strength of this town as a combination of garden city layout underpinned by a unique governance model. Considering some limitations in terms of local food opportunities, the thesis concludes that the combination of edible landscape, land stewardship, and community empowerment are three critical levers to underpin place-making that create resilient food cities.

Rationale and aim of the doctoral research.

The overarching aim of this doctoral research is to look at the characteristics of Letchworth Garden City to explore local opportunities for an efficient, healthy, and sustainable food economy.

The 19th century was a flourishing period in which many utopians, intellectuals and philanthropists shared their views on the social, political, and economic issues associated with the Industrial Revolution. Social reformer Ebenezer Howard (1850 - 1928) was one of them and is regarded as the figurehead of the Garden City movement. With Britain facing critical rural depopulation, he shared his vision of new medium-sized cities to counter the misery of overcrowded London. Sir Ebenezer Howard (1898, 1902) shared in his books a vision for new cities of 32,000 inhabitants where land use and food were intended as strategic economic resources: available for the local community yet open to competition and worldwide food trade (Howard 1898, p.24, p.75). With a group of enthusiastic supporters in his wake, Howard raised funds to establish the First Garden City Ltd. From 1903 the company began building Letchworth Garden City: a city that embodied his vision in terms of urban design, administration, and land management.

Nearly 120 years later, it can be argued that after several decades of economic and urban development using natural resources intensively, the 21st century is facing an environmental crisis, and the food industry is one of the major human activities that can impact the environment. Cities are growing fast worldwide in size and numbers, and a third of the world's population will be living in urban areas in 2050 (UN Department of Economic and Social Affairs, 2018). Current dominant

modern food systems rely heavily on oil for production, distribution, and consumption (Moragues-Faus, Sonnino and Marsden, 2017), which is regulated by decisions from national to international scales (Morgan, 2015), resulting in fragmented approaches to food policies (Barling, Lang and Caraher., 2002; Barling 2007; Fridman and Lenters, 2013; Sonnino, Tegoni and De Cunto, 2019). Vulnerabilities rooted in this conventional globalised food system suggest a need for a paradigm shift that includes multi-scale agency and cross-sector networks along the food supply chain (Olsson, 2018), which can be defended as a need for place-based perspectives that underpin locally socio-cultural dynamics, economic revitalisation, small-scale enterprises, and sustainable practices within food systems (Blay-Palmer *et al.*, 2013; Sonnino, Marsden and Moragues-Faus, 2016; Moragues-Faus, Sonnino and Marsden, 2017; Cerrada-Serra *et al.*, 2018).

Feeding settlements was a concern historically (Schumann, 2003; Lummel and Atkins, 2008; Vitiello and Brinkley, 2014; Imbert, 2017). However, in the later part of the 20th century, cities' political programmes drew scant attention to food in part because of the dissociation of the rural and urban realms (Opitz *et al.*, 2016), but the food system is re-entering cities' agendas (Pothukuchi and Kaufman, 1999; Nasr and Komisar, 2016; Cabannes and Marocchino, 2018) and municipalities increasingly commit to developing local food policy and strategy in order to create a place-based urban food governance aimed at addressing shortcoming in food security and sustainability (Halliday and Barling, 2018; Olsson, 2018; Coulson and Sonnino, 2019). Therefore, in the latest decades, scholars in food studies increasingly recognised urban areas as a framework to rescale and integrate more reliable and resilient local food systems that mitigate the global trade's impacts on health and the environment (Pothukuchi and Kaufman, 2000; Morgan, 2009, 2015; Viljoen and Wiskerke, 2012a; Nasr and Komisar, 2016).

In light of today's search for urban food solutions (Ingram *et al.*, 2013; Clendenning, Dressler and Richards, 2016), Howard's philosophy still resonates with some present-day planners' vision (Duany, Andrés and DPZ, 2011), which underlines his timeless idea. It is argued that this model had a major influence on urban planning history, theory, and practice (Choay, 1965; Buder, 1969, 1990; Fishman, 1977; Hall and Ward, 1998; Steuer, 2000a, 2000b), although practitioners and researchers may have disregarded its integrated food approach (Parham, 2015; 2016a, 2016b). Food principles are rarely the focus of garden city-related works, in favour of housing, green spaces for leisure, and more broadly, its influence on planning (Steuer, 2000a; Miles, 2006; Dennis, 2013). However, contemporary discourse has shifted the focus of garden cities towards the paradigm of sustainable urban development (Keeffe, Hall and Jenkins, 2016; Vernet and Coste, 2017). In this context, the re-emergence of food principles appears to be a pivotal aspect, as garden city guidelines delineate a framework for integrating food into the realm of urban planning. Questions related to food security, food access, and land management arising from the food system and urban studies

(Viljoen and Wiskerke, 2012a; Badami and Ramankutty, 2015; Cerrada *et al.*, 2018) meet the strategic land use, independent administration, land economy, town design for food production, health, environment, well-being, and social inclusion found in the garden city features (Howard, 1898; Adams, 1905).

In 1903, architects Barry Parker and Raymond Unwin proposed the physical translation of the world's first garden city with the masterplan of Letchworth Garden City (fig. 4.13) (Unwin, 1909; Buder, 1969; Livesey, 2019, p.77), to this day the closest version of Howard's idea of layout and administrative organisation. Designed and built from 1903 onwards, Letchworth Garden City is the embodiment of Howard's guidelines (Lewis, 2015; Livesey, 2019, p.119), a rare place where his innovative ideas are implemented, relying on the reinvestment of garden cities' financial results within the economic loop (Howard, 1898). Critically, a unique feature is a local administration that owns and manages properties and land on behalf of the community. Land ownership and land value capture implemented today in Letchworth (LGCHF, 2023a) are two principles inherited from Howard's theory that could support economically and administratively a healthy and sustainable food economy, as explored in Chapter 2 as a part of the literature review and in Chapter 5. The interplay between the garden city layout, the local administrative institution with a Foundation that owns and manages the land, and the socio-spatial experiences of food, provides a unique opportunity to explore what the garden-city canvas offers to underpin local food distribution that benefits health and the environment.

Therefore, the aim of the doctoral project is to examine an existing urban framework that respects the spatial and institutional structures of the original garden city theory, embodied in Letchworth Garden City. Understanding the spatial, economic, administrative, and social characteristics of the town could provide details on key parameters to adjust the local food economy and inform planning, design, policy, and place-making strategies within the urban food agenda, such as food security, accessibility, and sustainability. The research thesis is a case study of Letchworth, the world's first garden city developed five years after Howard's first publication (1898), which to this day, is the closest version of a garden city incorporating administrative organisation, economic tenets, and geographic features (Lewis, 2015; Parham, 2015; Andre, 2019, 2020). Thus, throughout the thesis, the garden city infrastructure refers to the overall organisation of the garden city, including physical, administrative, social, and economic principles to capture the holistic approach of the garden city to underpin the food economy.

Outlining the doctoral research: scope and key terms of reference

This doctoral project intends to situate the garden city model within the broad research interest of urban food planning using an analysis of Letchworth Garden City to contribute to a modern interpretation of the garden city model. The Anthropocene context of the study is fundamental. Climate emergency and its correlated environmental impact is the defining issue of the 21st century (Moreau *et al.*, 2012; Sellberg *et al.*, 2020), which includes uncertainty, global shocks, and ecological disaster, ultimately affecting food systems principally based on global trades (Lang, 2010). Feeding everyone healthily in a sustainable way that minimises environmental damage suggests changes in the food sectors ranging from production, processing, transport, waste, and diets (Springmann *et al.*, 2018) and urges to offset figures towards the acceptable planetary resource limit (United Nations, 2023).

Research within the literature leads to a combination of concepts to define the contemporary notions of the food economy. The food economy in this research refers to the outcomes revolving around the different food-supply stages, from production to waste management, including supply transformation and transportation, retail, and consumption (SFP, 2023). Inspired by Winter (2003), who expresses a social construct of the local relationships that makes the local economy, I join the claim that a food economy must contribute to cultural, social, environmental, and health structures in addition to economic convenience and practicality (Lang, Barling, and Caraher, 2009). This economy is thus "a subsystem of the ecosystem" where "human economies are, in fact, subsystems of larger ecosystems and must function within those constraints" (Kirschenmann, 2008, p.109, p. 111).

Attention to food systems is equally critical as this term links closely food with other sub-systems, such as land use, farming, waste management, housing, transportation, the environment, and their interconnections (Pothukuchi and Kaufman 2000; Hinrichs, 2014; Nguyen, 2018). Hence, the term food system in the thesis acknowledges the interactions of different systems that the food economy comprises. The food system is thus understood as a form of paradigm to understand the resulting food economy (Blay-Palmer, 2012; Yap, 2022).

The definition of a sustainable food economy revolves around three components: environmental, economic, and health as a part of social benefits (Lang, Barling and Caraher, 2009; Nguyen, 2018), summarised as such (Soil Association, 2001, cited in Kneafsey *et al.*, 2013, p.27):

A system of producing, processing and trading, primarily of sustainable and organic forms of food production, where the physical and economic activity is largely contained and

controlled within the locality or region where it was produced, which delivers health, economic, environmental and social benefits to the communities in those areas.

Environmentally, the whole food system should limit resources and greenhouse gas emissions while protecting biodiversity and mitigating Greenhouse Gases (GHGs) (Vermeulen, Campbell and Ingram, 2012). Economically, it is also argued that this food supply chain should guarantee ethical food traditions and local knowledge set in culture to support and advocate for the local communities (Donald and Blay-Palmer, 2006; De Schutter, 2017, 2019), tying together political drivers for changes through the social dimension of governance (Barthel, Parker and Ernstson, 2015; Brinkley, Raj and Horst, 2017; Kneafsey *et al.*, 2008; Kneafsey *et al.*, 2017).

1.2 WHY FOOD AND THE GARDEN CITY

This thesis is the successor of ground-breaking works from the 90s that introduced food as an urban concern and laid the ground for the urban food agenda (Parham, 1992, 1998, 2012, 2015; Garnett, 1996; Pothukuchi and Kaufman, 1999; Franck, 2003, 2005). This literature has developed and accelerated over the last decade, exploring alternatives such as local food systems to support transitions (Viljoen and Wiskerke, 2012a; Wheeler, 2013; Olsson, 2018) and help minimise the tangible consequences of anthropogenic global warming and associated climate change (Vermeulen, Campbell, Ingram, 2012; Wheeler and Von Braun, 2013).

Food and garden city in research today

The garden city model offered a holistic vision for new settlements to include food: Howard's foremost goal was to create a new society (Beevers, 1988; Buder, 1990) in a healthy environment (Howard, 1898; Meacham, 1999) where land use was envisioned as a strategic resource for the benefit of the community. The social driver in the garden city principles is a key element for self-sustaining communities (Gillette, 2010), which means they can sustain in time but are not self-sufficient as they need outwards connection for a healthy and balanced economy and social life. The garden city involves economic aspects as a condition for the garden city to be attractive and allow for decent living, in other words, "a place for business" (Purdom 1913, p.140).

Equally important, the status of the land is instrumental in the garden city system (Hall and Ward, 1998, 2014; O'Sullivan, 2016; Livesey, 2016; Szibbo, 2016). Unfortunately, Howard's holistic vision for self-contained cities is sometimes conflated with self-sufficiency (Keeffe, Hall and Jenkins, 2016). This myth of self-reliance reflects the scalar matter of the food economy. Howard gives a realistic representation of a garden city's foodshed, a notion described in Chapter 2, where residents are "perfectly free to get their food stuffs from any part of the world, and in the case of many products will doubtless continue to be supplied abroad. These farmers are hardly likely to supply them with tea, with coffee, with spices, with tropical fruits or with sugar, and their struggle to compete with America and Russia for the supply of wheat or flour to the town may be as keen as ever" (Howard, 1898, p.24). In sum, an inward-looking self-sufficiency was not a prerogative for the garden city model. Instead, the local market, including food, was detailed as a loop from production (Howard, 1898, p.18) to waste management (ibid, p.17), including transportation (ibid, p. 25), transformation (ibid, p.18), and retail (ibid, p.33). Moreover, defenders of the garden city movement associated the local community with food practices: common gardens and agricultural co-operatives (Howard, 1898, p.15; Adams, 1905, p.32). Similarly, collective kitchens (Purdom,

1913, p.111) are ways of emancipation for townspeople that reduce labour by pooling resources to accomplish tasks. Hence, relationships between different food stages and the benefits from community engagement are two crucial elements to understanding the food economy in the garden city context.

Meanwhile, today urban food is seen from different angles in academic work, explored in Chapter 2. From the modern productivist standpoint and its macro-level economy (Brinkley, 2013, p.245; De Schutter, 2019), roughly ruling since the second half of the 20th century in the Global North (Krebs, 2013), integration of food in cities is new (Pothukuchi and Kaufman, 2000). For the last thirty years, the food system has been a field of research in the geography discipline connected to governance, space, and rural land (Yap, 2022). At city and regional levels, land stewardship and governance are strategic tools to protect land use and include new stakeholders for food integration (La Rosa, Barbarossa, Privitera and Martinico, 2014; Ernwein, 2018; Santo and Moragues-Faus, 2019), shedding light on local institutions and their remits to integrate food in urban governance (Pothukuchi and Kaufman, 1999). Food Policy Council in North America (Blay-Palmer, 2009; Fridman and Lenters, 2013), Food Strategy and Food Partnership in the United Kingdom (UK) (Halliday, 2015; Coulson and Sonnino, 2019; Moragues-Faus, 2020): the rise of local food consortiums that involve different agencies to address food economy locally shows recent change of attitude to address food gaps left by the conventional food system.

The urban food literature suggests the extensive role of the local community and alternative entrepreneurship (Ghose and Pettygrove, 2014a, 2014b; Morgan, 2015; Blake, 2019; Lindemann, 2019), whereas land use transformation seem to be the missing link for Urban Agriculture (UA) and food retrofitting in cities (Fainstein, 2011; La Rosa *et al.*, 2014; Parham and McCabe, 2016). In addition, a disconnection between local institutions and the experienced foodscape fails to encompass the many realities of individuals and their circumstances, knowledge, and cultural background (Duncan, 2006; Soma, *et al.*, 2021). Therefore, everyday life as the socio-spatial experience of the garden city model helps us understand the role of spatiality in food economy development and access. Based on the premises that everyday life and individuals' practices are a vehicle for sustainable change (Shove, Walker, 2010; Shove, Pantzar and Watson, 2012), the spatial influence is a critical lens to examine the interconnection between social and physical aspects in food terms (Lake and Townshend, 2006; Mikkelsen, 2011a, 2011b). Nevertheless, the spatial dimension of the garden city remains a prevalent aspect of uncovering the interplay between the food economy and the social-spatial experience. The present doctoral project has extensively explored this relationship (Stern, Fishman and Tilove, 2013; Guise, 2015), examining aspects of urban design (Carmona, 2014; Hebbert, 2014) and urban morphology (Kropf, 2013) in order to understand the food experience in an existing garden city.

Methodological tools to explore food in Letchworth.

The doctoral journey is tied with the complex features of sustainability, embracing social, economic, and environmental aspects of food (Lang, Barling and Caraher, 2009). In that regard, the conceptual framework of the thesis borrows De Certeau's (1984, p.12, p.34) conceptual structure and terminologies to explore the interplay between governance ('strategy') and practice ('tactic') and their relationship with a specific environment ('place') further explained in Chapter 3. The premises of the study hold the interplay between these three components in the social agenda of food. As a result, the study undertakes an exploration of food through a place-based approach, looking at policies from governance decisions, initiatives from the local community, and practices from individuals as a response to their food environments.

The choice of a single case study allows for detailed fieldwork, and in-depth focused investigation, using complementary methods (Yin, 1993, 2009). Starting with extensive fieldwork, the first step was to map out every food-related location in Letchworth using Geographic Information System (GIS) software. This phase established the extent range and locations of food-related places and land use with detailed maps sources. These maps helped generate close-ups of different areas of the town to have a finer examination of the different urban morphologies (Kropf, 2017). These graphic outputs highlight the different interplays between green spaces, land use, and the built environment in relation to food. Archives, including photographs, masterplans, and documents from the early Letchworth informed on the influence of the history of the town to its evolution.

A part of the data collection entailed documenting bike rides and recording each exploration retrospectively on a map. This process was inspired by the Situationists' derive, a form of urban exploration by drifting, questioning the psychogeographical effects of a specific environment (Debord, 1958). This approach is relevant to understanding the convenience and accessibility to people, further discussed in Chapter 3.

Besides, fieldwork involves a light ethnographic approach stemming from anthropology, with observation and participation in the town's food life (Parham, 2012; Pink, 2012). Interacting with different stakeholders revealed distinct food realities' that the food mapping picture did not capture (Duncan, 2006). Experts in their fields (food strategy, urban planning, garden city), representatives of local authorities, home-grown food initiative champions, private sector involved in farming activities, and residents provided crucial inputs to articulate how food spaces and green structure played out in their daily lives. The role of ethnography in understanding space and place is widely

argued and highlight social shortcoming and help inclusiveness in a trans-local approach (Low, 2016; Dubois, 2019; Moragues-Faus and Sonnino, 2019). Food practices in this study encompassed notions such as closeness, convenience, knowledge, and affordability for fieldwork subjects (Hinrichs, 2003; Seyfang, 2006; 2008; Winson, 2004).

Finally, the nineteenth-century garden city model influenced urban planning theory and practice through its fascinating graphic sets (Sadoux, 2015, p.29), with which Howard communicated and convinced a spectrum of enthusiastic investors regardless of their political streams (Buder, 1990). Driven by this illustrative tradition, the research project applied food mapping and visual methods to examine the garden city theory and layout that include a holistic approach to food in cities. The visual methods bring together the quantitative and qualitative data in the analysis (Chalfen, 2011). The documentation of food-related places leverages maps as a conventional geographical instrument (Cook, 2019), complemented with visual prompts obtained from photographic surveys and residents' images of the food landscape (Harper, 2002; Lapenta, 2011).

Contribution to knowledge

The doctoral study provides new insights into urban food studies in three significant ways: an academic contribution to the field, policy implications drawn from the findings and discussion, and innovative methods to explore different perspectives on urban food.

In recent decades, scholars and practitioners have explored the garden city model in food terms more closely to integrate its principle into sustainable urban planning (Duany and Duany Plater-Zyberk, 2011; Viljoen and Wiskerke, 2012a; Parham, 2015a). These works acknowledge that the garden city model is a valuable tool to reflect on food and the rural-urban interplays thanks to its spatial design and infrastructure (Parham, 2015b; Cabannes and Marocchino, 2018). However, in addition to the physical layout, detailed evidence-based of the garden city model implementation considering the economic, administrative, and social dimensions depicted in Howard's book leaves room for exploration as well as the lived experience of a place. In that sense, the work seeks to contribute to urban food planning and design by highlighting the social, political, and economic drivers for food, using Letchworth as a case study (Yin, 1993, 2009). Many peer-reviewed articles do not focus on food at this level of depth and engagement and only a few of them look at Letchworth Garden City (O'Sullivan, 2016; Hügel, 2017; Cabannes and Ross, 2018).

Research indicates that there is significant potential in applied research by combining traditional techniques of geography and planning with ethnographic methods (Duncan, 2006; Cook, 2019; Hitchings and Latham, 2019; Soma *et al.*, 2021). This doctoral research uses this intersection

between the two disciplines to capture the complex dimensions of food and to characterise its role in health and sustainability, from the transactional logistic aspects of food to the personal socio-spatial experience. In terms of methodology, linking food with human activity and geography demands an innovative approach to link food and activities and geography (Palladino, 2020; Meenar, 2017) and the techniques used in this study to appropriate these food principles add empirically-based work to that understanding.

1.3 THESIS STRUCTURE

Eight chapters compose the body of the document that follow a three-step rationale. The three first chapters set the scene of the doctoral research with this introduction, followed by the literature review and methodology. Each of the four subsequent chapters presents components of the garden city model observable in Letchworth for food economy: spatial, economic, administrative, and social features. The final chapter discusses the previous results and ends with a reflection on the work and the doctoral contribution.

Chapter One to Three: inputs

Chapter 1 introduces the purpose of this thesis. It first presents the rationale and aims of the doctoral research. The second section examines and summarises the literature review findings and foreshadows the methodology, conceptual framework, and main contribution to knowledge. Chapter 2 starts with an overview of the literature search and review process. It then explores the existing literature that mentions the role of food in the garden city model and focuses on the contribution of the garden city model to the integration of food into the urban agenda. Delving further into each realm of exploration, a comprehensive summary of the garden city and food studies highlights a paucity of interactions between the two streams of literature. Chapter 2 concludes by identifying the knowledge gap, research problem and research questions, foreshadowing the methodology explained in Chapter 3, which sets out the research design process, theoretical framework and methods used to conduct the study.

Chapter Four to Seven: findings

Four chapters present the findings associated with the themes identified in the conceptual framework: the spatial dimension and the geography of food in Letchworth, the economic aspect of the garden city implemented in Letchworth Garden City, the political decision processes, and food-related practices. Chapter 4 presents the findings in regard to the food economy in space and time to characterise land cover, including green spaces and food-related locations. Chapter 5 focuses on the land economy at the heart of the garden city, using maps and financial reports alongside individual interviews of local representatives, business owners, and experts. Chapter 6 delves further into the unique administrative setting in Letchworth, exploring the garden city governance and associated land value capture features that underpin an independent and local institution. Chapter 7 is dedicated to the socio-spatial experience of food in Letchworth Garden

City and looks at the everyday inventions of individuals to use their time and environment to conduct daily food practices.

Chapter Eight: discussion and conclusion

Chapter 8 contains the doctoral thesis discussion and conclusion. It first addresses the three research questions outlined in Chapter 2 and considers the findings in light of the literature review. A second section presents the doctoral work as original knowledge and its contribution to academia but also presents potential policy implications for Letchworth as well as the wider appropriation to the urban governance context. Finally, the thesis provides a reflection on the academic journey, including the limitations of the study and new avenues for research.

CHAPTER 2: BRIDGING THE FOOD AND GARDEN CITY LITERATURE

There is in reality not only, as it is so constantly assumed, two alternatives – town life and country life – but a third alternative, in which all the advantages of the most energetic and active town life, with all the beauty and delight of the country, may be secured in perfect combination; and the certainty of being able to live this life will be the magnet which will produce the effect for which we are all striving – the spontaneous movement of the people from our crowded city to the bosom of our kindly mother earth, at once the source of life, of happiness, of wealth, and of power. The town and the country may, therefore, be regarded as two magnets, each striving to draw the people to itself – a rivalry which a new form of life, partaking of the nature of both, comes to take part in.

Howard, 1898, p.6

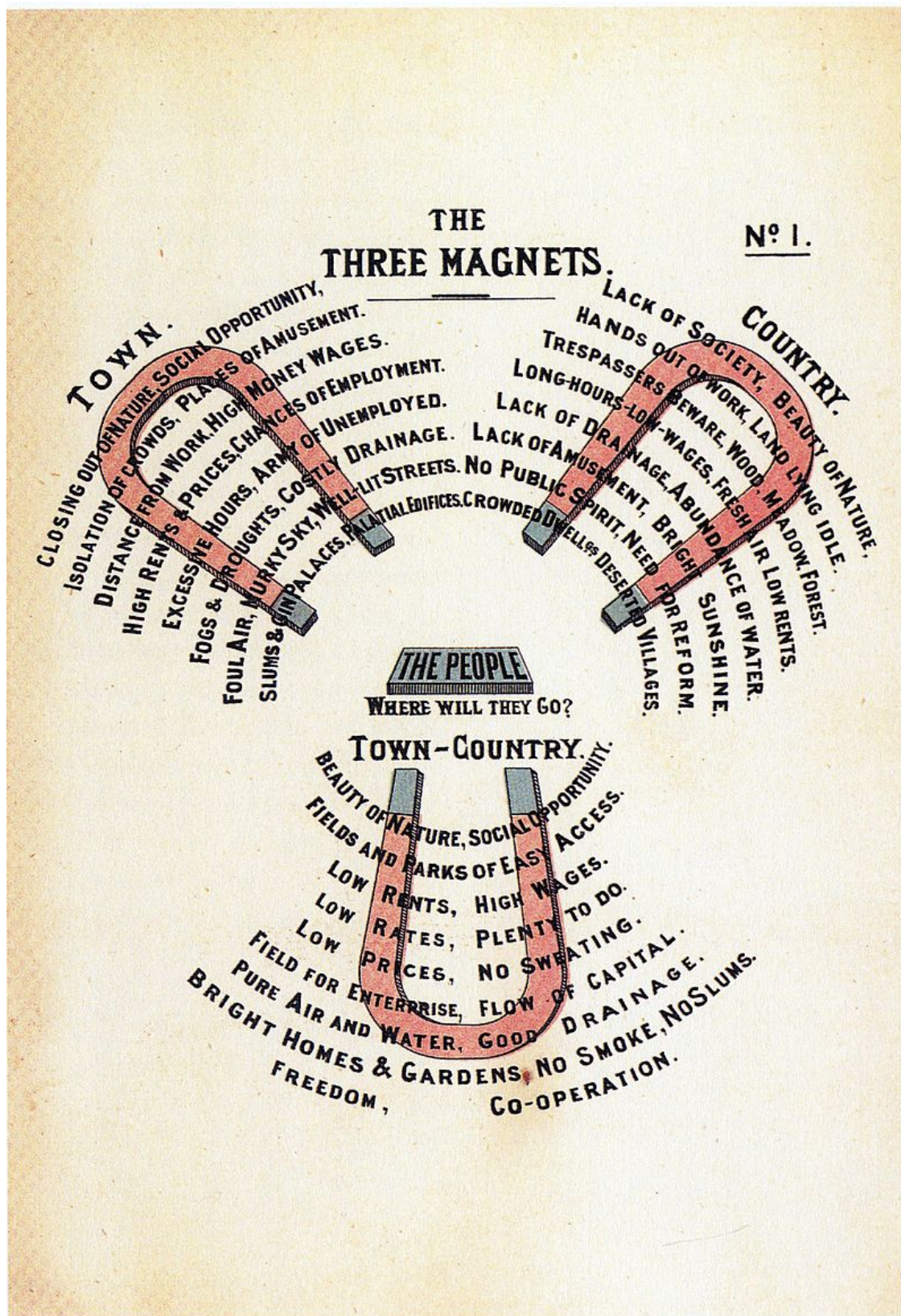


Figure 2.1: Diagram No1 – The Three Magnets, Howard, 1898.

2.1 GETTING STARTED WITH THE LITERATURE REVIEW

This chapter explores existing literature linking the garden city model with today's food approaches. A brief introduction to the chapter presents the literature search and review process and highlights works where garden city and food merge, foreshadowing the importance of food in the garden city model. The second section focuses on the garden city literature that mostly covers the physical features, the network infrastructure, the social objectives, and the political and economic ideal. Key framing points from the garden city literature help contrast the food-system-focused literature and identify correlations between the garden city model and present urban food planning concepts, such as foodscape, foodshed, food policies, governance, and social drivers. The last segment situates the UK and 2020s context of the research and provides research questions for the doctoral study, laying out the foundation for the next chapter that focuses on methodology.

Literature review process

In order to distinguish the existing connections between the literature on the two principal topics, the literature review is divided into two topics: garden city and food economy to identify overlapping themes between the two fields (fig. 2.2). First, the academic literature search of garden city outlines the topic of food and explores its economic, spatial, social, and environmental implications. The food economy literature encompasses city-wide level studies food partnership reports, and significant policies, that can influence local decisions about the food economy. Other keywords that occur frequently in both realms of exploration touch mostly on urban planning to fine-tune the concepts that connect food in the garden city.

To some extent, it is easier to define the scope of garden city literature than it is for food literature. The literature review examines garden city articles for food-related elements or the lack thereof and explores topics that broaden the scope of the food economy. This includes relevant food-related content such as policies, socio-spatial practices, urban design, and placemaking, which together contribute to a comprehensive understanding of the food economy in garden cities.

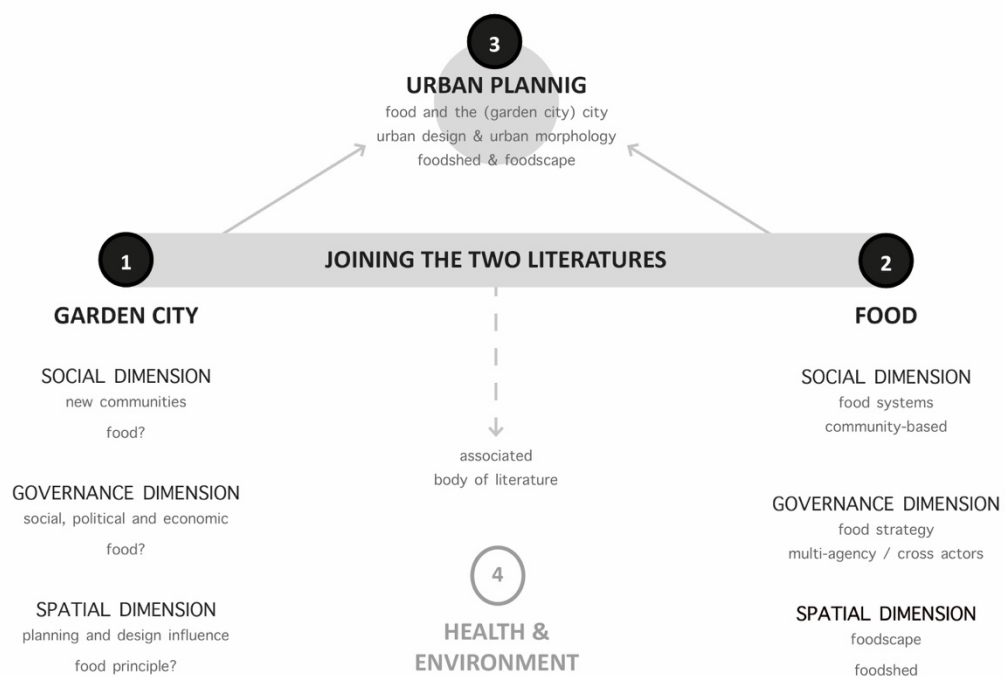


Figure 2.2: Concept map of the main topics of the literature review, Author, 2023

The food literature review, however, encompasses wide-ranging topics with multiple ramifications. The keyword approach with inclusion and exclusion criteria keeps the references relevant to the aim of the doctoral study. The literature review explores the UK and countries with similar modern food systems and markets, including European and North American cases. Other English-speaking countries such as Australia and New Zealand were dismissed from the literature list as climate and the role of the food policy council didn't stand out in the outputs, except where a unique focus was brought forward. Couchman's (2005) article for instance provides insight into distinctive green features of urban design elements of the garden city in New Zealand.

The use of the Library and Research Centre (LRC) at the University of Hertfordshire and its online bibliographic database was the primary source of references, along with the British Library and the Cambridge University Library (Appendix 2.1: key terms search and output of the literature search).

Where the garden city and food literature meet

Although there are similarities in their subject matter, literature on both garden cities and food tends to remain distinct (Brinkley, 2013; Clark, 2003; O'Sullivan, 2016; Hall and Ward, 2014). Monographs on garden city rarely develop in detail its food organisation and often focus primarily on the historical development of the garden city movement (Beevers, 1988; Buder, 1990; Standish, 1999; Miller, 2002a; Sharifi, 2016), the stakes of its social organisation (March, 2004; Hardy, 1979), but there is a paucity of work delving into the food principles of the garden city model in great detail. Similarly, the food literature occasionally cites the garden city as a blueprint for urban food planning yet without extensive insights into its implementation, except for a limited number of examples explored below.

Several texts exploring the relationship between food and cities point to the garden city model as a pioneering idea to plan healthy cities (Duhl and Sanchez, 1999; Steel, 2015; Cabannes and Ross, 2018) and integrated food in planning (Viljoen and Wiskerke, 2012a, 2012b; Brinkley, 2013; Morgan, 2015; Bognon and Cormier, 2018). Pothukuchi and Kaufman (2000, p.114) describe the garden city as “the best example by far of systematic attention to food issues”, including “many aspects of the food system—production, distribution, collective preparation and consumption, and waste recycling—as integral to the city”. In a preceding article discussing the role of municipal institutions in integrating food into the urban agenda (Pothukuchi and Kaufman, 1999, p. 215), they also highlight the close-knit relationship between producers and buyers in the garden city.

Scholars mention the garden city when exploring the history of food in urban planning history (Vitiello and Brinkley, 2014, p.99; Imbert, 2017). Howe, Bohn, and Viljoen (2012, p.99) also investigated the historical backdrop of the open spaces for food production in England, citing the garden city model and its relevance in terms of the financial and institutional model for land management and protection in support to the public interest. Parham's (2015, p.133) ground-breaking work on the convivial city provides a comprehensive approach to food and urbanism and highlights the role of Howard's extensive contribution to the holistic approach of the “food and the three magnets”. Another angle that retains contemporary food studies attention is the integrated agriculture to the garden city (Clark, 2003) and its agrarian urban solutions, emphasised in specific contemporary works (Hall and Ward, 1999; Duany and Duany Plater-Zyberk, 2011).

Some quantitative studies examine the garden city model for food through the lens of its physical, quantifiable, and morphological aspects (Keeffe, Hall and Jenkins, 2016; Yuan *et al.*, 2014). Keeffe, Hall, and Jenkins (2016) challenge the applied feasibility of the garden city diagrams for food production by examining the model based on a caloric self-sufficient approach. They demonstrate that metric figures from Howard's books are not fit to provide self-sufficiency for the

32,000 inhabitants of a garden city and conclude that the garden city is “an unsustainable model” (2016, p.97, p.104). However, the scope and assumptions of their study ignore the social, economic, and political infrastructure of the garden city, which is also crucial both in Howard's vision (1898) and in the urban food system literature (Jarosz, 2011; Kirwan, 2004; Sonnino and Marsden, 2006). Moreover, the erroneous interpretation of two fundamental elements of the garden city, namely the "local option" (Howard, 1898, p.18, p.73) as creating an insular marketplace and the purported self-reliance of the model, expounded in section 2.2.1, positions these investigations in a distinct conceptual framework from this doctoral study, which endeavours to comprehensively scrutinise the garden city model in relation to food.

2.2 LOOKING FOR THE GARDEN CITY FOOD PRINCIPLES

Based on the previous analysis of the existing literature that acknowledges food in the garden city, the following section outlines the garden city backdrop for the study in relation to food following four components: physical, social, political, and economic features to explore the holistic stance of Howard's idea. As a preamble, the crucial influence of the garden city model on urban theory and planning sets out divergent interpretations of the model as a potential dilution of Howard's overall message about food.

A decisive influence on urban planning: dissemination and interpretations

Sir Ebenezer Howard published the first edition of his book in 1898 and laid out the foundation of an urban alternative to the industrial Victorian cities (Hall and Ward, 1998; Hügel, 2017). His foremost goal was the creation of new interconnected self-standing cities that offer decent and fair living conditions for new communities. Visually summed up with the "Three Magnets" diagram (fig. 2.1), the garden city combines the advantages of the city, with vibrant life and economic opportunities, on the one hand, and the country with affordable housing and access to healthy natural spaces, on the other hand.

The garden city movement met an initial success despite shortcomings in fully meeting Howard's holistic vision with the implementation of the agricultural belt (Edwards, 1913; Mumford, 1965; Beevers, 1988; Miller, 1989, p.137; March, 2004; O'Sullivan, 2014). Associated with the genesis of town planning (Buder, 1969; Fishman, 1977; Phillips, 1977; Ward, 1990, 1992; Hall and Ward, 1998), the garden city model had a compelling influence on the international development of the new urbanism discipline (Heathorn, 2000; Steuer, 2000; Miller, 2002a; Parsons and Schuyler, 2002; Sharifi, 2016; Monclús and Diez Medina, 2018). A catchy name (Ward, 1990), pragmatic description of financial calculations and diagrams (Buder, 1990; Tizot, 2018), many publications (Miller, 2002b), charismatic propagandists such as Purdom, Unwin, Parker, Culpin, Adams, Osborn, and Howard himself, who strategically campaigned, (Unwin, 1909; Hardy, 1992; Lock, 1999; Heathorn, 2000) can explain the successful dissemination of the idea to a large audience (Hardy, 1992; Domhardt, 2012; Geertse, 2016).

While the garden city offers a breadth of values to which various investors could relate through different angles, its integrity was somehow compromised after the dissemination and interpretation of the garden city movement on an unprecedented international scale from its early stages (Culpin, 1913; Beevers, 1988, p.89; Hardy, 1992; Ward, 1990, 1992; Hall and Ward, 1998; Meyers, 1998; Richert, 1998; Miller, 2002a; Hall, 2014; Geertse, 2016; O'Sullivan, 2016, p.167; Tizot, 2018). As

a result, Howard's central principles of land economy and administration were disregarded shortly after its publication (Clark, 2003, p.95; Phillips, 1977, p.98). Fishman (1977, p.87) concluded his chapter dedicated to Howard's work as such: "Nothing is more discouraging to any idealistic movement than partial success" and whether the garden city is a failed or successful model is still debated (Sutcliffe, 1990). This dispute suggests an opportunity for exploration between what the theoretical model represents in planning history and the mitigation of its central values once built. This includes the garden city food-related economy, yet the importance of food in the garden city through the role of agriculture, transportation, community, land use and ownership (Ward, 1992, Hall and Ward, 1999, p.200), suggests the holistic approach underpinning the local food economy in the garden city model.

2.2.1 Physical patterns and food landscape: 'diagram only'

In his book, Howard represented his idea with a circular conceptual diagram (1898, p.14) (fig.4.1 and 4.2), clarifying later that "each garden city must be carefully designed in relation to the site" (1898, p.131). However, his diagrams are sometimes understood as literal blueprints (Clark, 2003, p.91; Keeffe, 2016, p. 91; Fishman, 1977, p.41, p.69), bringing conflicting interpretations regarding the purpose of the visual supports (Mumford, 1965, p.32; Eckdish Knack, 1998, p.4). This confusion might explain the prevalence of the layout over the social aspect at the heart of the garden city (March, 2005; Bookchin, 1974 in Clark, 2003, p. 95). However, the overarching physical feature of a 6000-acre municipal entity divided into two main areas, is central to his vision: the town estate of 1000 acres and the agricultural estate of 5000 acres (Howard, 1898, p.20, p.31).

Food in the agricultural and the town estates

The agricultural estate functions in two distinct capacities: firstly, it serves as a barrier to the urban spread of the town, as evidenced by Purdom's assertion in 1913 (p. 108) that it is "mainly for agricultural occupation" (ibid, p.117). It also provides food and employment opportunities for the town, with various types of husbandries, including smallholdings, fruit farms, cow pastures, and large fields (fig. 4.1), to ensure a wide range of staple food (Harris, 1907, p.40; Howard, 1898, p.18; Adams, 1905, p.92). Food production in the Garden City benefits the residents in both social and economic terms. In addition, it represents affordable investment opportunities and entrepreneurial projects for private households on an individual scale (Howards, 1898, p.18; Adams, 1905, p.40;

Purdom, 1913, p.117). Direct access to a local market is strategic for smallholdings (Adams, 1905, p.51; Howard, 1898, p.18; Purdom, 1913, p. 116) in the view to create “[...] new means of distribution [that] are bringing the producer and the consumer into closer relations, and thus (by reducing railway rates and charges, and the number of profits,) are at once raising prices to the producer and diminishing them to the consumer [...]” (Howard, 1898, p.143). The agricultural belt is also the place for education and rural industries (Adams 1905, p. 44). An attempt to develop a local and comprehensive policy for agriculture in Letchworth in the mid-1910s was dismissed by the Garden City Association (GCA), created in 1899 to support the project and the garden city idea in its early stage (Culpin, 1913), suggesting divergent internal agendas regarding agricultural matters (Beevers, 1988, p.127). Despite fruit farms and small holdings in Letchworth, the agricultural sector met its limits at an early stage compared to Howard’s ambition (O’Sullivan, 2016, p.171).

Food production in the town estate is made possible with additional allotments on the edge of the agricultural estate (Howard, 1898, p.26), private and shared gardens (*ibid*, p.14) for one’s food growing and consumption or as a complement of wage to improve livelihood (*ibid*, p. 17). The productive garden can sometimes be seen through the lens of a romanticised and idealistic vision of country life (Purdom, 1913, p.108), with benefits in terms of spirituality and health (Howard, 1898, p.9; Purdon, 1913, p.106).

Town and agricultural estates are separated but work together: the town estate is designed for a convenient and efficient food economy from production to waste management. This loop allows short-distance transportation and fresh local production sold in town (Creese, 1966, p.205). Some suggest that Howard's vision reflects his own memories of the farming challenges he faced in America (Beevers, 1988, p.5; Fishman, 1977, p.35). Howard was indeed acutely aware of the obstacles that producers encounter in the food supply chain, where numerous intermediaries and speculators can impede access to markets (1898, p.23). In the garden city, the “Crystal Palace”, also referred as “Grand Arcade” (Howard, 1898, p.14, p.75), is a publicly owned place for the exhibition, trade, and retail of local products from local agricultural production and manufactures. Howard (1898, p.68) described a retail trade network system in detail as an opportunity for individuals to operate businesses (*ibid*, p.73), privileging local traders, yet open to competitiveness (*ibid*, p.33). Most shop leases are for 99 years to ensure control over speculation and stable economic activities facing economic change (Howard, 1898, p.75; Fishman, 1977, p.66; Beevers, 1988, p.95). The town estate is an economic recipient of the local food production (Aalen, 1992; Clark, 2003, p.91) and a neighbourhood, called a ward (fig. 7.1), should provide trading activities and every basic service within walkable distance (Howard, 1898, p.38).

Industry, transportation, trade, consumption, and the myth of self-sufficiency

Industrialisation in the 19th century also included agriculture, which was one domain of the modern economy to change drastically with mechanised tools (Tizot, 2018, p.16). The garden city is thus a “town of the industrial age” (Geddes, 1968, p.154) for the “betterment of industrial life throughout the country” (Howard 1898, p.123). Improvement of the countryside guarantees “a place for business” (Purdum 1913, p.140) that offers jobs next to residential areas thanks to a systematic way of planning and building (1913, p.149). Firstly, employment opportunities, ensured by productive cities with agriculture, industries, and retail outlets (Stranz, 1984), are within walkable distance from residential areas (Howard, 1898, p.48; Adams, 1905, p.51; Fishman, 1977, p.41). Secondly, agriculture must be closely associated with manufacturing sites and factories strategically connected with a transportation rail system for effective freight, roads or canals (Howard, 1898, p.16; Adams, 1905, p.32, p.43) (fig. 1.1 and 2.3). This network, based on the proximity of workforce and customers, offers an advantage to local producers and retailers for trading (Howard, 1898, p.79; Adams, 1905, p.21). The rural and urban realms work in synergy, and the organic waste cycle is part of the local food system of a garden city (Howard, 1898, p.32, p.37; Clark, 2003, p.89) with “the waste products of the town could, and this without heavy charges for railway or other expensive agencies, be readily brought back to the soil, thus increasing its fertility” (Howard, 1898, p.24). Economically efficient, this organic-waste feedback loop also saves time in the management of the agricultural estate and is embedded in the overall planning (Howard, 1898, p.26):

There are yet other reasons why the rent which a farmer on the Garden City estate would be willing to pay for his farm, or a labourer for his allotment, would tend to increase. The productiveness of the agricultural part of the estate being increased by a well-devised system of sewerage, and by a new and somewhat extensive market, its unique convenience for transit to more distant markets, would also be increased because the tenure of which the land his help encouraged maximum cultivation.

Self-sufficiency is sometimes considered a prerequisite in the garden city model (Heathorn, 2000, p.114; Clark, 2003; Alexander, 2009; Keeffe, Hall and Jenkins, 2016; Szibbo, 2016). This position is, however, disputable when delving into Howard's manifesto. The "local option" (Howards, 1898, p.18, p.73) is based on the competitive model of capitalism and is still open to international market to enhance performance. Entrepreneurs could trade abroad, as much as customers could purchase goods from anywhere. The local option is rather an appropriate system to ease relationships between producers and costumers, a sensible short supply-network system, described later by members of the Garden City Association as an "exceptional opportunity for the disposal of (the

producers') produce" (Harris, 1907, p.40), with "a new market direct to hand for the sale produce" (Culpin, 1913, p.25). Through the local option, the townspeople can integrate the garden city economy and influence the decision regarding the number and quality of local services (Howards, 1898, p.80; Osborn, 1969, p.30) because "if the population was dissatisfied, it could exercise its power through withdrawing its support from a particular vendor or industry" (Clark, 2003, p.92).

Social city: the ward and the regional planning

The success of the garden city would lead to multiple similar experiences (Howard, 1898, p.128): the ultimate goal of the experiment was to scale up the settlements into a network of interconnected garden cities called "Social Cities" (ibid, p.133) (fig. 1.1 and 2.3): a 12,000-acre central city with 58,000 residents connected by railway to eight other 32,000-people garden cities, for a total of 250,000 people, and surrounded by a pedestrian-friendly rural belt (1898, p.131). Later understood as a "network of urban nodes" (Heathorn, 2000, p.114) or as a "network of cities against capitalism" (Clark, 2003, p.92), the social city represents small autonomous clusters networks of communities and economic units, over which each municipal management keeps its power (March, 2004, p.411).

Fundamental new models of a comprehensive vision of planning inspired by the social city, such as Regional Planning (Meyers, 1998; Parsons, 1998), represent the appeal to large-scale unity in terms of a place that brings together rural and urban areas (Geddes, 1968, p.343; Meyers, 1998; Freestone, 2002, p.64; Pozzer *et al.*, 2012, p.60; Vernet and Coste, 2018, p.47) as well economics (van der Gaast, van Leeuwen and Wertheim-Heck, 2020). Besides, the regional scale reflects levels of food production and the concept of foodshed, also explored in section 2.3.1, relevant to sustainable food planning (Parham, 2015, p.245).

Subsequent interpretations of regional scale in planning inspired by the social city can sometimes be associated with zoning and segregation of the city's functions (Meyers, 1998, p.297; Sharifi, 2019), but Howard's fundamental theory was the idea that an active community "depended on stable and enduring primary and small group relationships" (Buder, 1969, p.397). The legacy of the garden city on the multi-level organisation (Domhardt, 2012) evolved with an increasingly sustainable component within neighbourhoods' scale in urban movements of the twentieth century (Sharifi, 2016; Swart *et al.*, 2021).

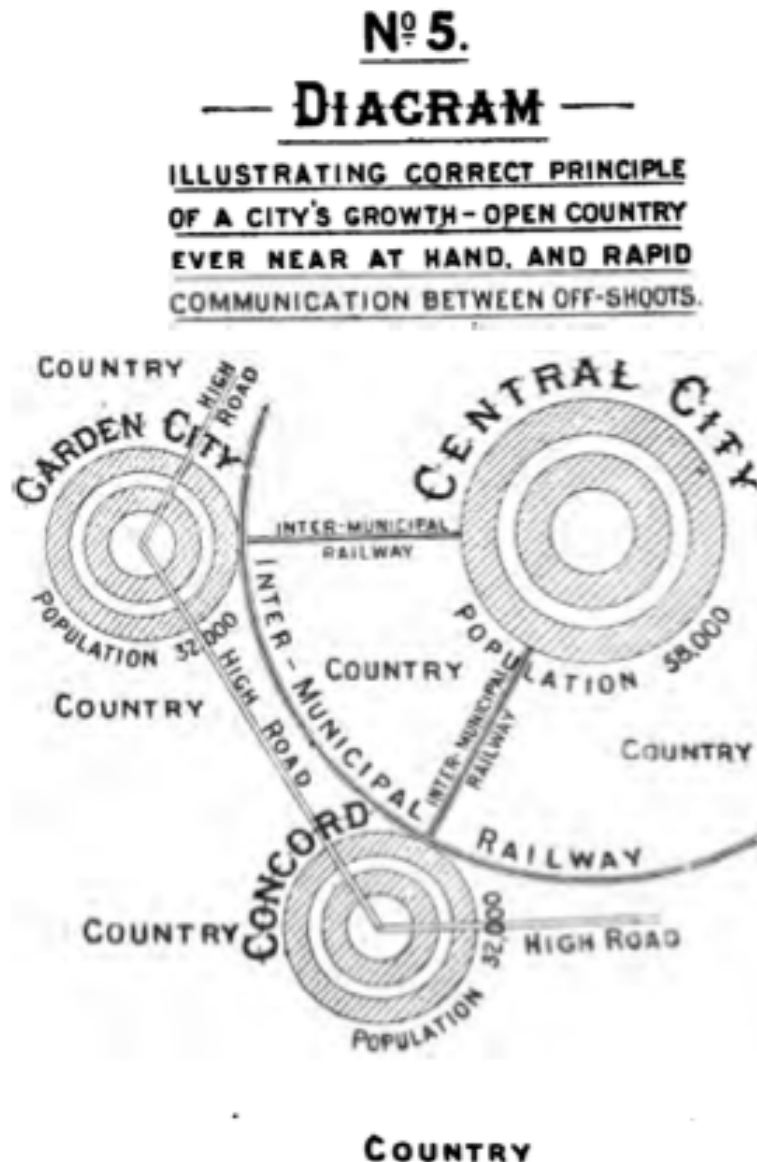


Figure 2.3: Diagram No5: City's growth and open country, Howard, 1902.

Accelerated with the expansion of car use in the 20th century (Creese, 1966; Fishman, 2002), the suburban low-density patterns shifted in the fifties with the middle class accessing private homes with gardens, seen as a sign of economic and social emancipation (Clapson, 2000). Consequently, connections between the garden city and the suburbs are suggested in texts (Osborn, 1969, p.40; Ward, 1992, p.128), fading a bit more the role of food in the garden city model (Livesey, 2019, 96).

2.2.2 Social drivers for independent communities

The garden city literature explores the intertwined environmental and social issues and connects spatial layout with the creation of inclusive communities (Eckdish Knack, 1998; Heathorn, 2000, p.124). Howard's social reform was found in the influence of the environment on social demeanours and health (Buder, 1969, p.397; Clevenger and Andrew, 2017, p.6; Creese, 1966, p.204; Miller, 2002, p.8; Fishman, 1977, p.41), a revolution led by design established "peacefully" and "spontaneously" (Fishman, 1977, p.28).

A healthy and decent living for communities: an environmental concept

Nature in the garden city embodies the nurturing background of a spatial organisation for a new social order. Illustrated by Purdom's (1913, p.109, p.111) narrative, the picture of the garden city community entails gardeners foraging orchards and neighbours exchanging knowledge. Gardens and allotments were a backdrop for a healthy, decent, and active life for residents wandering in the fresh air embraced by a community spirit (Adams, 1905, p.111; Purdom, 1913, p.104; Gillette, 2010; Livesey, 2011; 2016). As a result, the garden city can be understood as a physical and environmental concept (Meacham, 1999; Pozzer *et al.*, 2012; Szibbo, 2016; Swart *et al.*, 2021) for a new form of urban life directly generated by an "environmental ideal" (Buder, 1969, p.397, 1990, p.65) that stood in opposition with the industrialised cities (Beevers, 1988, p.5; Mumford, 1965; Paquot, 2005, p.66). Some critics dispute this idea and argue that the low density featured in the garden city principles impinges on community building (Heathorn, 2000, p.114), and instead, the garden city should be a dense bounded city as opposed to an endless urban sprawl disconnected from the countryside resources (Mumford, 1965; Fishman, 2002).

The garden city social message for new communities seems more difficult to convey to potential interested audiences (March, 2004, p.409). Ward (1998) regrets the misinterpretation of Howard's social reform bypassing the interplay between land and community. While Howard is perceived as a utopian because of his expectation of social changes (Heathorn, 2000, p.11), the garden city environmental feature, emptied of its social application (Ward, 1998, p.129), reaches an incomplete conception connected with the contemporary imaginary of nature, sometimes used as a brand or flagship (Johansson, 2012).

Local administration and publicly owned land for food community benefits

Howard was engaged with the extensive reform stance that accompanied drastic social changes in the nineteenth century (Buder, 1990, p.24; Gillette, 2010, p.18) and collective land ownership was the mainstay for a social reorganisation (Heathorn, 2000, p.115; Tizot, 2016, p.116). The Land Nationalisation Society created in 1881 in the UK was of interest to Howard (Aalen, 1992; Hardy, 1992; March 2004, p.416), albeit he did not trust central control to rule on the local level (Heathorn, 2000, p.117; Fishman, 1977, p.10; Tizot, 2018, p.7). In Howard's view, local management was preferable to obtain support from the population (Beevers, 1988, p. 38; Clark, 2003, p.90; Szibbo, 2016, p.132) and redistribute decision-making power (March, 2004, p.416) with a closer relationship with those in authority (Mumford, 1965, p.35).

The purchase of the land at agricultural value by the municipality of the garden city for both town and agriculture (Howards, 1898, p.33, p.22; March, 2004, p.411) is a political process with two major benefits. Making the land public is a shield against speculation (Howard, 1898, p.75; Beevers, 1988, p.183), breaking the monopoly of few large landowners in favour of co-operatives and redistribution of profits made (Unwin, 1914, p.20) and offered less expensive tenure that ultimately, would attract industries to settle in (Purdom, 1913, p.144). The 99-year leases ensure a fair tenure of land and prevent any increase of rent for the tenant (Adams, 1905, p.92; Beevers, 1988, p.127; Fishman, 1977, p.66) and supersede capitalist speculation (Clark 2003). Foreshadowing the discussion in the next section, a crucial aspect of the garden city is that agricultural land values remain lower than urban ones, and the Land Value Capture (LVC) central to the garden city model is devised to prevent garden city inhabitants from bearing the brunt of these speculative expenditures.

2.2.3 Economic and political model underpinning the garden city food system.

Unearned increment: the rate-rent reinvestment

Howard wanted to achieve his social goal with entrepreneurship tools, but the "capital venture" superseded the "cooperative commonwealth" (Tizot, 2018, p.15). These compromises to implement the social ideal within a liberal market blurred Howard's social message (March, 2004, p.428). However, this economically innovative idea of Howard stems from community ownership and the land value capture scheme, which is the reinvestment of the rents within the local economic loop (Mumford, 1965, p.38). The reinvestment loop profits the community (Purdom, 1913, p.144) and

offsets profits made from land use into improvement by a unique and public owner of the town estate that oversees the rise of the land value. Rents paid by households and businesses include this increased rate, the “rate-rent” (Howard, 1898, p.28), which compensates the increasing value of the land but keeps the difference within the financial loop. The “vanishing point of the landlord” (fig. 5.1) meant that land should not be owned by private landlords, enabling access to the land and housing for farmers and residents (Howard, 1898).

Additionally, the "rate rent" (Howards, 1898, p. 28) pays for local purposes, such as civil engineering constructions, maintenance, and social and cultural benefits. The revenue generated from the garden city came from the agricultural and town estates including household and enterprise activities. This “unearned increment” (ibid, p.27) by a unique landlord for their own profits is rather “collectively earned”, kept, and reinvested (ibid, p.21). A garden city thrives with a reinvestment model for small self-contained economic units (Lock, 1991; March, 2004, p.422). Despite the detailed cost analysis to prove that his model is economically viable (Howard, 1898, p. 35, p.52), there is a scarcity of economic implementation in existing garden cities (Szibbo, 2016, p.142), to the point that some scholars cast doubt on the feasibility of such an economic model (Hügel, 2017, p.2). Letchworth had a difficult financial and productive start (Beevers, 1988, p.80; March 2004, p.414; O’Sullivan, 2016, p.170; Szibbo, 2016) but remains nonetheless a unique example where the Land Value Capture (LVC) is in place, also explored in section 2.3.2, the closest version of Howard’s original economic vision (Lewis, 2015; O’Sullivan, 2016, p.170).

The land economy at the heart of the garden city is not often explored, but some articles show how distinctive it is to the model (Lewis, 2015; Parham, 2016a, 2016b; Szibbo, 2016, Sullivan, 2016). The system is lauded for its efficacy in facilitating the transition of residents into a local welfare state once investors have been repaid (Sadoux, 2015, p.30). Beyond the local economic aspect, Sadoux (2023, p.3) highlights the unique role of large landowners and their role in the planning process, as they “are in a position to provide the land needed to build the new settlements that successive governments have called for, is in itself an incentive to document their perspectives and investigate the range of initiatives they are involved in to promote new settlements”. If Sadoux's article focuses on the critical issue of housing shortage in the UK, this assertion can also refer to the limitations that regular local authorities face in providing land for food production to implement land stewardship and Urban Agriculture (UA) as other articles mention (Fainstein, 2011; Bunce and Aslam, 2016), explored in section 2.3.2.

Governance structure and local democracy

The redistribution of wealth and power is given practical expression through an autonomous self-managed municipal administration, which is embodied by municipal groups structured around a central council and three additional departments in charge of projects on behalf of the residents (fig. 6.1) (Howard, 1898, p. 67). Howard depicts the board of management as a representation of the collective management based on a private model for public actions (ibid, p. 64), setting into motion the different wheels of private and public interests. Tizot (2018, pp.14) highlighted the similar feature of the management of the garden city with a “large private company”, whereas Hebbert (1992, p.134) stresses the “charitable and philanthropic organisation”, which “remains a uniquely altruistic planning model”. Today, most garden cities are garden suburbs lack the administration structure for a municipal economy, unlike the world’s first garden city built following a cooperation deal with the Garden City Pioneer Company that purchased the land in 1902 (Beevers, 1988; Buder, 1990). In 1903, The First Garden City Company Ltd. validated the town’s masterplan and started its construction (Culpin, 1913; Harris, 1907; Beevers, 1988; Buder, 1990). This distinctive self-funding structure evolves but remains in place over the years (Lewis, 2015, p. 155), saved in 1962 (Letchworth Garden City Corporation Act, 1962) and then converted into a charitable organisation, the Letchworth Garden City Heritage Foundation with its own Act of Parliament (1995). Today, the Letchworth Garden City Heritage Foundation (LGCHF) is the largest landlord in Letchworth and manages 5,300 acres of the town (Lewis, 2015, p.153; LGCHF, 2023i).

March (2004, p.409), however, outlines four tensions opposing core values as gaps between two approaches in the garden city democratic model between inclusiveness and decision, central and local, right and utility, equality and liberty. The common point emerging in all pairs was an argued antagonism between individual and collective interests for implementation (2004, p.412). As a result, this amalgam leads to further confusion about the garden city's social purpose, diverting focus towards its physical and design features (March, 2004; Szibbo, 2016; O’Sullivan, 2016).

Garden city model: towards the current food-systems approach

The traditional design-based approach of the garden city keeps inspiring architects and urban planners (Duany and Duany Plater-Zyberk, 2011; Stern, Fishman and Tilove, 2013; Sadoux, 2023). The entry point of food on a regional scale is commended by a few authors with urban planning and urban theory as a starting point (Brinkley, 2013, p.248; Hall and Ward, 1999). More recently, in the UK, the Wolfson Prize was awarded to the planning practice URBED for their proposition

of garden cities on a regional scale (Hurley, 2014; Bradbury, 2015; Clevenger and Andrews, 2017; Vernet and Coste, 2017). All these accounts demonstrated the increasing relevance of regional economics (van der Gaast, van Leeuwen and Wertheim-Heck, 2020) and the use of the land value capture scheme, as well as the social, political, economic trans-scalar dimension of the model (Rudlin, 2015; Falk, 2017; Sadoux, 2023).

The importance of the social dimension and rethinking the garden city for new sustainable communities is paramount to Howard (Lock, Henderson and Ellis, 2017; Sadoux, Cantaroglou and Gloor, 2008), who had a holistic understanding of the garden city's food economy, including a market close by for short transportation distances, a return of organic waste to land, fair and just land tenure, regional planning, land use strategy, community empowerment, and spatial organisation and land available for food growing. Meanwhile, the world's population should reach nearly 10 billion by 2050, 66% of whom live in urban areas (United Nations Department of Economic and Social Affairs, 2014, 2017, 2019). New food systems are experimented in urban areas and lead to solutions, such as urban agricultural movements (Cockrall-King, 2012) alternative food networks (Jarosz, 2008), local food supply networks (Martinez *et al.*, 2010), retrofitting food in cities (Parham, 1992; Parham and McCabe, 2016) or cross-cutting scales of governance including urban scopes (Haysom, 2015), which are the focus of the following section.

2.3 LOOKING AT THE URBAN FOOD SYSTEM APPROACH

The garden city literature review conducted so far identifies three overarching features that apply to a food economy framework: the spatial layout of the garden city model, the community components that support the model, and the economic mechanisms at the heart of the garden city administration. These premises call for consideration of urban design and foodscape, trans-scalar planning (including financial and political models), and social factors influencing food decisions. Before exploring these aspects in the food literature, a section examines current food system paradigms, explored in the section below to determine the food economy's conceptual background.

Food system paradigm for food security

In several academic research projects, the notion of a food system is considered as a mechanism behind the dynamic of the food economy (Donald and Blay-Palmer, 2006; Vitiello and Brinkley, 2014; De Schutter, 2017, 2019; Miralles, Dentoni and Pascucci, 2017). A definition of a food system includes the sub-systems from production to waste of food activities, based on a multi-level socioeconomic network, and environmental dynamics (Pothukuchi and Kaufman, 1999, p.218; Brinkley, 2013, p.243; Moragues-Faus, Sonnino and Marsden., 2017, p.183; Tendall *et al.*, 2015, p.19; Nguyen, 2018). Today, the modern dominant food system in the Global North, referred to as the conventional food system in this thesis (Brinkley, 2013), results from a post-WW II strategy with standardisation of food output and distribution, following a worldwide and productivist rationale identified by scholars (Barling, Lang and Caraher, 2002; Kirshenmann, 2008; Lang, Barling and Caraher, 2009; Brinkley, 2013, p.245; Gardiner, 2013; Krebs, 2013).

In this system, a reduced number of big corporations decide on the market prices (Lang, Barling and Caraher, 2009; Lang and Heasman, 2015), generating an imbalance of power relationships along the food chain (De Schutter, 2017; Morgan, 2015) and prejudices for small-scale businesses that struggle to meet requirements to enter a global market (Renting, Marsden and Banks, 2003; Raynolds, 2004; Jarosz, 2008). Besides, it is broadly argued that this productivist model, based on oil dependence for agriculture, food distribution and consumption (Kirschenmann, 2008; Lang and Barling, 2012; Maye and Kirwan, 2013; Parham, 2015a) causes environmental damage (Kneafsey *et al.*, 2013, p.34), notably in the loss of biodiversity due to intensive large-scale monoculture (Jarosz, 2008, p.233; De Scutter, 2017). Overproduction distorted land use as well as body capacity (Lang, 2010) with the “pseudo food” (Winson, 2004, p.301), characterised by empty calories, high in fat and sugar and nutrient poor. Hunger and obesity are the two faces of the same coin and represent the productivist model's failure on health (Brinkley, 2013; De Schutter, 2019)

contributing to the increase of non-communicable health problems such as coronary artery disease and type II diabetes (Barling, 2007; Beyranevand and Broad Leib, 2017)

If production is still the foremost focus of the UK's official stance towards food security (Ingram *et al.*, 2013), somewhat side-lining local food system approach (Kirwan and Maye, 2013), new emerging gears such as nutrition and cross-sectoral food system approach provide a framework, summarised by Lang and Barling (2012) in Table 2.1. From simple access to safe food everywhere at all times, food security is today complexified (Moragues-Faus, Sonnino and Marsden, 2017, p.185). The neo-Malthusian approach to food security based on demographics and the risk of depleting resources opens the food security definition to different factors impinging on food access (Morgan, 2015; De Schutter, 2017, 2019). This approach gives rise to two conflicting food security paradigms (Lang and Barling, 2012; Morgan, 2015, p.1380; Moragues-Faus, Sonnino and Marsden, 2017): one-centred on a productivist model as supply- and demand-based response (Krebs, 2013), and the second on the food system, focusing on distribution rather than mere quantity (Moragues-Faus, Sonnino and Marsden, 2017; Morgan, 2015; Lang and Barling, 2012).

Scholars who look at a new approach to a food system consider new bases of reflection for transition and sustainability (Hinrichs, 2014) that constitute a “new food equation” (Morgan and Sonnino, 2010, p.210; Sonnino, 2016) bringing “new fundamentals” to the food security agenda (Maye and Kirwan, 2013, p.2) to mitigate the rising urban population, energy pressure, land and water scarcity, global climate change, and agri-food sector labour issues. While the conventional agro-food system, as defined earlier, was understood on a macro-level until the 1970s, a new perspective considers the micro-level associated with the social dimensions that emerged in the 1990s economic theory (Kirwan, 2006). Hence, the food system paradigm seems to share commonalities with the garden city structure by including a progressive trans-scalar approach (Jarosz, 2011), underpinned by social science for multi-actor decision-making bodies (Lang, 2010b; Kirwan and Maye, 2013; Maye and Kirwan, 2013; Sonnino, 2019), fostering place-based solutions to address environmental and socio-economic inequity of the conventional approach to food security (Sonnino, 2013, p. 6; Sonnino, Marsden and Moragues-Faus, 2016; Cerrada-Serra *et al.*, 2018).

Now the broad background of food research is set out, the following three sections explore the geographical aspects of food, the political and multi-layered nature of the food economy, and the different aspects of social drivers for food decision and access.

Table 2.1: Some terms contributing to food security discourse, Lang and Barling, 2012, p.322

Term	Focus	Policy implications	Illustration
Autarky	Production from within closed borders	Usually implies existence of authoritarian control	Cambodia Pol Pot 1970s regime (Kiernan 2008)
Food control	System of regulations and measures to meet the interests usually of the state (rationing)	'Top down' system of control; usually rationing (if state); contracts and specifications (if commercial)	British food rationing in World War 1 (Beveridge 1928)
Food capacity	Ensuring capability and potential to produce	Building natural, social and economic capital to enable food system maintenance	Swedish Food 21 programme to build farm and food capacities (Institute of Food Sciences (Sweden) 2005)
Food defence	Anticipation of stockpiles in dire circumstances	Stockpiles and back-up systems	Grain stocks; proposal to create new 'virtual' grain stocks system (von Braun and Torero 2008)
Food democracy	Full social engagement with decisions	Investment in citizenship throughout the food system to move from passive to active modes of relating with food	Historical perspective on uneven growth of English food democracy 14th–20th century (Lang <i>et al.</i> 2009)
Food nationalism	General aspiration for national self-sufficiency where possible	Combines appeals to produce and consume nationally sourced food	Celebration of national culinary cultures (Wilks 2001); 'buy country X' marketing appeals
Food resilience	Capacity to recover from or withstand shock	Requires assessment of risks and what is necessary to ensure recovery	Planning to restore food supplies after shock (terrorism, tsunami, oil crisis, etc.) (Peck 2006)
Food rights	Ethical principles to shape supply	Building strong social networks to ensure people have a sense of entitlement	FAO 2004 voluntary guidelines for governments to activate; Brazil and South Africa have it in their constitutions (FAO 2004)
Food risks	Any factors that threaten goals	Having monitoring systems to detect	WHO Global Environment Monitoring System – Food Contamination Monitoring and Assessment Programme (GEMS/Food) (WHO 2011)
Food sovereignty	Movement articulating the right to define one's own food system, usually associated with small farmer viability	Support for small farmers and the rural infrastructure against perceived threats to existence represented by agribusiness	Campaign work of Via Campesina peasants organisation (Borras 2003)
Food sustainability	Food systems must be designed to exist for the long-term	Defining food systems to meet multiple criteria and values	Position proposed by UK Sustainable Development Commission (Sustainable Development Commission 2009a)
Food welfare	Safety nets for availability	Food donations or welfare benefits to enable poor to buy	Food stamps (MacDonald 1977); Food Banks (Poppendieck 1999)

2.3.1 Shaping the multi-faceted framework of food economy.

This section characterises the shift from the global market-driven conventional food system to alternative food economies, including shortened distances in the food supply chain (Pretty *et al.*, 2005). Creating new economic markets that support the local economy (Niemi and Pekkanen, 2016; De Schutter, 2019), these endeavours for change have an overarching goal to re-connect population to the food system in a set of shared values (Marsden, Banks and Bristow, 2000; Renting, Marsden and Banks, 2003; Sage, 2003; Jarosz, 2008).

Alternatives to the modern food systems: localising the foodshed

The Alternative Food Network (AFN) movements originated in the early 2000s (Marsden, Banks and Bristow, 2000) and dispute the limited interactions between production and consumption due to the delocalisation of the conventional food system (Sonnino and Marsden, 2006, p.183; Winter 2003; Feagan, 2007, p.24). AFN was primarily “a broad embracing term to cover newly emerging networks of producers, consumers, and other actors that embody alternatives to the more standardised industrial mode of food supply” (Murdoch *et al.*, 2000, cited in Renting *et al.*, 2003, p.394). A growing body of AFN literature revolves around four specificities: a reduced number of intermediaries in the food supply chain, localised small-scale supply chains associated with an overall commitment to the local communities, direct purchasing venues, and economic and environmental commitments (Jarosz, 2008; Mastronardi *et al.*, 2015, 2019; Bos and Owen, 2016). These features contribute to three interconnected outcomes: support for small-scale production, re-localisation of food around shared values, and restructuring of urban and rural areas on a regional level (Jarosz, 2008, p.232; Kneafsey *et al.*, 2013, p.13).

However, Tregear (2011) notes that the widespread use of AFN in food literature can generate issues in the definition of its structural features, due to underestimated shortcomings and lack of feedback on practices. Acknowledging these limitations, in this thesis AFN is used as an umbrella term that covers economic market, practices, and stakeholders (Sage, 2003) and includes other terms that describe alternative stances to the modern food system, such as Community Supported Agriculture (CSA) (Jarosz, 2008), Short Food Supply Chains (SFSCs) (Giampietri, Finco and Del Giudice, 2016; Fabbrizzi, Menghini and Marinelli, 2014; De Pascale *et al.*, 2017; Koutsou and Sergaki, 2019; Vittersø *et al.*, 2019) or Local Food System (LFS) (Feagan, 2007).

The power relationship imbalance in the conventional food system shows a form of monopoly in the middlemen remit (De Schutter, 2019, p.21) that limits the integration of small-scale businesses to dominant conventional economic markets (Jarosz, 2008; Brinkley, 2018) (fig. 2.4). The Short Food Supply Chain (SFSC) constitutes an alternative response to the conventional food system and is defined by a reduced number of economic intermediaries along the food distribution stages that enhances direct production to consumers, as shown in Figure 2.5 (Chiffolleau *et al.*, 2019; Kneafsey *et al.*, 2013, p.13; Levkoe *et al.*, 2018, p.108; Todorovic *et al.*, 2018).

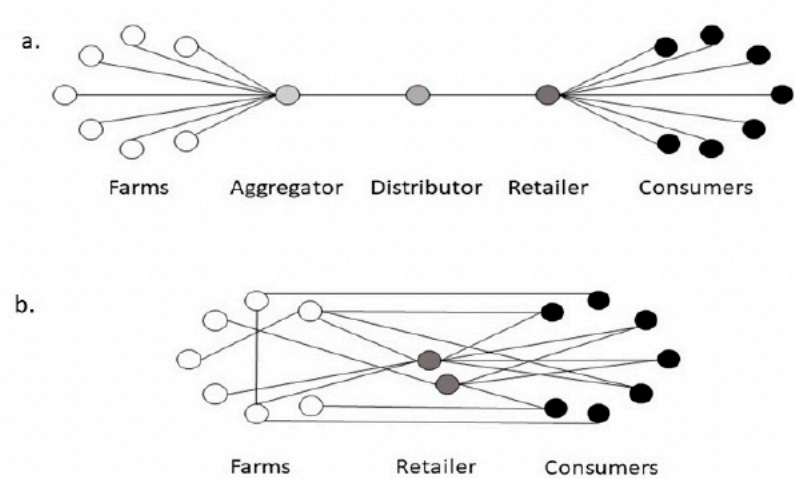


Figure 2.4: Archetypes for a centralized food distribution network as typified by the global supply chain (a), in comparison with AFNs (b), Brinkley, 2018, p.2

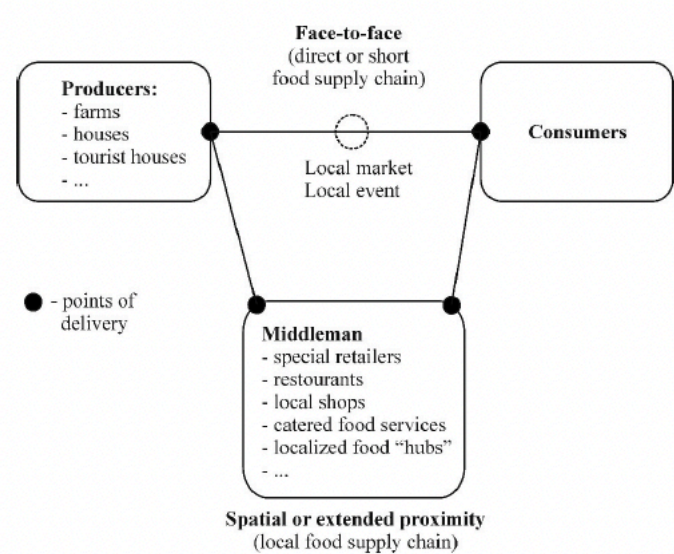


Figure 2.5: Short Food Supply Chains (SFSCs) schematic, Todorovic, 2018, p. 6

Although LFS is not a sternly defined notion (Niemi and Pekkanen, 2016), it is broadly expressed as "foods [that] are produced, processed and retailed within a defined geographical area" (Kneafsey *et al.*, 2013, p.23). Through this spatial dimension, LFS introduces the conceptual and practical elaboration of the construct of foodshed (Feagan, 2007, p.26) that Kloppenburg, Hendrickson, and Stevenson (1996, p.37) define as "a socio-geographic space: human activity embedded in the natural integument of a particular place". Three dimensions characterise the foodshed: spatial first, where the foodshed is the geographical region necessary to feed a certain location and its population (Kloppenburg, Hendrickson and Stevenson, 1996; Brinkley, 2013, p.246) used as a quantitative approach to assess the spatial extent as "theoretical self-sufficiency of the communities they serve" (Zasada *et al.*, 2017, p.25). The foodshed is also characterised as a relation and an analytic tool for conducting an environmental capacity (Świader, Szewrański and Kazak, 2018) that associates the foodshed with the logistics aspect of the food stages, including public and private partnership for food procurement (Carlsson and Williams, 2008; Kneafsey *et al.*, 2013), delivery, and access (Brinkley, 2013). Finally, the foodshed embodies a contest against the global system for community empowerment that defends the need to condense foodsheds and maximise urban agriculture to deal with climate change, biodiversity and social sustainability issues (Kloppenburg, Hendrickson and Stevenson, 1996).

On the other hand, Born and Purcell's (2006, p.195) seminal paper introduces the notion of the "local trap", which refers to the tendency of food activists and researchers to assume inherent health and sustainability virtues on the local scale, issue also pointed out as an "unreflexive localism" (DuPuis and Goodman, 2005, p.360) and inward-looking conservative stance (Holloway and Kneafsey, 2000). Indeed, the local approach has limited power to address macro-scale phenomena with the downside of a potential conservative approach linked with "defensive localism" (Winter, 2003, p.30). More scholars have also tempered the assumption that SFSCs and LFSs guarantee transparent, sustainable food solutions (Morgan, 2015; Laforge, Anderson and McLachlan, 2017; Sonnino, 2019), food access (Brinkley, 2013, p.252), health, social justice, and inclusion (Donald and Blay-Palmer, 2006; Morgan, 2015; Samina, Morgan and Hall, 2017), and ensure farmers' economic livelihoods (Jarosz, 2008). The early perception that LFSs can address environmental and socio-economic challenges has evolved in the last ten years, from an enthusiasm towards LFS to identify the "fragilities of these initiatives" (Sonnino, 2019, p.2) to reconsider the remit of local institutions to implement food policy. For instance, local and specialised food businesses depend on national and international supply markets to find their niche within the conventional food system and mass production marketing (Winter, 2003; Donald and Blay-Palmer, 2006; Maye and Ilbery, 2006; Kirwan, 2006; Lang, 2010a; Maye, 2013, 2013; Cerrada-Serra *et al.*, 2018; Vittersø *et al.*,

2019; Laforge, Anderson and McLachlan, 2017) While some papers follow a binary rationale between alternative and the conventional food system (Le Velly and Dufeu, 2016), academics also look at a more nuanced contrast, and highlight the AFNs' hybridity within the conventional food system (Winter, 2003; Sonnino and Marsden, 2006; Chiffolleau *et al.*, 2019; Kneafsey *et al.*, 2013).

The multi-agency food governance: including new stakeholders in the food system.

Marsden (2000, p.22) suggests that a place-based approach to food security represents a “new food governance”, which challenges the “macro-structural determinism” of the conventional food system. In recent decades, the place-based approach and the rise of local food consortiums show recent initiatives at the local level to address food gaps left by wider authorities, such as pockets of food poverty, recycling, and waste management: Food Policy Council in Northern America (Blay-Palmer, 2009; Fridman and Lenters, 2013) and food strategy and food partnership in the UK (Halliday, 2015). In the UK, localised approaches emerged with the Sustainable Food Places Network (SFP, 2023), which proposes a framework for cities and metropolitan areas to overcome siloed approaches to food (Moragues-Faus and Morgan, 2015; Moragues-Faus and Sonnino, 2019; Santo and Moragues-Faus, 2019).

The cross-sectoral and multi-agency food governance briefly presented and conceptually developed in section 3.1 is, in this thesis, the association of institutions and “privately organised actors” (Marsden, 2010, p.21). Morgan (2015) identifies that the number of actors in both the food system and urban planning intensifies the intricacy of urban food planning. Multi-agency, multi-actor, and multi-sectoral approaches to the food system are yet needed to confront monopolies and unbalanced relationships along the food chain (Barling, Lang and Caraher, 2002). Similarly, the governance of food faces challenges as it straddles multiple departments with competing priorities (Pothukuchi and Kaufman, 2000). Consequently, departments may struggle to collaborate effectively to address food-related concerns (Albrecht, 2001; Oliver, Vesty and Brooks, 2016; de Wall *et al.*, 2019), highlighting the issues of silo attitude and its impact on achieving organisational objectives.

However, LFSs tend to be coordinated within the conventional national and international frameworks rather than being mutually exclusive (Morgan and Sonnino, 2010; Kirwan and Maye, 2013; Betsy and Blay-Palmer, 2006) and to delve further into the inclusion factors in alternative and localised approaches to food, the following section focuses on the notion of place discussed in the food literature.

2.3.2 Grounding the foodscape.

Literature suggests three main aspects of the interplay between food and space discussed in the urban food literature: by exploring first the definition of foodscape as a backdrop for the doctoral project, a second step aims at elaborating on the role the food in placemaking as an economic and social agenda for urban planning.

Defining the foodscape

An increased use of the term foodscape can be observed in academic literature since the 2000s, with an evolving definition since the early publications: Vonthron, Perrin and Soulard (2020) provide a comprehensive review of the foodscape meaning among academic articles that summarise the foodscape literature into four streams. Initially referring to both the physicality of food and its spatial approach based on statistics and spatial analysis (ibid, p.5), it seems that, in the early use of the notion, the foodscape is limited to micro-scale food display and consumption places (Winson, 2004, p.301). However, a more trans-scalar and qualitative understanding of the foodscape emerges (Vonthron, Perrin and Soulard, 2020, p.15) and recognises “the social and spatial organisation of networks and food supply systems” (Wiskerke and Verhoeven, 2018a, p.30; Sonnino, 2013). A third construction of foodscape is on behavioural responses influenced by specific environments (Vonthron, Perrin and Soulard, 2020, p.10) that shape social and cultural structural inequality, and the impact of food environment on behaviours, also described by Mikkelsen (2011a, 2011b). The fourth aspect of the foodscape is its role in contesting a systemic global corporate food system and promoting the local level (Vonthron, Perrin and Soulard, 2020).

On a geographic level, the spatial understanding of foodscape also relates to land use (Vonthron, Perrin and Soulard, 2020, p.13), a crucial dimension for land stewardship (Foster, 2021), as environmental management framework that provides guidance and grant incentives (Defra, 2023a; Defra, 2023b). An example of the double benefit of land stewardship is the use of bio-waste dynamics and biodiversity conservation (Kirschenmann, 2008, p.116; Brinkley; 2013, p.249) while protecting farmland from land pressure due to urbanisation (Cerrada-Serra *et al.*, 2018). Besides, to address the land pressure in urban areas, Urban Agriculture (UA) is increasingly brought up in planning as an avenue to help support environmental management and land use protection (Blay-Palmer *et al.* 2013; La Rosa, *et al.* 2014; Torres, Nadot and Prévot, 2017; Artmann *et al.*, 2021), as well as a contribution to the local economy (Garnett, 1996; Petts, 2005; Opitz *et al.*, 2016). UA is also argued as a catalysis role for new policies (Hardman and Larkham, 2014), despite a limitation

stemming from the inadequate power of local authorities to administrate UA (Fainstein, 2011; Catney and Henneberry, 2019).

Drawing from the complex aspects of the foodscape, food and cities share a multifaceted interplay. For many years, the food system remained largely unseen in cities, which makes urban food planning appear to be a comparatively new field for planners (Brinkley, 2013; Pothukuchi and Kaufman, 1999; Morgan, 2015). Sometimes resulting from non-decision regarding food-related planning (Battersby, 2017) or from other urban planning objectives (Pothukuchi and Kaufman, 2000), the food system and urban planning are two intertwined fields (Brinkley, 2013; Morgan, 2015; Parham, 1990, 1992, 2012, 2015; Viljoen and Wiskerke, 2012a) and an increasing body of literature links food with other subsystems of spatial planning, including mobility, density, population, land use, transportation, and UA (Pothukuchi, 2000; Carsjens, 2015; Parham, 2020).

The different spatiality of food in cities

Cities are argued as a vehicle for sustainable food systems (Sonnino, 2016; Olsson, 2018; Sonnino, Tegoni and De Cunto, 2019, p.112; Haysom, 2015) that can embrace the uniqueness of each place in a “local interpretation” (Coulson and Sonnino, 2019, 172) of local food challenges and ultimately identify specific needs and resources required to the implementation of food policies. Sense of place is especially significant when food is a cultural element that distinguishes a place from another (Ilbery and Kneafsey, 2000; Sage 2003; Maye and Ilbery, 2006; Pink, 2012; Arefi, 2014; Sonnino, Marsden, Moragues-Faus, 2016; Parham, 2018; Palladino, 2020; Cartel, Kibler and Dacin, 2022).

Individuals' experience of a place is the social construct of the placemaking process (2019, p.128), which encompasses “diverging space narratives” (Koopmans, *et al.*, 2017, p.155). Hence, interpretations of placemaking encompass the physical, social, and political aspects connected with various themes: tourism (Everett, 2012; Urquhart and Acott, 2013; Fusté-Forné, 2018; Razpotnik Visković, 2021; Richards, 2021) local response from the community to localised issues (Christou, 2017; Blake, 2019), micro-politics (Ferris, Norman and Sempik, 2001; Pierce, Martin and Murphy, 2010; Ernwein, 2017; Lennon and Moore, 2019) and the role of urban green spaces (Scott *et al.*, 2018; Koopmans *et al.*, 2019).

Parham's (1992, 1993, 2008, 2012, 2015) significant contribution to convivial city concepts adds an outlook on the interplays between food, people, and place, most specifically on the quotidian and mundane dimension of food-related tasks that include shopping, cooking, gardening, and sharing a meal (2008, p.16). These considerations have grounds in Illich's (1973, p.12) work, which defines conviviality as a challenge to technocratic and industrial productivity. Tools and process of

conviviality mean for each community to implement their ideal society (Peattie, 2019; Paquot, 2019), involving different means to achieve it: mastering tools to create instead of purchasing or the linkage between rural and urban realms are two examples relevant to this doctoral study (Grünig Iribarren, 2019). Besides, the role of conviviality and food calls for a form of social and economic activities that shape an environment (Parham, 2008, p.15).

In terms of food and spatial features, the market-centred city and its associated “continuous urban function” (Parham, 2005, p.87) stand in opposition to the car-centred model of malls and box-like supermarkets (Freestone, 2002) spatially and socially disconnected from its close vicinity. These two models are relevant in two accounts. Firstly, the creation of green spaces that result from urban design (Trancik, 1986), which relates to the emergence of placelessness (Relph, 2000; Seamon and Sowers, 2008; Freestone and Liu, 2016) in urban food areas spaces that the modern food system creates invites a close look at the term “lost space” (Trancik, 1986, p.4), the result of leftover spaces between buildings with undefined purposes. The second account leads to understanding the car-dependency impacts on individual behaviour and the convivial city (Parham, 2015), explored later in section 2.3.3.

Green spaces and food

The non-built environment has become an increasing focus in urban design and planning (Childers *et al.*, 2019), providing several concepts to address the role of the broad term nature in cities. Childers *et al.* (2019, p. 2) use the term Urban Ecological Infrastructure (UEI) as a valuable umbrella term to encompass the different concepts of infrastructure to nature in cities, which is “effectively all the physical components of a city except the built environment”. This all-encompassing concept is valuable for this thesis, which seeks to characterise non-built environments to assess opportunities and potentials for food and sustainability. Several nature infrastructure concepts have been extensively discussed in literature, and a couple require a summary to academically frame the spatial analysis of the garden city layout.

Green Infrastructure (GI) is defined by the European Commission (EC) as the implementation of water and structured nature networks to provide and enhance ecological functions from the coordination between nature conservation and human construction to create ecological functions such as stormwater management, ecosystem services, biodiversity protection and climate change mitigation (Ying *et al.*, 2022). GI is, however, a “contested concept” (Wright, 2011, p.1004) with various understandings due to different interpretations and definitions between theory, policy, and planning (Benedict and McMahon, 2002, 2006; Davies *et al.*, 2006; Wright, 2011, p.1005,

Matsler *et al.*, 2021). The study of GI has grown since its first discussion in the 1990s (Mell, 2008, p.69) and exponentially in the last 10 years (Ying *et al.*, 2022, p.345; Master *et al.*, 2021, p.6). A consensus from different literature reviews, however, is the contribution of GI to environmental, social, and economic levers related to sustainable development (Mell, 2008, p. 69; Wright, 2011, p. 1006; Wang and Banzhaf 2018; Ying *et al.*, 2022, p. 344), but with different results in practice (Wright, 2011, p. 1015; Wang and Banzhaf 2018). Similar principles of sustainable development can be found in Nature-based Solutions (NbS), whose pillars are social, environmental, and economic (Maes and Jacobs, 2017; Wendling *et al.*, 2021), seen as multifunctional and technical solutions that benefit through the use and respect of ecosystems and community urban gardening (van der Jagt *et al.*, 2017).

In planning, UEI (Childers *et al.*, 2019) can play a role in food with agricultural landscapes in an urban context (Yacamán Ochoa *et al.*, 2020). Attention to food in urban design can be incorporated through the concept akin to edible landscape (Russo *et al.*, 2017; Bohn and Chu, 2021). Continuous Productive Urban Landscape (CPUL) is a concept coined by Viljoen, Bohn and Howe (2005), who propose the implantation of open productive landscapes that run continuously through the built environment. Not only for food production, CPULs are productive in economic, ecological, and environmental terms with multifunctional characteristics. CPUL, UA, GI, and more broadly edible landscapes, contribute to placemaking by “exploring the social, environmental, and political possibilities of urban food production” (Koopmans *et al.*, 2019, p. 162) that create distinctive spaces (Ferris, Norma and Sempik, 2001; Urquhart and Acott, 2013; Arefi, 2014, p. 15; Scott *et al.*, 2018).

2.3.3 Social drivers in food systems

Communities for food resilience and sustainability: co-governance, food democracy

Political economy is broadly defined as a social science that connects government, individuals, and resulting public policies (Friedmann, 2003; Winter, 2005; De Schutter, 2017, 2019). In food terms, Winter (2005, p. 613) argues that the “political-economy approach of the 1980s may perhaps have served to neglect the agency of farmers, with its focus on food orders and the Common Agricultural Policy (CAP)”. De Schutter (2019) argues that the political economy approach puts at the centre the power relationships and is useful for addressing food chains' power relationships and considering the diversity of groups (Chiffolleau *et al.*, 2019), drawing together skilled and unskilled

actors for a qualitative relationship between producers and consumers with yet different agenda (Kirwan, 2006).

A central element in the idea of food democracy is that the decision-making process should engage with the different actors of the food chain (Sonnino, Marsden and Moragues-Faus, 2016; Neve *et al.*, 2021), including non-expert and non-specialists (De Schutter 2017, p.19). Bringing more stakeholders to the political decision generates asymmetrical power relationships between formal governance bodies, community-led groups and people (Ghose and Pettygrove, 2014a, 2014b; Moragues-Faus and Morgan, 2015; Morgan, 2015), crystallising sometimes hardship in this co-governance configurations (Johnson and Osborne, 2003; Ackerman, 2004; Somerville and Haines, 2008; Birnbaum, 2016) “in terms of inclusivity, representation, and accountability” of all the stakeholders (Coulson and Sonnino, 2019, p.176). Co-governance is thus topical regarding the small private sector interests (Jarosz, 2008), residents (Soma *et al.*, 2021) community food initiatives (Fridman and Lenters, 2013), and associated social inclusion (Birky and Strom, 2013; Brinkley, Raj and Horst, 2017; Brons and Oosterveer, 2017; Poulsen, 2017). The definitions of food governance (Lang, 2003, p.555) and co-governance (Somerville and Haines, 2008) cannot disregard power relationships between different stakeholders in terms of structure or collaborative initiatives outcomes (Marsden, 2010; Vittersø *et al.*, 2018; Sonnino, 2019).

Community empowerment bestows new research avenues to identify and alleviate food inequalities (Bos and Owen, 2016; Brinkley, Raj and Horst, 2017). For instance, the micro-politics that stems from the production of spaces, linked with the rich and diverse socio-spatial interactions and practices on a local level (Ernwein, 2014; Lennon and Moore, 2019), and community projects’ integration “may be incongruent with the institutional mechanisms through which planning operates” (Lennon and Moore, 2019, p.129). Community-based solutions to address localised social issues are likely to leverage local opportunities for food equality and accessibility (Kneafsey *et al.*, 2008; Barthel, Parker and Ernstson, 2015; Brinkley, Raj and Horst, 2017; Kneafsey *et al.*, 2017). Not necessary in the contestation or mutually exclusive, community impetus and institution goals meet in placemaking results (Lennon and Moore, 2019), DIY urbanism (Finn, 2014, p.381) is defined as low-cost solutions, “ad hoc” and “spontaneous interventions” emerging from individuals or groups of individuals to address the localised problem of urban practicality to address a lack of response from institutions, which can involve street furniture, re-greening streets, and signposting to enhance user-friendly user urban environment. Impetuses originating from the community are not, however, always synonymous with activism (Finn, 2014, p.388) but can be a pragmatic approach bypassing a slow and ineffective administrative framework (Finn, 2014, p.391).

Accessing food: from availability to convenience

While this section 2.3 starts looking at the definition of food security to identify the paradigm in which the study evolves, its definition may vary. Food access seems to be a constant of food security (Kaiser, 2017; Lang and Caraher, 1998). Lang (2010, p.94) provides a conceptual framework of food security centred around the three As for accessibility, availability, and affordability. Caspi *et al.* (2012, p.1711) add two additional As for acceptability and accommodation, defined respectively as “people’s attitudes about attributes of their local food environment, and whether the given supply of products meets their personal standards” and “how local food sources accept and adapt to local residents’ needs”. Moving the food security extent from the household focus to a wider geographic level, Kaiser (2017, p.215) argues that communities have an increased role in food security because it relates to individual practices through food accessibility, and affordability, but also community self-reliance, social justice, and sustainability.

Some authors have explored the influence of the food environment to understand the influence of a context on individual behaviour: food deserts characterise “poor urban areas where residents cannot buy affordable, healthy food” (Cummins, 2002, p.436), and obesogenic environment, “the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations” (Swinburn, Egger, and Raza, 1999, p.262). This idea concurs with Lake and Townshend’s work (2006, p.262) on obesogenic environments, based on the premises that “overweight and obesity are not caused by a single factor, and evidence indicates that the environment has a significant effect on diet, physical activity and obesity”. Likewise, Winson (2004, p.300) argues that blaming individual factors, understood as a form of lifestyle, is a theoretical shortcut and claims that urban design plays a crucial role as a structural influence in facilitating compatible routines (Mikkelsen, 2011a, 2011b).

Therefore, the focus on food accessibility and the associated term food availability is instrumental in defining practices happening around food (Walker *et al.*, 2010; Lang, 2010; Kaiser, 2017). Cerrada *et al.* (2018, p.13) define food access by combining the economic (affordability), physical (availability), and sociocultural barriers (habits and knowledge) factors. Food accessibility conceptually combines sociocultural access (Blay-Palmer and Donald, 2006; Jarosz, 2008) and “easy access” (Barling, Lang and Caraher, 2002, p.16). In sum, a form of convenience to access food within an alternative network highlights the need to be “smart, simple, quick, flexible, cheap, transparent, and reliable” (Todorovic *et.al.*, 2018, p.2) to match the so-called convenience of the modern food system. Convenience and accessibility are interconnected, between constraints within existing “infrastructures of provision” (Seyfang, 2008, p.199). If the radius of safe walkability is understandably a factor of inclusion (Humber and Soomet, 2006, p.714), food accessibility is more complex than mere proximity and connected with structural social issues such as income, race,

gender, and resources (Lang and Caraher, 1998; Parham, 2015a; Brinkley *et al.*, 2017; Lindemann, 2019) or can also be limited by skills, availability, and resources (Fridman and Lenters, 2013; Schrager, 2018). It is thus contended that individuals' environment influences food choices: habits and routines are a response to access (O'Keefe, *et al.*, 2016; Renting *et al.*, 2033, p.396).

Acceptability and food practices

Hence, the influence of the environment on behaviours is identified as a structural factor (Duhl and Sanchez, 1999; Winson, 2004, p.301; Neve *et al.*, 2021), to the point that scholars argue that practices should inform and influence policies (Thévenot, 2000; Beilin and Hunter, 2011; Dansero and Nicolarea, 2016). Inspired by how Shove, Pantzar, and Watson (2012) define a product or service as effective once embedded in daily life (Dagevos and Veen, 2020, p.101), notions such as closeness, convenience, knowledge, and affordability for food-related practices are also inherently associated with other routines around food that express the grouping of everyday life routines in the most convenient way possible (Nicolini, 2012; Fridman and Lenters, 2013; Castelo, Schäfer and Silva, 2021), an aspect explored in greater detail in section 3.1.2 for methodology purposes.

In this thesis, acceptability is borrowed from Caspi *et al.* (2012, p.1172) as one of the four factors to assess an "environment–diet relationship". In their systematic literature review, they identify that "acceptability and accommodation [...] generally showed a significant relationship between constructs such as food quality and hours open for local stores and fruit and vegetable consumption" (2012, p.1175). Various interpretations exist regarding the endeavours and efforts individuals make towards sustaining personal standards of food quality (Caspi *et al.*, 2012; Gillison *et al.*, 2022), which to some extent connects to the original definition of a positivistic behavioural approach to acceptability (McEwan and Thompson, 1988). In essence, acceptability means the effort individuals could make to attain and obtain a food supply that aligns with their values, meets high quality and sustainability standards, and offers convenient access.

Besides, the perception and understanding of the consumers also encompass non-spatial components when asked to reflect on sustainable cities (Pilař *et al.*, 2019; Bösehans and Walker, 2022). Social reasons and a form of political engagement motivate food procurement in AFNs' venues (Kirwan, 2004, 2006; Todorovic *et al.*, 2018) and are drivers for local food demand (Adams and Salois, 2010). These motivations can also be a deliberate choice to avoid particular food procurement, such as supermarkets (Seyfang, 2008, p.196; Watts, Little and Ilbery, 2018), with beliefs and positive outlooks on buying locally (Jarosz, 2008; Kneafsey *et al.*, 2013, p.35).

Hence, criteria for food quality are socially constructed and constitute a complex evaluation (Marsden *et al.*, 2003, p. 424; Kirwan, 2006; Kirwan and Maye, 2013; Berti and Mulligan, 2016; Chiffolleau *et al.*, 2019; De Schutter, 2017, 2019). Additional criteria of food quality and environmental aspects also encompass sustainable food production and support to regional development (Marsden Banks and Bristow, 2000), knowledge sharing and good practice (Blay-Palmer, 2009; Blay-Palmer, Sonnino and Custot, 2016), fair price, safety, transparency, traceable products, and healthiness of food purchased (Berti and Mulligan, 2016; Kirwan, 2006). “More local” and “more natural” are argued to be a shortcut to defining quality in AFNs (Winter, 2003, p.25), but equally important, notions surrounding the human process of the food economy, such as the territorialisation market and re-connection between producers and consumers are core principles of social constructions in AFN (Ilbery and Kneafsey, 2000; Sage, 2003; Seyfang, 2008; Renting *et al.*, 2013, p.400; Blay-Palmer, Sonnino and Custot, 2016).

2.4 CONTEXT OF THE STUDY AND LITERATURE REVIEW CONCLUSION

The last section of the literature review situates the doctoral project within the recent global shocks that impacted not only the methods and research design of the doctoral project but also the perception of food during the doctoral research. This section then outlines the knowledge gap and the research problem as an introduction to the research questions arising from the literature review, which foreshadows Chapter 3 methodology, describing the conceptual and technical design of the research.

2.4.1 Context of the doctoral project

Overlapping 2020s' crises

In early 2020, the COVID-19 outbreak destabilised most of the world. The magnitude of the pandemic inevitably modified the research project's political and socio-economic background as its consequences in food terms were diverse in daily lives: consumers bracing for impact while stockpiling (Lufkin, 2020), calling for home-made bread bakers (Cereceda, 2020), but also striking evidence of the struggle of the most vulnerable to access food (Defra, 2020). The empty shelves in UK supermarkets during the pandemic period have demonstrated the potential consequences of a food shortage and their subsequent impact on consumer perceptions (Alim, 2020; Galanaki, 2020; Parsons and Barling, 2020; Seal, 2020).

In a wider perspective, the dominant globalised food system structure is argued as not tailored to dam the various and rapid changes inherent to global shocks (Lang, 2012), with vulnerabilities rooted within a food system unsuitable for fast trans-scalar response (Moragues-Faus, Sonnino and Marsden, 2017), although exogenous shocks can shape incremental policy or decision-making system (Sage, 2003; Folke, 2006, p.254; Howe, Bohn and Viljoen, 2012; Skordili, 2013; Lang and Heasman, 2015; Barling, 2017; Caraher, 2019). Entering a period of frequent upheaval, crisis recurrence, whether financial, political, health, or sanitary, shows how the terminology is over-used, conflating intensities, lengths, and origins of troubled times, therefore dispossessed of meaning (Lang, 2010b, p.87). As the pandemic unfolds and exposes vulnerabilities linked with world globalisation, climate change, whose effects are observable and threatening, is the defining challenge of the 21st century on an international scale (Vermeulen, Campbell and Ingram, 2012; Kneafsey *et al.*, 2013; Morgan, 2015). Besides, the fulgurant and visible effects of the COVID-19

epidemic supplanted Brexit's news coverage, implemented two months earlier on January 1, 2021 (Bethany, 2020).

Administrative organisation in the UK and the unique role of the Foundation in Letchworth

Given the case study's focus on England and the literature review's emphasis on governance and decision-making processes (Barling, Lang and Caraher, 2002, p. 3), it is imperative to understand the local administrative structure to discern the distinct characteristics of Letchworth as both a garden city and a town in the United Kingdom. In her doctoral thesis, Halliday (2015, p.41) provides an overview of the structure of sub-national government in England (Table 2.2). The county of Hertfordshire, where Letchworth Garden City is located, falls in the non-metropolitan county category, which is a two-tier governance structure category (Appendix 2.2: Map of Counties and Unitary Authorities). These are subdivided into smaller government organisations: districts and boroughs. Other local governance organisations in England are one-tier structures: the Metropolitan Areas, London Boroughs, and Unitary Authorities.

The Hertfordshire County Council is subdivided into eight Local Authority Districts called either Borough Councils or District Councils. The County Councils and Borough/District Councils have complementary prerogatives. Letchworth Garden City depends on the North Herts District Council (NHDC, 2023), under the Hertfordshire County Council (HCC, 2023) (Appendix 2.3: Map of Local Authority District, Counties, and Unitary Authorities).

The Letchworth Garden City Heritage Foundation, the LGCHF or the Foundation in this thesis, is a charitable organisation that represents and manages the interests of the community as collective landowners, rooted in the foundation of the world's first garden city (LGCHF, 2023e). It is the legacy of First Garden City Ltd, which built the town in 1903 (Creese, 1966, p.216). An Act of Parliament in 1962 transformed First Garden City Ltd into a public sector organisation called the Letchworth Garden City Corporation (Letchworth Garden City Corporation Act, 1962), which enabled Letchworth to continue the implementation of land value capture for the benefit of the community and save the town from property speculators. The Letchworth Garden City Corporation was eventually dissolved by a second Act of Parliament in 1995 to create the Letchworth Garden City Heritage Foundation (Act of Parliament, 1995), which exists to this day.

Table 2.2: Structure of sub-national government in England (Halliday 2015, p.41) - adapted by the Author to highlight the administrative context of Letchworth Garden City.

Table 2-1 Structure of sub-national government in England				
	Structure	No.	Notes	Powers & responsibilities
LA types	Unitary authorities	55	May be county-wide or urban	Education, roads, public transport, social care (children's and adults), housing, libraries, leisure, environmental health, planning, local tax collection
	Metropolitan district councils	36	Essentially unitary authorities since 1985, but there may be joint boards for some services eg fire, police, waste disposal.	
	London boroughs	33	Each of the 32 boroughs plus the City of London is effectively a unitary authority – but the GLA is has some service responsibilities /veto	
	Greater London Authority	1	Led by the Mayor; held to account by the London Assembly	Highways, transport, passenger transport and strategic planning, police, emergency services
	Isles of Scilly	1	Sui generis unitary authority	Mostly as for other unitaries, but with some services provided by Cornwall
	Two-tier authorities		NB there is also a third tier of civil parishes in some areas, with typical responsibilities being allotments, parks, public clocks.	
	County councils	27		Education, highways, transport, passenger transport, social care, libraries, waste disposal, planning
	District councils	201		Housing, leisure, environmental health, waste collection, planning applications, local tax collections
Leadership types	Leader plus cabinet	386	Model used in the majority of local authorities	Leader responsible for all council executive functions, decides whether to make decisions himself or to delegate
	Mayor plus cabinet	15	Mayor is directly-elected following a 'yes' result in referendum	Mayor responsible for all council executive functions, decides whether to make decisions himself or to delegate to cabinet or Councillors; has soft or informal powers.
	Alternative	52	Alternative based on committee system, only small councils are eligible	
Special arrangements	Local enterprise partnerships	39	Partnership between local authority and businesses	Economic priorities and growth, job creation
	City Deals	28	Precise deals are worked out individually between cities and Whitehall	More budgetary autonomy, plan for local growth
	Combined Authorities (non London)	5	Provide greater coordination between member local authorities; address national government with one voice	Economic development, regeneration, transport (but not replacing functions of local authorities)

Since 2014, the Foundation, has been a registered society under the Co-operative and Community Benefit Societies with charitable status number 28211R (LGCHF, 2019b, p.4). As a not-for-profit organisation, the Foundation is a local institution with no political party affiliations. Its main objective is to preserve the garden city value of the place, mainly driven by its history, in three main areas: urban management (real estate, infrastructure and public space), support for the local community and the transmission of history and heritage (LGCHF, 2019a). This means preserving the social, economic, and physical characteristics of the first garden city.

Howard's innovative idea relied on a city owned by a private trust, which managed the leased land and reinvested the financial gains into the Garden City's economic cycle. As a result, the wealth of the garden city remains solely for the benefit of the local community. The Foundation still adheres to this basic principle of reinvestment today (Howard, 1898, p. 70). Howard strongly believed that a local private entity could prevent the loss of wealth and was, in a sense, a solution to emancipate the community from central government.

In its current form, 30 governors work with the Foundation leadership team and staff to make strategic decisions at Letchworth, which are made by a board of nine trustees elected from among the governors listed above (LGCHF, 2017, 2023g) (fig. 2.6). The governors are the link between the Foundation and the residents (LGCHF, 2017). Their role is to represent the residents of Letchworth at the quarterly meetings of the Board of Governors. The Executive Team is the governing body that works for innovative strategy and local action in the three areas described above managing the estate, supporting local communities, and promoting the town's heritage. At the time of the data collection, the structure of the Executive Team is divided into four teams: Strategic Planning, Heritage and Community, Finance and Property. Each team is led by an Executive Director who is responsible for current projects with their team. The Foundation is led by a Chief Executive and a Head of Governance.

Trustees serve for three years, and the Board of Trustees advises the management of the Foundation and approves policies and strategies. Currently, the governance of the Foundation is organised according to a Board of Trustees and Board of Governors and a Leadership Team that provides the background work to make informed local decisions based on a strategic plan tailored to the social and economic needs of the town (Lewis, 2015; LGCHF, 2023c), such as a strategic plan or sustainability policy (LGCHF, 2023d). The Foundation has the authority to propose strategies, such as new developments and policies. In terms of food, the Foundation has encouraged the planting of orchards, allowed residents to plant an allotment, created a community food garden in the town centre in 2014, and offered free gardening masterclasses. The Foundation shares local responsibilities with the local district council, North Herts District Council (NHDC, 2023).

As the custodian of the garden city principles, the Foundation also has other responsibilities. The Foundation manages the city in terms of the overall estate, infrastructure, and public space, as well as supporting the local community as part of its charitable objectives (LGCHF, 2023c). Estate management includes the maintenance of the estate and the implementation of infrastructure. The Foundation oversees the physical aspect of the city within the estate through the alteration of all properties within it. The scope of the Scheme of Management (1967), which applied to a defined area in Letchworth (fig. 5.4), provides guidelines to be followed in terms of house alteration, streetscape and tree cutting. The scheme was introduced “to ensure that houses are in harmony with their original design and character” (LGCHF, 2023f).

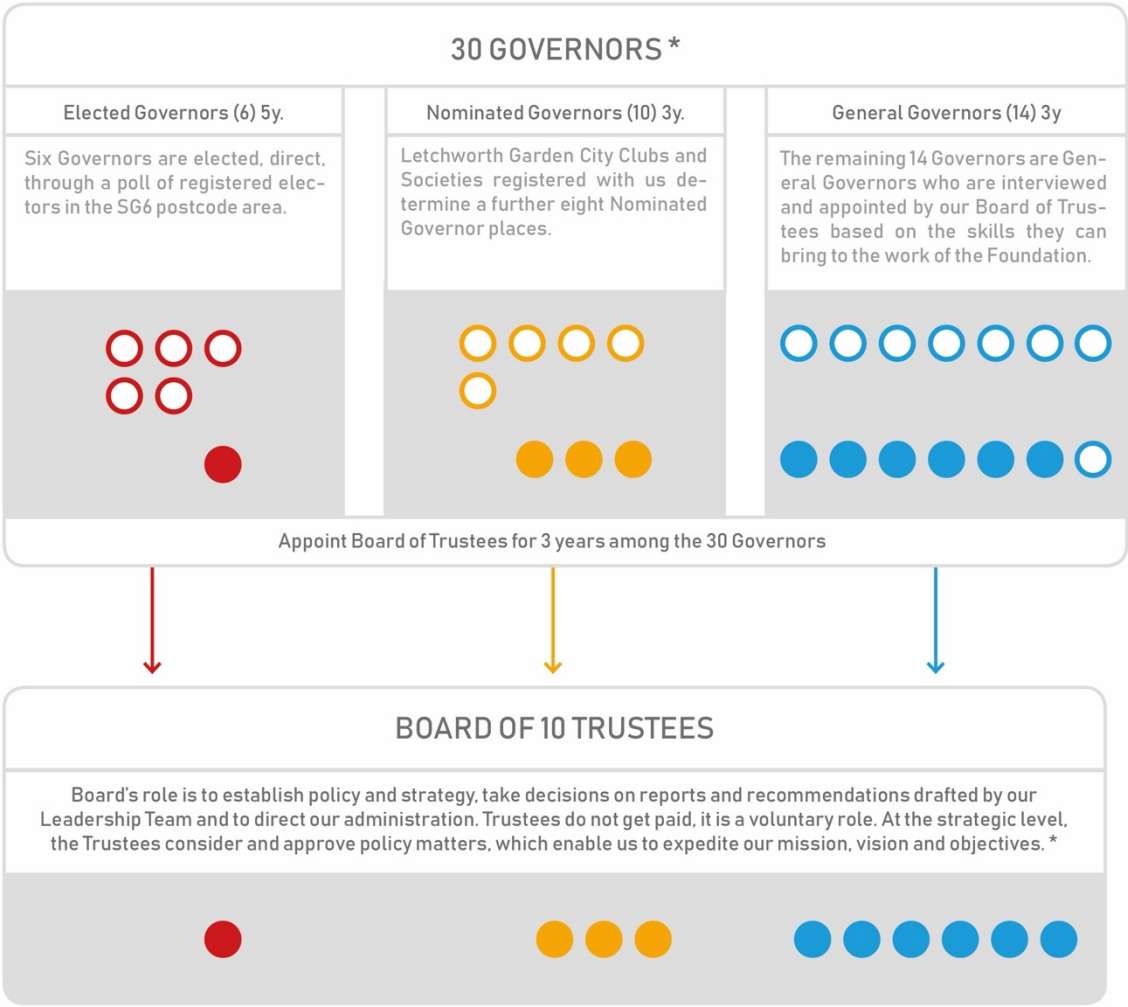


Figure 2.6: Board of Governance and Board of Trustees, Author, 2018 (source: LGCHF, 2023g)

Today, the Foundation is still operating and remains committed to the principle of reinvestment. The Foundation publishes an annual statement of income and investment (LGCHF, 2023a). This reinvestment principle, called land value capture, is recognised by the UK government, and is defined nationally as follows (UK Parliament Publications, 2023):

[...], we refer to land value capture in the context of taxes and charges imposed by local or central government which seek to capture, for the public benefit, increases in land value that arise from public policy decisions or specific development events, primarily the granting of planning permission by local authorities or as a consequence of new, or improved, major infrastructure projects.

The Foundation received 100 million GBP in assets after the transfer from the Letchworth Garden City Corporation in the 1990s (Lewis, 2015). As a result, the LGCHF is the largest property owner in Letchworth, including commercial and residential estate that consists of 17.239 m² of offices, 181 industrial units and 125 shops (LGCHF, 2023h). This portfolio generates incomes reinvested for the town. This model enables the Foundation to be a self-funding entity. Out of 12 million GBP in 2018, the annual turnover of the LGCHF is nine million pounds GBP (LGCHF, 2019a). Out of this total, 5% is from agricultural land, but 81% of the incomes are mustered in commercial properties of industries, offices, retail, and leisure (LGCHF, 2023b). Reinvestment covers the educational farm (11%), environmental improvement (8%), and grants (7%) for support to community-led initiatives in addition to gardening masterclasses (LGCHF, 2023c).

2.4.2 Knowledge gap: the research problem

Summing up the literature review

The literature review suggests that food and garden city literature meet in places, but their intersection seems to offer new fields of exploration (Parham, 2015, 2016a, 2016b). Howard (1898) envisioned the garden city built around a comprehensive food economy, from production to waste management, including transportation, processing, and trade. Geographically, the garden city is recognisable by its division into agricultural estates, mostly dedicated to food production, which works with the town estate, also offering plots to grow food for a viable local food economy since “every farmer now has a market close to his doors. There are 30,000 townspeople to be fed” (Howard, 1898, p.24). The garden city offers a variety of plots suitable for different agricultural production: “to grow wheat on very large fields”, while “the cultivation of vegetables, fruits,

flowers, which requires more personal care” (ibid, p.17), is made possible with private and shared gardens (Adams, 1905; Unwin, 1909). Not only the physical organisation of the town but the land management based on public ownership and land value capture (Howard, 1898, p.13; Unwin, 1914) also are the foundation of the garden city infrastructure: the “social advantages of common ownership of land [...] for a juster and better system of land tenure” (Howard, 1898, p.83) are essential and support the garden city principles beyond town layout. Howard’s idea of a “local option” (ibid, p.32) where the economic life in a garden city depends on the support of the local administration and community. However, these recommendations that underpin the role of the food economy in the garden city came undone in the implementation and interpretation of the model in favour of spatial characteristics, such as low-density and green networks (Parsons and Schuyler, 2002; Mell, 2008; Vernet and Coste, 2017), overlooking often the political and economy of food in a garden city.

While integration of food is a holistic approach underpinned with an urban-rural infrastructure and its community in Howard’s work, current studies suggest that food was since disconnected from urban areas and fragmented amongst the different systems, which led to the search to a practical reintegration of food in the urban agenda (Sonnino, Tegoni and De Cunto, 2019). In terms of spatial layout, including multifunctional GI (Marsden and Sonnino, 2008) that reconnects rural and urban areas as well as people and food production (Sage, 2003), with the underlying issue of the visibility of the food system in cities (Morgan, 2015; Lu and Carter, 2022). Howard’s local option provides a framework for reflection that echoes the place-based food system of the recent AFN literature where producers and costumers are protected from a hegemonic food monopoly with transparency and fair price (Anderson *et al.*, 2014; De Pascale, *et.al.*, 2017; Brinkley, 2018; Chiffolleau *et.al.*, 2019). Authors also emphasise clear leadership to implement a form of food partnership (Coulson and Sonnino, 2019) using 'an institutional vehicle' (Morgan, 2015, p.1388) such as councils, municipalities and mayors (Halliday and Barling, 2018; van der Jagt *et al.*, 2017; Sturzaker and Nurse, 2020, p.80). This is also argued by Barling, Lang and Caraher (2002, p.19) when they emphasise that structural interventions are also needed at regional and local government levels.

The research problem and arising research questions.

Therefore, the research problem stemming from the literature review addresses how the garden city principles are suited when applied to the needs of the food economies in today’s cities and urban contexts. The thesis investigates the garden city principles in Letchworth, including land ownership and land value capture in support of healthy and sustainable food economies locally today. It also

considers the role of local government, social cohesion, and the spatial layout of the city as key factors to support it.

Based on the assumption that these four principles, spatial, economic, administrative, and social, must be examined in detail to reveal the mechanisms underpinning food production and distribution, Letchworth Garden City embodies a significant case study to explore the implantation of the garden city model. Once applied, these would translate into a framework that influences the urban food system and contributes to the local economy. This expectation led to three research questions, whose rationales based on the literature review are subsequently explained:

1. Could the governance structure of the garden city be suitable to support a strategy for resilient food cities?

The first research question explores the governance of the garden city and its local impacts on the spatial, economic, and social levels. This question examines the potential inclusive role of leadership and co-governance in the garden city model to support a healthy and sustainable local food economy. This question is also aimed at investigating the different remits of local institutions and their influences and gathers outlooks from institution representatives and experts to outline enablers and challenges of the decision-making process for the food economy in Letchworth Garden City.

2. Do the spatial characteristics of the garden city influence food-related networks and practices?

A review of the extant literature suggests that Letchworth Garden City may be regarded as an authentic real-life exemplification of the garden city model, which has been in operation for a period exceeding 120 years. The present study documents the development of the town's urban layout and food locations from 1903, employing cartographic and archival materials to provide a contextual framework for the analysis of the key principles of the garden city model. These principles include economic, administrative, and social factors. The research question aims to identify the motivations, enablers, and challenges in everyday practices, thereby providing a comprehensive understanding of the morphological aspects of the urban structure and neighbourhoods. This understanding is intended to underpin socio-spatial experiences of food and an investigation with local representatives and community groups will provide further information on land use, land economy, and food co-governance.

3. How might the garden city model contribute to a food economy that has positive impacts on environmental management, climate mitigation and public health benefit?

The garden city model's unique organisation has the potential to inform on the crucial role in transforming land use into a more inclusive local food economy, thereby mitigating issues stemming from large-scale food distribution systems. Furthermore, the garden city model's inclusive role of leadership and governance has the potential to support a healthy and sustainable place-based food economy, bolstering long-term decisions to address gaps left locally by national food policies. In addition, one of the goals of the research is to provide insights into urban food planning. While the garden city constitutes a distinct context, the analysis of governance and urban design elements could inform the development of a framework for a local food strategy, contributing a broader non-garden city context

Now that the research problems and questions are identified, Chapter 3 defines the theory of knowledge derived from the literature review and presents the methods selected to address the research questions.

CHAPTER 3: EXPLORING FOOD IN LETCHWORTH GARDEN CITY

3.1 THE RESEARCH FRAMEWORK

The potential contribution of the garden city model to urban food planning sits within a multidisciplinary framework, illustrated by the wide field of research explored in Chapter 2. The conceptual framework considers the garden city model as an example of urban and food complexity: spatial, economic, administrative and social. Therefore, the research follows a transversal approach that links the garden city model based on spatial organisation, administrative management, and social inputs as described in Howard's published manuscript (1898; 1902).

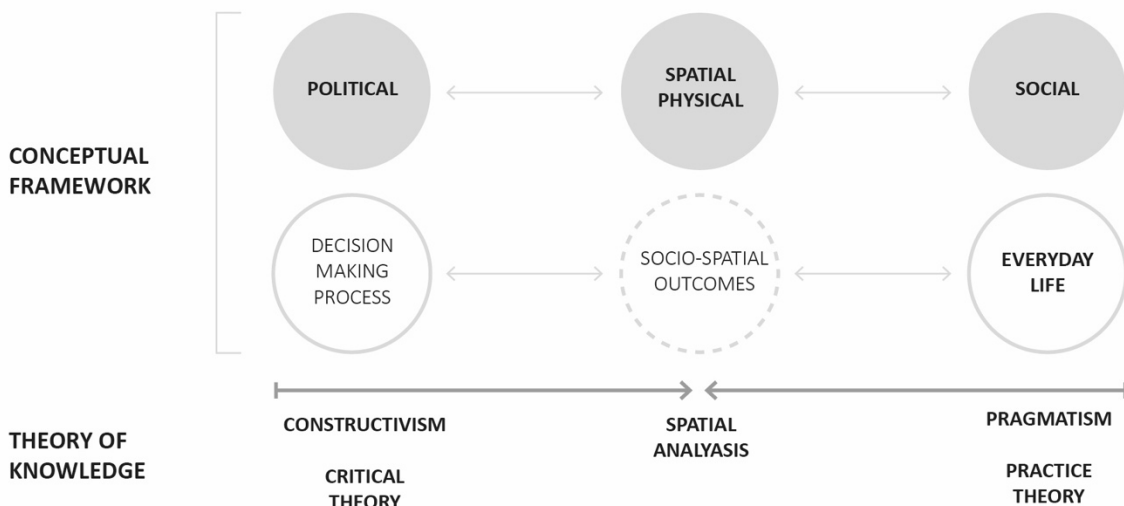
Chapter 3 outlines the approach to carry out the research, presented in Figure 3.1. It also details the conceptual structure of the thesis, placing the theoretical framework of the research, identified in section 2.4.2. From this theoretical paradigm, the next two sections 3.2 and 3.3 describe the study's methodological design. The following section 3.2 justifies the chosen data collection methods, whereas section 3.3 explains the data processing and analysis. The final part concludes with the ethical considerations of the research approach.

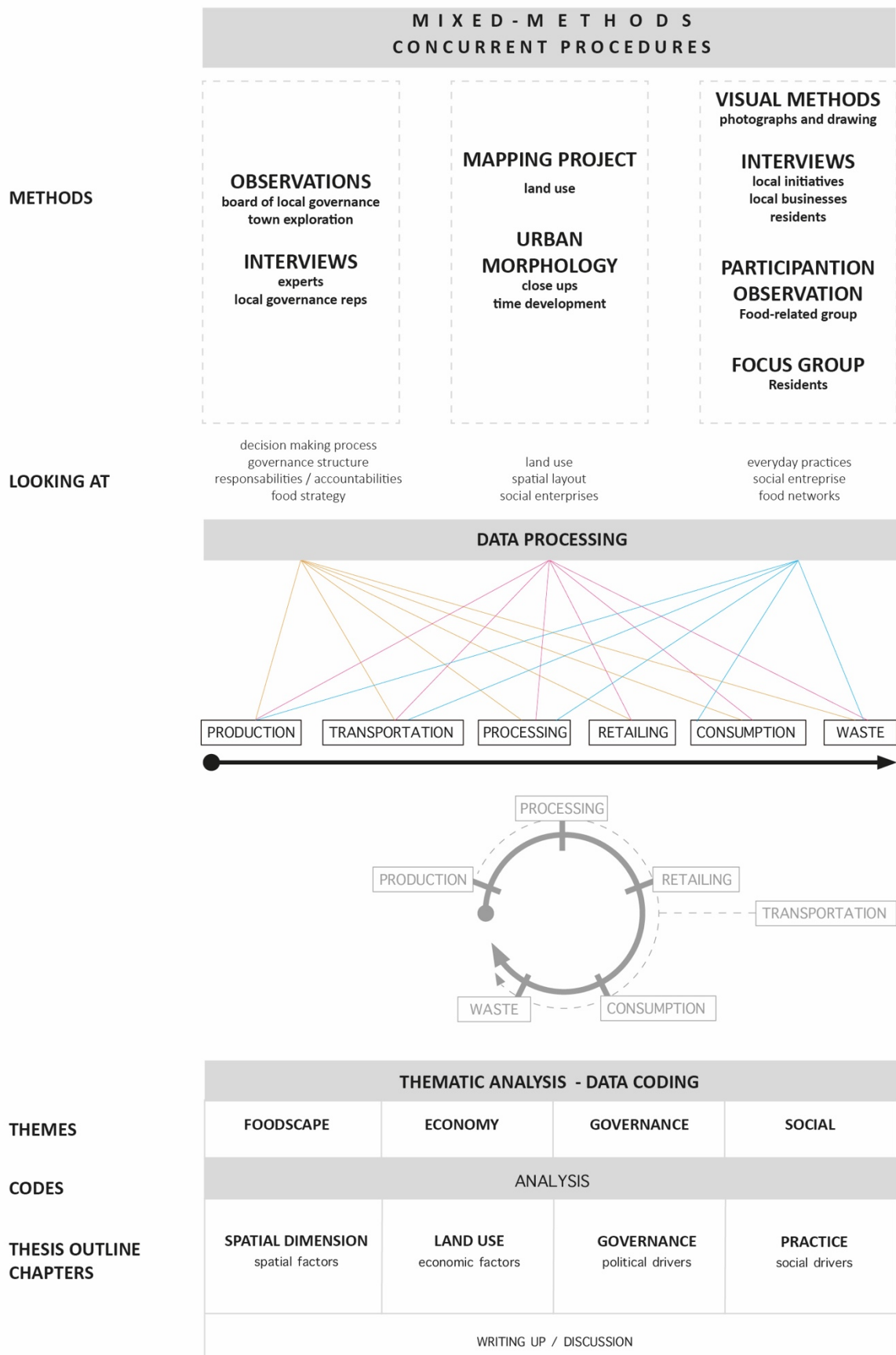
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Figure 3.1: Research design map, Author, 2023

RESEARCH DESIGN

	FOOD ECONOMY		
RESEARCH PROBLEM	The research problem is the interplay between the Garden City principles implementations, land ownership and land value capture being the core guidelines, to support a healthy and sustainable food economy in Letchworth today, considering the role of local government, social cohesion and the spatial urban layout to help it.		
RESEARCH QUESTION	1 Could the administrative structure of the garden city be suitable to support a strategy for resilient food cities?	2 Do the spatial characteristics of the garden city influence food-related networks and practices?	3 How the garden city model might contribute to a food economy that positively impacts on environmental management, climate change mitigation and public benefit?
RESEARCH AIMS	- to examine the potential inclusive role of leadership and governance in the garden city model to support a healthy and sustainable local food economy	- to explore the garden city principles can link the food economy as a socio-spatial experience	- to explore whether Garden City features could be possibly replicable or potential recommendation inputs for food policy, land stewardship, and food planning.
OBJECTIVES	2.1 To investigate the local governance's and the different local institutions' remits and influence. 2.2 To gather local representatives' and experts' outlooks and outline enablers and challenges of the decision-making process for the food economy.	1.1 To document the evolution of the town's urban layout and foodscape from 1903 with maps and archives 1.2 To interact with the local community to understand motivations and everyday practices.	3.1 To identify and interview experts and outline critical goals and food planning spatial solutions within the socio-political context of Letchworth Garden City 3.2 To compare the garden city principles with sustainable and resilient urban food models confronted with global dynamics around food systems.
APPROACH	CASE-STUDY Letchworth Garden City		





3.1.1 Conceptual framework: food seen through three factors.

The concept of governance, as laid out in section 2.3.1, covers the influence of institutional strategies and activities carried out by both the public and private sectors. However, Chapter 2 recognises the uneven power dynamic between formal institutional entities and grassroots initiatives (Morgan, 2015; Moragues-Faus and Morgan, 2015). Therefore, co-governance, as described in section 2.3.3, incorporates civic initiatives, grassroots innovations, and non-expert participation (Andretta and Guidi, 2017; De Schutter, 2017) to understand bottom-up involvement and address unmet social needs (Christou, 2017; Dagevos and Veen, 2020). In order to achieve this, local communities must be considered as essential stakeholders collaborating with a local institution (Battersby, 2017).

The study owes to the influence of the French sociologist De Certeau (1984) and his development of terminologies and concepts. De Certeau's (1984, p.38) characterisation of "strategies" and "tactics" provides a relevant illustration of the research's conceptual stance. "Strategy" denotes the combination of steps taken to achieve a desired result, while "tactics" refers to the use of time and space by individuals to attain an unplanned goal. In other words, "tactics" emphasise the daily practices people utilise to address their needs in a specific environment. Additionally, De Certeau (1984, p.39) identifies the third component of "place" as crucial to this distinction.

Strategies pin their hopes on the resistance that the establishment of a place offers to the erosion of time; tactics on a clever utilisation of time, of the opportunities it presents and also of the play that it introduces into the foundations of power.

Hence, the conceptual framework interlinked the three questions of the spatial organisation of food locations, individual practices, and decisions to influence behaviours and land use to address localised issues (fig. 3.2).

Strategy: food governance, the socio-political and economic drivers

In this dissertation, the term strategy refers to the management of food, as explored in Chapter 2. This governance encompasses heterogeneous groups and stakeholders involved in food-related decisions with different stances, agendas, levels of power, legitimacy, interest, and spatial outreach (Barling, 2007; Morgan, 2010). Additionally, this governance structure at multiple levels and sectors also takes into account the social and political influences from the viewpoints of the stakeholders (Ernwein, 2014; Ghose and Pettygrove, 2014b). Private enterprises or civil initiatives function as a third force when mainstream corporations or high-level state intervention fail to

address intricate issues identified by public authorities (Barling, 2007; Battersby, 2017, p.421). Therefore, the strategy encompasses social innovations and democratic citizenship, defined here as grassroots movements and bottom-up contributions to the political agenda (Ghose and Pettygrove, 2014a), as well as top-down decision-making by governments and institutions (Catney and Henneberry, 2019). The rise of local food partnerships throughout the UK through the Sustainable Food Places Network (SFP, 2023) exemplifies this cross-actor approach, which more accurately reflects the governance configuration and cities' transition spaces (Moragues-Faus, 2020, p.2).

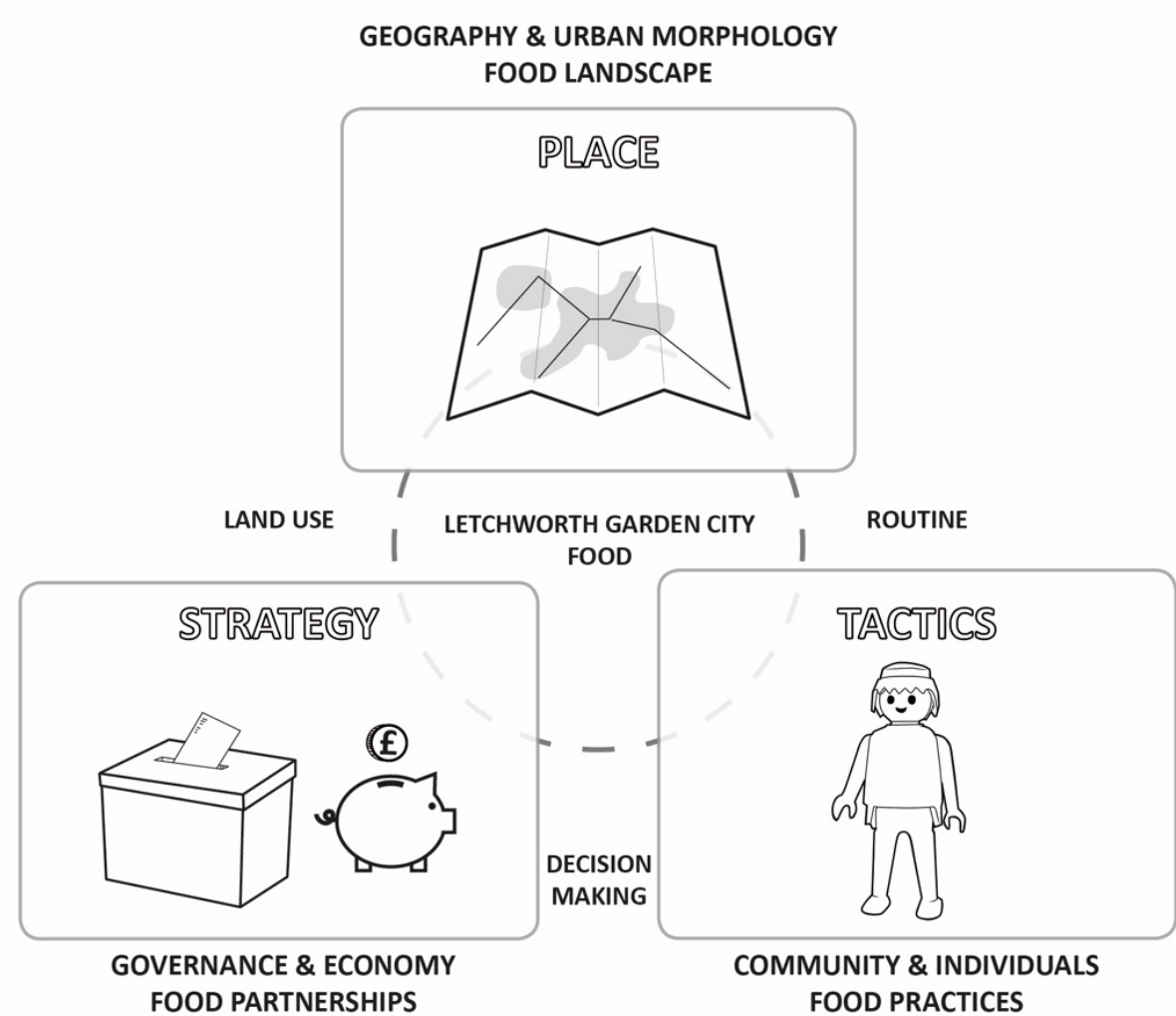


Figure 3.2: Diagram of the conceptual framework, Author, 2023

Tactics: food practice, the everyday life

If strategy covers the socio-political decision-making process, tactics is a process where individuals make daily use of their environment to pursue their food practices. Through the lens of social appropriation of a place (Wiskerke and Verhoeven, 2018a), an examination of food systems provides insight into the individuals' ability to access food and food procurement that fits within convenient daily habits (Dagevos and Veen, 2020, p.120). Change of paradigm in urban planning reflects the power of individuals' adaptation in everyday practice (Parham, 2020), such as "tactical urbanism" and Do It Yourself (DIY) urbanism (Finn, 2014, p.381), which echoes De Certeau's terms of "bricolage" (in French), translated as "make-do" in the English translation.

As seen in Chapter 2, this doctoral study draws on social sciences to examine the food and garden city model. Without delving into the determinism aspect of Bourdieu's work (1977, p.80), his notion of 'habitus' enables an exploration of these practices, acknowledging the taken-for-granted routines, operated unconsciously "the product of history". The notion of habitus facilitates the exploration of individuals' appropriation of space and time within their environment (ibid, p.85) and influences their routine innovation, subject to limited resources (ibid, p.95, p.97).

Place: foodscape, the city layout

The third ground of the research project is the spatial approach, connected with governance and practice, conceptually relevant to explore the research problem as the model is a built city. De Certeau (1984, p.117) explains that "space exists when one takes into consideration vectors of direction, velocities, and time variables. Thus, space is composed of intersections of mobile elements". In short, a place is a practiced space. Grounded in the notion of place, De Certeau (1984, p.34) describe everyday life into two streams of influence: strategy, the mechanisms representatives power build to reach a desired state, and tactics, how individuals work with their direct environments and appropriation of the results of strategy. A description of place could be "any area delimited by a set of geographical coordinates" (Palladino, 2020, p.124), but scholars appropriate the term to explore the lived-experienced area (Cartel, Kibler and Dacin, 2022; Palladino, 2020). On a general academic understanding, Arefi (2014, p.21) points out a differentiation between site and place and defines "place" as a socially contracted, lived-experienced area, the term "site" relates to expert knowledge, science, and analytic rigour. In the context of food systems, some scholars have examined the concept of place exploring the "local" and "community" components of "spatial concepts" where social interactions give rise to processes and practices (Feagan, 2007, p. 29; Lennon and Moore, 2019, p. 124).

3.1.2 Theoretical background: critical constructivism, practice pragmatism

Chapter 2 identified ideas shared by several fields of expertise and demonstrated how the interdisciplinary appropriation of respectively sustainability, food, or systems may have blurred definite meaning (Hinrichs, 2010, p.18). Academics who explore the interplay between health and the built environment use interdisciplinarity methods (Carpiano and Daley, 2006; Glanz *et al.*, 2016) with yet challenges in reporting research to different disciplines, as well as the inappropriate generalisation of findings beyond its sample (Leech, Onwuegbuzie and Combs, 2011, p.9; Elwood, 2009). The multi-faceted approach of food studies requires a combination of perspectives and theories to serve an inter-disciplinary project to generate a bespoke background and embrace the diverse aspects of the conceptual framework within the assumptions that represent theories of knowledge, below explained.

Constructivism and pragmatism: fitting into two philosophies of knowledge.

Conflicting interpretations of key notions of food security within different disciplines, as outlined in Chapter 2 challenge a universal definition (Sonnino, Marsden and Moragues-Faus, 2016; Moragues-Faus, Sonnino and Marsden, 2017). The various stances toward the food economy that operates at a location, scope, and time draw a socio-political and spatial picture (Elwood, 2009; Sonnino, Marsden and Moragues-Faus, 2016; Chiffoleau *et al.*, 2019), which cannot fit within ontology umbrella and the universal and neutral positivistic approach that “supposes an objective reality” (Braun and Clarke, 2022, p.177), nor within naturalism that dissociated social phenomena with physical phenomena, and considers the research undisturbed by the researcher (Hammersley and Atkinson, 1995, p. 6). Hence, the paradigm of the research is an epistemology meta-theory that explores the relativism of knowledge (Braun and Clarke, 2022, p.175) to engage with the different dimensions of the food economy.

Constructivism supports the research questions as it “reflects a set of beliefs about the world and how it can be understood and suggests various approaches to the study of human phenomena based on these beliefs” (Hershberg, 2014, p.2). A constructivist theoretical framework provides a bridge between the spectrum of the different partakers involved in different aspects of food in cities, including the researcher (Hammersley and Atkinson, 1995, p.21).

However, in the epistemological branch of methodology, aspects of pragmatism are also relevant to an understanding of the connection between theories, such as texts or recommendations, and actions as “knowledge is seen as a contextual property that evolves through everyday practices and is measured by its practical consequences” (Biesenthal, 2014, p.2). Sometimes conflated with the sole practice focus (Buch and Elkjaer, 2020), in this doctoral study, pragmatism is used to link the translation of strategy designed to address a problem, and tactics individually made to overcome a problem. Pragmatism insists on the experience and knowledge that influence the evaluation of practical ‘problem’ for action response (Biesenthal, 2014, p.4):

[...] the pragmatic concept of experience is threefold: Firstly, it is the product of the interplay between objects and action; secondly, it enables the creation of practical knowledge by engaging in problem-solving activities and, thirdly, it serves as a point of reference for verifying the meaningfulness of an act. As a result, pragmatists consider experience as plural, equivocal and in constant flux.

Although there is no clear school of thought since its emergence in the mid-nineteenth century (Buch, 2020), a recent “pragmatism turn” (Bernstein, 2010; Visser, 2017, p.45) seems to be the new paradigm for social research (Morgan, 2014a) and more broadly all the fields that investigate “practices, actions and constructive knowledge” (Goldkuhl, 2012, p.135). Goldkuhl (2012, p.144) defines pragmatism as a potential fourth paradigm along with interpretative, positivist, and critical approaches for qualitative research and describes a pragmatist stance where the role of the researcher is engaged in changes rather than beliefs as a constructed knowledge. The insertion of pragmatism as a solution-based approach with historical philosophy provides a blueprint for a contemporary science of the ordinary (De Certeau, 1984, p.12; Nicoloni, 2012, p.29; Talisse and Aikin, 2011).

Critical theory and practice theory: two perspectives

To underpin the epistemologist approaches and philosophy of knowledge described above, the doctoral research considers critical and practice theories as relevant for two main reasons: the critical theory stands out as linking theory and practice to understand motivations (Budd, 2012), while practice theory possesses significant aspects relating to pragmatism (Buch and Elkjaer, 2020).

Critical theory is a movement that rejects the assumption of universal truth (Hershberg, 2014) to recognise the social construction of subjective reality and knowledge. Critical theory has a long history from its onset with the Frankfurt School, which developed into an umbrella term for ‘critical theories’ offering forms of interpretation (Tyson, 2006; Saar, 2017). Predilection methods in critical

theory involve observation, interviews, and public participation (Budd, 2012, p.4) to develop an understanding of motivations informed by practices (ibid, p.5).

Although critical theory is a long-established perspective in social science, Rodriguez (2020) argues that this can benefit from other rationales to refine stances toward the food system through the lens of social transformation from institutions and individuals (Wirskerke and Verhoeven, 2018b; Dagevos and Veen, 2020). In terms of application, the critical theory focuses on organisations, social movements, or communities and shows an advantage in addressing issues as a form of self-reproduction of engagement within difficulties (Cordero, Mascareño and Chernilo, 2017; Harvey, 2018).

Similar to the previous pragmatism turn, there has been a recent emergence of the practice turn in social science, which was first identified by Schatzki, Cetina, and von Savigni in 2001 and discussed in various articles, including those on food studies (Brons and Oosterveer, 2017; Hennchen, 2019). As Buch pointed out (2019, p.13): “practice theory has just recently begun to expand its focus from pure analytical and explanatory concerns to include issues concerning action research, intervention and governance”. Practice theory presents a framework to examine daily consumption patterns (Røpke, 2009). Shove, Pantzar and Watson (2012) identify three interconnected components: meaning relating to emotion and values, competencies associated with skills and knowledge, and materiality concerning objects or infrastructure available. This structure serves the conceptual framework, encompassing what residents seek in food choices (meaning), what they know (competencies, knowledge, and skills of the town or food), and how their environment creates opportunities, depending on spatial structure, regulation, standards, or procedure.

Recently, Buch and Elkjaer (2019, p.12) connected pragmatism with practice theory as they both contribute to the science of organisations. When pragmatism explores knowledge through actions, as discussed in the previous section, practice theory apprehends individual’s choices and repetition as a network of routines associated with one another (Nicolini, 2012), a “nexus of practice” defined by scholars (Castelo, Schäfer and Silva, 2021). This perspective indicates how a set of practices, a food distribution system, and its spatial environment influence daily routine and food practices (Brons and Oosterveer, 2017; Reckwitz, 2002, p245-250, in Røpke, 2009). Hence, the research explores the stretch between the different food systems and domestic food choices, what Nicolini (2012, p.228) calls “zoom in and out”.

3.1.3. Study design: combination of approaches

Based on the conceptual and theoretical framework that investigates the political, social, and spatial dimensions to draw attention to the diverse realities and narratives within a specific context, this doctoral project implements a case study method that integrates ethnographic techniques such as observation, participation, and interviews to examine diverse socially constructed perspectives (Budd, 2012, p.4).

Using a case-study

As the research project is an empirical investigation that addresses a specific setting, a case study seems immediately relevant since this approach makes possible an understanding of contemporary phenomena embedded within limits in the context of real life (Yin, 1993, p.59). An appropriate start should define what constitutes a case for this study (Ragin and Becker, 1992; Gerring, 2006, p.7). In this research, the case, i.e., the object of study, is bounded in space and time (Gerring, 2006, p.18): Letchworth and its scope of influence, from the onset till today. The unit of analysis (Yin, 1993, p.19, p.48, 2009, p.31) explores foodshed, food accessibility, and the interplay between urban design, the social-spatial food practices, and transformation for socio-political ends, notions outlined in Chapter 2.

To ensure robust case-study guidance, Yin (2009) presents four criteria to claim validity through the different case-study stages. In terms of data collection, construct validity (Yin, 2009, p.40) ensures correct operational measures and should provide multiple data sources to establish a chain of evidence, developed in 3.2. Besides, the data collection reliability (Yin, 2009, p.40) is based on a protocol that ensures a replicable study and that can reproduce data collection and coding to end up with similar conclusions. The third condition is an internal validity of the data analysis that confirms causality and conclusions by a sound explanation stemming from the triangulation and interpretation of these elements, which is further covered in 3.3. Finally, the external validity of the research design is the interpretation of the case study's outcomes that stand with the type of design of the case study chosen and its replicability, discussed in section 8.4.1.

In this study, the research is a single case study (Yin, 2009, p.47) with multiple detailed explorations of spatial feature of the town. These close-ups are not multiple case studies but different components of the overall context (Stake, 1995), an embedded unit of analysis (Yin, 2009, p.46). The case study's findings and conclusion ultimately aim at helping recommendations for the decision-making process (ibid, p.17). However, one can challenge the replicability and generalisation of the findings of a single case study (ibid, p.15), arguing that a place-based approach

is, by definition, specific to its context: somewhere else's institutional, spatial, and demographics could possibly not provide an identical upshot. This idea is not applicable as the case study for this doctoral programme investigates the distinct food characteristics of the town to identify ways of enhancing a place-based approach to the local food economy: such findings may also be applicable to other case studies.

Moreover, the research develops from constructivist foundations, and the researcher's background is recognised as a potential influence on the different interpretations of the qualitative dataset (Clough, Nutbrown and Cox, 2002; Pouliot, 2007; Hershberg, 2014), which opposes a strict one-way theory-driven deductive justification (Yin, 1993, p. 47). However, the study outlines Howard's founding principles of the garden city as an initial theory to explore the food economy in today's Letchworth. As a result, the nature of the subject studied legitimates an inductive standpoint to refine a theory from the data, verifying the initial background that represents the garden city principles as a theoretical basis for the study. Therefore, the study uses methods explained in section 3.2, following a data-driven inductive investigation process that refines the theory from the data, verifying the initial background of the garden city principles as a theoretical basis. Researchers typically identify new and unexpected themes in primary data that can refine research questions. This process follows an iterative approach (Clarke and Braun, 2017) that ought to be tested and verified through the data examination and organisation collected within an initial thematic framework.

Ethnography to underpin the case-study.

Based on conceptual and theoretical frameworks, the use of a methodology to understand on-site practices initiates the transition to an ethnographic approach (Hammersley and Atkinson, 1995; Brewer, 2000a). Ethnography is supposed to allow "understanding and explaining the cultural context of lived experience" (Forsey, 2010, p. 567). The use of light ethnography in this thesis aims to "combine the generic with the topical, the substantial with the formal" (Hammersley and Atkinson, 1995), concomitantly with the constructivist framework which uses "the collaborative nature of knowledge production as an asset to the research process and make use of it, bridging the expertise of scientists with the expertise of participants in a study" (Hershberg, 2014, p.7).

Ethnography, can encompass different meanings across social science fields (Brewer, 2000b), but to clarify the conditions for ethnography, Hammersley (2018, p.4) states that this entails:

[...] relatively long-term data collection process, taking place in naturally occurring settings, relying on participant observation, or personal engagement more generally,

employing a range of types of data, aimed at documenting what actually goes on, emphasises the significance of the meanings people give to objects [...], and holistic in focus.

The discipline of ethnography is “place-bound” and holds the potential to examine the creation of place during human geography fieldwork (Herbert, 2000, p.550; Hitchings and Latham, 2019) and inform on individuals’ repeated sets of practices (Dagevos and Venn, 2020; Röpke, 2009). As seen in sections 2.3.2 and 3.1.1, the place is a social construct made up of shared understandings and social structural differences, such as race, class, and gender, rather than a set of physical properties. Low's (2016) concept of specialising culture examines the use of ethnographic theory and methods as a means of comprehending space and place and illustrates how ethnographically-based spatial analyses helps understand and address social inequalities and exclusion.

In terms of methods, structured and compared interviews, the use of visual methods, observation and participation are the distinctive methods of ethnography (Yin, 1993, p. 64; Forsey, 2010; Watson and Till, 2010). Nonetheless, these are two different approaches, despite similarities regarding fieldwork between case studies and ethnographic research (Yin, 1993, p.55; Gerring, 2006, p.18). To prevent conflating the two procedures, Yin (1993, p.46) provides the three main characteristics defining the case study and ethnographical approach, summarised in Table 3.1. The second section of the table, also drawn from Yin, shows how the association of a case study with ethnography serves as an inductive process.

In light of the case study investigation, ethnography translates the food economy immaterial phenomenon of the food system into tangible everyday geography of practice (Katz 2004, in Watson, 2010), while geographic survey with graphic tools gives an account of the spatial dimension of the case-study (Herbert, 2000). Besides, ethnography entered the field of geographic studies (Cook, 2019) as it represents “a research strategy to understand how people create and experience their world through a process such as placemaking, inhabiting social spaces” (Watson and Till, 20010, p.121).

Table 3.1: Comparison of case study research and ethnographic research – from Yin (1993, p.46), Author, 2023.

Case study	Ethnography
Process characteristics	
1 – define a specific question ahead of time	1 – gain a close-up detailed rendition of the real world
2- emulate positivism in developing a rival hypothesis	2 – challenging the logical positivism whereby all evidence is relative and not dependent on the investigation
3 – carrying fieldwork in a targeted fashion and collecting evidence in a limited timeframe	3 – fieldwork over a long period and in a more unstructured manner that allows for an iterative process and unexpected outcomes
Use for investigation in research	
1 – question defined ahead of time.	1 – question to be refined and re-questioned and nuances: what are the elements that impact the local food network?
2 – understand the structure of political agencies that have leverage on food decisions / conclude of strengths and weaknesses of the local food decision potential	2 – understand the various food approaches of residents
3 – target element of data collected.	3 – interaction with the experience environment with less expected outcomes from residents

3.2 METHODS USED WITHIN THE CASE STUDY AND DATA COLLECTION PROCEDURES

Use of mixed methods

This section outlines the application of mixed methods in research that involves a combination of quantitative and qualitative data to investigate the same phenomenon (Leech and Onwuegbuzie, 2009, p.266; Harrison, Reilly, Creswell, 2020, p.474). Mixed methods research is recognised as a burgeoning methodology employed when undertaking research projects that require multiple perspectives (Onwuegbuzie and Leech, 2006; Leech and Onwuegbuzie, 2009, p.266). Kumar (2014) highlights that combining qualitative and quantitative methodologies enhances inadequacies in either approach to produce a thorough analysis. As a result, mixed methods amalgamate epistemological and ontological perspectives in human geography (Elwood, 2009, p.99): quantitative methods assess data for factual reality, such as geographical locations and urban morphologies, while qualitative data interprets social phenomena present within these physical structures.

The decision to use a mixed methods approach in this study is tied to the research question articulated in the conclusion of Chapter 2 that aim to explore the relationships between the various aspects of the food economy in Letchworth (Onwuegbuzie and Leech, 2006, p.483; Creswell, 2009, p.21). Specifically, this doctoral research project aims to link spatial dimensions with socio-political experiences. The research problem identified in Chapter 2 is to recognise the factors that influence the food economy in the garden city mode while being uncertain about crucial variables for exploration (Creswell, 2009). Before delving into the specifics of each data collection method, this section presents some logistical considerations regarding this. In this doctoral study, data collection follows a concurrent triangulation strategy, which means that quantitative and qualitative dataset collections are simultaneous and interpreted during the results stage without any priority to a particular dataset (Creswell, 2009, p.217).

Logistical considerations: access to data and adapting fieldwork during a pandemic.

Between 2018 and 2019, fieldwork was conducted for the PhD project, thereby establishing a networking system within the town. If contact details for business and community-led groups can often be found online, direct interaction with residents presents more difficulties. Intermediaries such as the Foundation or local organisations facilitated the recruitment of residents by providing details about the study (Hammersley and Atkinson, 1995, p.67).

Despite being an unforeseen circumstance, the COVID-19 pandemic has prompted innovative solutions approach to ethnographic tools. The original plan of conducting walk interviews had to be scrapped in favour of exploring the oxymoronic concept of remote ethnography, which means observing participants without the presence of the researcher (Clark, Trimingham and Wilson, 2022, p.375).

Already before the COVID-19 outbreak, Postill (2017) makes a case for remote ethnography using digital tools. Inspired by the early remote ethnographic methods used via video, written documents, and epistolary correspondence during WWII, he advocates against the misconception that remote ethnography cannot grasp the nuance of lived experiences, especially with prior knowledge of the site. Obviously, with the restriction related to the COVID-19 pandemic, direct ethnography was pending between 2020 and 2021 and an increasing adjustment from fieldwork to online tools generated reconsideration of most ethnographers and anthropologists' methods (Podjed, 2021; Watson and Lupton, 2022). This event urged researchers to initiate an overarching reflection about remote ethnography and the sense of closeness (Martínez *et al.*, 2021; Podjed, and Muršič, 2021) and deepen the use of online tools.

In March 2020, the UH Ethics Committee responded to the COVID-19 outbreak by implementing restrictions that limited face-to-face interactions, postponing fieldwork until further notice. Therefore, from 2020, interviews were conducted online while observation and active participation ongoing since 2018 abruptly stopped. Upon realisation that the pandemic would persist throughout the collection period, supplementary online methods were incorporated into the remote ethnography investigation toolkit. These methods provided comparable data to that obtained through participatory, observatory, and focus groups. Three approaches were devised to accommodate most participants' preferences (fig. 3.3), described in section 3.2.2. Organisations' websites or social media profiles (Twitter, Facebook, Instagram) helped stay informed about social life or strategic decisions (Dowling, Lloyd and Suchet-Pearson, 2016). Finally, two Facebook and Instagram accounts were established particularly for the study to advertise the research and attract more participants.

WE ARE LOOKING FOR RESIDENTS TO TAKE PART IN OUR RESEARCH ABOUT FOOD IN LETCHWORTH !

Our study explores the Garden City model and its potential contribution to a healthy and sustainable local food economy. As a resident, your insight is valuable and will help understand daily food experiences in Letchworth

HOW TO GET INVOLVED?

YOU CAN

**TAKE PICTURE(S) OF YOUR
EVERYDAY
FOOD ENVIRONMENT,**



**PLEASE PICK THE
OPTION
THAT SUITS YOU BEST.**

OR

**TALK TO ME (ONLINE) ABOUT
YOUR EXPERIENCE OF FOOD IN
LETCWORTH,**



**YOU CAN CONTACT ME TO SIGN UP
OR SEND YOUR PICTURES HERE**

a.andre@herts.ac.uk

OR

**JOIN A SMALL GROUP OF
RESIDENTS TO DISCUSS FOOD
IN TOWN.**



**I'LL GLADLY PROVIDE
MORE INFO
ABOUT THE STUDY.**



Many Thanks, Amelie Andre
PhD researcher
University of Hertfordshire
Study reference: LMS/PGR/UH/03241(3)



Figure 3.3: Flyer to broadcast the research on social media from November 2020 to April 2021,
Author, 2020

3.2.1 Quantitative methods

This section outlines the quantitative methods applied in the doctoral research to characterise the spatial features of Letchworth Garden City. First, food mapping outputs provide an overview of food locations on a town-wide scale. Second, the mapping database expands to develop three-dimensional representation models of Letchworth's neighbourhoods using Urban Morphology Analysis (UMA) techniques, explained below.

Food mapping: locating food places.

Mapping proves critical in sustainable planning research to uncover place-based food solutions (Brinkley, 2013; Carsjens, 2015). Digitalised mapping, especially Geographic Information System (GIS), is a popular tool in geography and is increasingly employed in socioeconomic sciences (Duncan, 2006; Sweeney *et al.*, 2015; Wise, 2018). However, the shift from techno-positivism, which emphasises quantitative aspects, to a socio-political approach focused on the users elucidates GIS technology's growing importance in the social sciences (Malczewski, 2004) and urban studies (Wise and Craglia, 2008) as well as its usefulness as an analytical tool for decision-making (Leake and Malczewski, 2006; Sweeney *et al.*, 2015). GIS techniques not only use strictly quantitative data (Elwood, 2009) but also support participatory and qualitative methods (Aitken and Kwan, 2009; Meenar, 2017; Collins, 2011) to capture a more comprehensive representation of local food features and values (Duncan, 2006; Taylor and Lovell, 2012; Soma *et al.*, 2021).

GIS tool remains in this thesis a quantitative method to apprehend the site. This set of maps is planned to contrast with qualitative inputs and acknowledges the role of social science in interpreting mapping outcomes. Food mapping involves listing, characterising, categorising, and recording components of a place for analysis and comparison (Yuan *et al.*, 2014). The geographic use of mapping establishes a list of key localisations of food to create a spatial dataset that informs on physical features, such as size and measurements, through geometric representation: lines characterising distance, points for exact locations, and polygons to represent areas (Wise, 2018) to displays these multi-attribute elements simultaneously (Malczewski, 2004; Leake and Malczewski, 2006; La Rosa *et al.*, 2014). This geographical aspect of food mapping is necessary to the research to outline the diversity of food landscapes in Letchworth, characterise the environment spatially and the different levers of action for food supply in cities.

The mapping project dataset uses the Edina Digimap online platform, accessible through a UH account. This platform provides an on-demand files directory, including open green spaces, woodland areas, railway tracks, administrative boundaries and historical background. The LGCHF

provided additional files with supplementary components, such as estates, roads, and buildings, to improve the details of the city layout. The two sets of secondary data for food location, verified on-site during the fieldwork, added supplementary categories, including orchards and allotments to develop precise research maps. The dataset is obtainable in shape files that are compatible with a geospatial Geographic Information System (GIS) data analysis and management package, QGIS.

Despite the large array of files furnished by the supporting institutions, supplementary primary data collected during fieldwork is essential to supplement the database. Using an online directory similar to Battersby's study (2017), this research lists food establishments in Letchworth, locates them on a map, and verifies their physical location. This two-step procedure presents an opportunity to identify food outlets absent from the online directory and provide a qualitative assessment of the area. For example, between 2017 and 2019, site visits indicated that some plots and allotments were available or neglected.

Urban Morphology Analysis (UMA): characterising food spaces

A definition of urban design is the process of intentionally or unintentionally shaping a place for people but carries an ambiguity due to the interdisciplinary fields of research it represents through spatial organisation, economic context, and social experience (Carmona, 2014, p.1; Arabindoo, 2014, p.47). Urban design is arguably a complex discipline summoned by different fields of research, including the exploration of spatial experiences (Cuthbert, 2011, p.6) not only linked to its morphology but also to the role of placemaking and social experiences in urban settlements. In terms of spatiality, urban design is the generation and study of typologies between form and process, a combination of historical and design imagination (Cuthbert, 2011, p.225). Thus, urban design is directly linked to placemaking (Thomas, 2016). Arefi's work (2014, p.6) provides a compelling framework for the placemaking definition and acknowledges the role of government in charge of the people's needs but also the unique set of circumstances of a place that constitute opportunities that arise from outside the community, and the assets, existing within the community.

To explore urban design, Urban Morphology Analysis (UMA) is an analytic tool of the design structure that examines the physical patterns of human settlement (Wise, 2018), "their structure and the process of their formation and transformation" (Kropf, 2017, p.45). The interrelated components represent a metaphor linguistic of grammatical compounds of architecture and urban design (Griffith, 2017, p.157; Kropf, 2017, p. 10; Suryawinata, Mariana and Wijaksono, 2018, p.5). The use of UMA embraces different terms and Kropf (2017) sets a glossary of the UMA application used in this thesis that provides a useful distinction for the analytical process with three terms used

to explore spatial organisation in Chapter 4: patterns, configuration, and types. Patterns are a core notion of urban morphology (Kropf, 2017, p.14) “encapsulated in the idea of the pattern of relationships” and associated with the human process of generating repeating configurations: UMA integrates and hierarchises these compounds to help understand the “social and cultural process involving interaction between individuals or groups of people and their physical environment” (Kropf, 2017, p.130). The notion of configuration is an arrangement of urban elements, such as roads, buildings, green spaces, while types, or typologies, express a modularity within a configuration.

Therefore, UMA solicits different fields of investigation including geography, city planning, urban design, and conservation (Moudon, 1997; Kropf, 2017; Clifton *et al.*, 2008) and can help decipher social dynamics in built cities (Venerandi *et al.*, 2017), explore urban sustainability (Suryawinata, Mariana and Wijaksono, 2018), or development control and city management to underpin decision-making (Troglio *et al.*, 2012; Imam, 2017). To this end, UMA generates and analyses of three-dimensional close-up portions of the town in this doctoral study. In this research, UMA gives a bird-eye view at a block scale, characterised by different spatial patterns (Wise, 2018; Kropf, 2017). These close-ups highlight the food-related compartments that suggest the availability of food outlets or the potential use of land for food purposes.

UMA features two principal variables. Through time, UMA delves into the historical development examination of a place with the comparison of maps. UMA also informs on the urban settlement shapes and the meaning of its process (Kropf, 2017, p.14; Suryawinata Mariana and Wijaksono, 2018). In that sense, comparing the development of land uses over time and space helps understand food practices’ evolution associated with the spatial organisation of the place (fig. 3.6a and 3.6b).

3.2.2 Qualitative methods

This section focuses on the qualitative methods and their respective purposes. Qualitative methods often fit within a constructivist perspective “that explores the multiple meanings of individual experiences, meanings socially and historically constructed, with an intent of developing a theory or a pattern” (Creswell, 2003, p.18) (see also 3.1.2). As a result, qualitative methods typically involve engaging with participants to identify recurrent themes from the data (Kumar, 2014; Braun and Clarke, 2022) through different narratives (Creswell, 2003, p.21).

Engaging with local stakeholders and experiencing the site involves in this doctoral study four ethnography-based sets of methods (see 3.1.3). Strategically starting with observation to familiarise with the place and everyday life in town, allow for connecting with community-led and institutional representatives, experts in their fields, and some residents. A second set of data comes from conducting individual Semi-Structured Interviews (SSIs). A third method is a discussion group with residents. This overall strategy provides various angles to explore the role and experiences of participants. The final and fourth aspect regarding engagement in this doctoral research includes visual material, discussed separately in section 3.2.3.

Observations: scoping the site, taking part in the local life

An aspect of observation in qualitative academic work is characterised as a research method that “entails description and reflection upon embodied and emotional experiences, intersubjective and material exchanges, and social and non-human interaction” (Watson and Till, 201, p.127). First, observation during the study sessions consists of surveying the spatial organisation of the town in various neighbourhoods to gain geographical understanding of the area.

In the exploration stage, observation for data collection entails documenting journeys on bikes with photographs, cycling randomly in targeted parts of the town, and each exploration path being recorded retrospectively on a map (fig. 3.5). A first pragmatic reason to conduct fieldwork on a bicycle is due to its appropriate speed for observations: covering a large territory, yet adequately slow to grasp first-hand the site and perceive details without the “filters” of cars' windshield (Appleyard, Lynch and Myer, 1964, p.22). Exploring by bike is a part of becoming familiar with the physical geography features and topography: hills, slopes, enclaves, and hidden paths. Hence, over time, cycling shifts from a mere means of transportation to an experience “structured about the bike, body and landscape to produce particular meanings of place” (Spinney, 2009). This observation method implies the actual experience of the site, paramount for the researcher to grasp a sense of place in the urban analysis, the sensation of bodily movement through urban space (Appleyard, Lynch and Myer, 1964; Larice and McDonald, 2013).

These considerations connect with De Certeau's (1984, p.98) “walking rhetoric” where walking expresses a code of the city with streets, public space, forbidden areas, and walls that he compares as “a preliminary definition of walking as a space of enunciation” to reading a city and explore its spatial organisation. Cycling explorations are inspired by the simple method: the idea of walking in the city (Cuthbert, 2011, p.149) and are akin to other terms borrowed from the French language,

such as “flânerie”, (Cuthbert, 2011, p.148; Larice and McDonald, 2013), meaning to wander about in French.

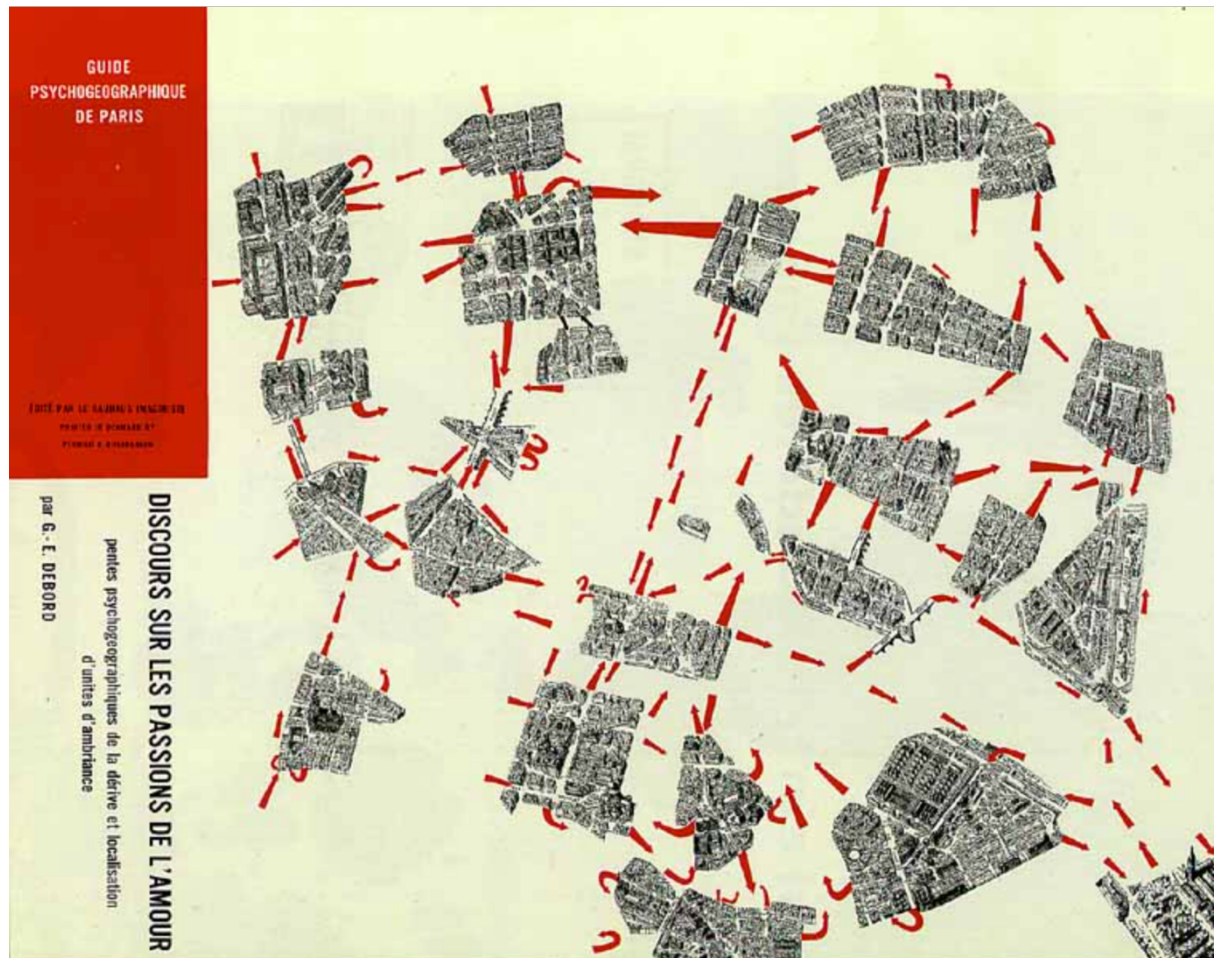


Figure 3.4: Guy Debord, 1955 “Psychogeographic guide of Paris: edited by the Bauhaus Imaginiste Printed in Dermark by Permild and Resengreen – Discourse on the Passion of love: psychogeogrphahic descents of drifting and localisation of ambient unities” Public domain, available at: <https://imaginarymuseum.org/LPG/Mapsitu1.htm>

The place influences the cycling journeys, which are in sum an adapted form of Situationism’s theory of the “derive” (translated from French as drift in English) (Debord, 1958, no page), a form of urban exploration questioning the psychogeographical effects of a specific environment by experiencing the preconceived idea from the bird-eye view perspective of a map (fig. 3.4). Created in 1957 the International Situationist is a movement hallowed with a revolutionary background with the goal of a critic of capitalism to change its society (Plant, 1992; Sadler, 1998). But three decades

later its legacy was transferred from radical roots to moderate interpretations (Plant 1992; McDonough, 2004, 2006, 2011). Illich's (1973) critique of modern consumption with a convivial toolkit appears similar to the Situationists' criticisms and is based on a comparable psychological perspective regarding the everyday experience of a socio-spatial environment.

Figure 3.4 is a graphic representation of derives in Paris that reveals the unity of a neighbourhood, creating islands in the city separated by movement axis: roads, and train tracks. The inspired cycle drifts in Figure 3.5 show a larger reach, but the cycling wanderings suggest islands in town and helped understand the physical barrier in town in order to prepare interviews and experience sharing from the participants.



Figure 3.5: Map of the derives in Letchworth, Author, 2019

An aspect of the observation sessions is being in town during food-related events, such as the Food and Drink Festival, the Farmers' Market, but also attending public meetings of local groups, and public meetings, debates, or presentations of local administration. As a part of the methodology, participation in everyday life in town is a means to identify the values of community-led initiatives and motivation and trying to understand the influence of the context of Letchworth as a garden city. Participation requires a position of "engaged listener" for a possible conversation as much as observation (Forsey, 2010, p.563). During data collection, active participation in two locally based groups focused on food, joining a small team managing a community garden and assisting a food-waste rescue project. This confers an understanding of the motives behind those who instigate and those who volunteer. Participation was the occasion to become a familiar face and not a mere observant, even during observation of public events and public meetings at the Local Council. To support the observations and gain a deeper understanding of the individual food experience, semi-structured interviews (SSIs) facilitate detailed interactions with specific stakeholders.

Semi-structured interviews (SSIs): understanding the different food agendas.

The overarching goal of interviews in qualitative research is to learn about personal experiences (Gubrium and Holstein, 2002; DiCicco-Bloom and Carbtree, 2006; Galletta, 2013). Many disciplines use this method among various methodologies (Mann, 2016, p.47) and the interview is increasingly used in human geography (Herbert, 2000; Hitchings and Latham, 2019). The ethnographic stance of this doctoral study uses interviews to provide several illustrations of a group in the case study and mixed-methods research, interviews can corroborate facts emerging through other methods (Yin, 2009, p.106). Amongst the different interview techniques, Semi-Structured Interviews (SSIs) follow a grid of pre-determined open questions yet allow for exploring further response and "offers great potential to attend to the complexity of a story in need of contextualisation" (Galletta, 2013, p.9). A question grid is critical to identify common themes in the participants' perspectives (Kvale, 2007; Kvale and Brinkmann, 2009) and give a comparison basis to understand perspectives of people involved in the food economy on-site. Semi-structured interviews, which follow a grid of questions, allow for digression or precision if additional and unexpected information arises from the interviewee (Galletta, 2013). Comparing a segment of the interview with question common to the different participants allows for engaging with the interviewee and leaves room for appropriation of this time (Galletta, 2013).

Residents and experts represent the two primary groups of stakeholders identified to participate in the SSIs. Experts include individuals representing institutions, local businesses, citizen-led organisations, and experts in their fields (Appendix 3.1: List of the participants and their profile).

They are chosen for their activities and field of expertise and invited via their public contact details. Residents are from previous connections made during participation and observation, word of mouth, and advertisements posted on social media (fig.3.3). On the other hand, the residents' contribution is their personal food experience of the town. Their interest in the study may suggest a form of awareness of the topic of food or the environment, although no specific criteria were required apart from being older than 18 years old.

Different question grids for each group yet cover the same topic with variations of jargon, emphasis and specifications depending on the respondent's knowledge and expertise (Krueger and Casey, 2009, p.40; McDowell, 2010, p.164; Mann, 2016, p.4). The interview follows five steps that Krueger and Casey (2009, p.43) describe to build momentum during a focus group. (1) A brief opening breaks the ice, explaining the aim of the research and how the contribution will help. This stage is also the occasion to restate the data collection protocol and request permission to record the meeting. (2) Then, the study begins with an introduction outlining the experts' remit and knowledge of the residential journey of the residents of Letchworth. (3) The third step is a transition question, adapted depending on the interviewee's expertise, which addresses food activities and partnerships for experts or food procurement routine for residents. (4) The key question focuses on the characteristics of cities in food terms, whether on the spatial, economic, political, or social dimensions of food in places relevant to the interviewee. (5) The meeting concludes with an open question involving personal views that leaves time for additional remarks once the interviewees are more familiar with the exercise and the interviewer (Appendix 3.2: Question sets).

Out of 49 SSIs, six are experts in their fields, whether food policy, urban planning, or garden city; sixteen are representatives of local authorities; six are local food-related initiative champions; five are working with or in the private sector; and three are involved in farming activities. In addition, thirteen residents have responded to the call for participation in the study, as described at the start of this section 3.2. With the interviewee's consent, SSIs are recorded for transcript purposes (see section 8.4.1), also described in section 3.3.1, which presents the data processing and analysis.

Group discussion: exploring others' perspectives.

A group discussion organised towards the end of data collection when more participants are aware of the study (Kamberelis and Dimitriadis, 2013, p.62). To mitigate the impact of external factors that affect public speaking and the assessment of self-disclosure (Krueger and Casey, 2009, p.7), the group discussion comes as a complementary contribution to SSIs and observation (Frey and Fontana, 1991; Morgan, 2014b), bringing specific to the context though participants' interaction,

generating ideas while discussing key themes considered in SSIs and reflecting both methods' outcomes (Kamberelis and Dimitriadis, 2013, p.61)

This method, initially devised as a focus group, is a research technique that gathers information from specific groups of individuals and their interactions (Krueger and Casey, 2009; Morgan, 2014b; Greenbaum, 1998). After the in person encounters transferred online from 2020, the virtual setup for a focus group is different, but the methods and process of a focus group guided the configuration of an online group discussion. The focus group is part of a research process that involves identifying the relevant participants to create a homogenous group, elaboration of an appropriate structure with targeted questions or activities during an agreed timing, and a facilitator, most often the researcher in an academic focus group (Nyumba *et al.*, 2018). Hence, based on these guidelines proper for focus groups, the group discussion in this study is organised to gain voices and understand residents' outlooks regarding local food offers, personal definitions of healthy and sustainable food, and everyday life food procurement (Appendix 3.2: Question sets)

The group discussion is based on three expectations (Breen, 2006, p.464): to share and compare participants' experiences, to develop and generate ideas, and to explore issues of shared importance. The primary purpose of arranging a group discussion is to gain complementary insights and a more profound comprehension of the perception of food in Letchworth linked to the themes obtained from the SSI transcripts (Breen, 2006, p.465). Nevertheless, group discussion might unexpectedly yield results inherent to participatory techniques (Acocella, 2012; Kamberelis and Dimitriadis, 2013, p.67; Vigurs and Kara, 2017).

Building on the thematic framework of SSIs, the procedure of the group discussion includes visual elicitation (Lapenta 2011, Margolis and Rowe, 2011), a technique that uses visual support to initiate conversation (Harper, 2002). Themes, such as the spatial component of the town supporting food economy and activities led to historical and political considerations while commenting on archives and photographs from the Garden City Collection (GCC, 2023), so that participants can interpret them and reflect on their observations on today's environment (Margolis and Rowe, 2011; Pink, 2001, 2011b).

Four people volunteered to constitute a group, initially planned between four and eight (Nyumba *et al.*, 2018). Although the participants appear to be homogeneous in their engagement in city life, they have different profiles and residential backgrounds. They have been living in Letchworth for various amounts of time in different neighbourhoods (fig. 7.2), and have an interest in either food, gardening, or urban planning. Notes during the meeting enable personal records and comments (Watson and Till, 2009), as well as an abridged transcript (Krueger and Casey, 2009) further explained in the data procedure section 3.3 of this chapter.

3.2.3 Visual methods, linking Qual and Quant

This section describes and justifies the exploration of the spatiality of food in Letchworth while including the versatile appropriation of visual methods by different disciplines. It includes: the use of photographic surveys, food mapping, UMA, and visual elicitation (Pink, 2003; Crang, 2010; Chalfen, 2011; Margolis and Pauwels, 2011; Kropf, 2017).

Documenting food geography and food practices

The theory and practice of urban planning was significantly impacted by the garden city model from the 19th century, especially in relation to its visual aids (fig. 1.1; 2.1; 4.1; 5.1; 6.1; 7.1) (Crang, 2010; Cook, 2019). Visual media, including diagrams and their translations into a masterplan of the world's first garden city located in Letchworth, Hertfordshire (fig. 4.13), are arguably how Howard managed to communicate and convince a wide range of enthusiastic investors from different political streams (Buder, 1990; Tizot, 2018). The diagrams from Howard and Parker and Unwin's master plans are pivotal sources of visual information (Howard, 1898, 1902; Unwin, 1909; GCC, 2023) that help the interpretation and illustration of the importance of food in the garden city model. Therefore, visual techniques are useful for the research project as they help investigate the theoretical context of the garden city as a practical and applicable infrastructure on an extensive scale.

The use of visual material in this doctoral project includes traditional tools in geography such as maps, schematics, sketches, drawings, and sections as a way of representation and analysis of a site combined with ethnographic-related visual inputs, photographs from the researcher and the participants, and historical material (Crang, 2010; Hitchings and Latham, 2019). Historical materials encompass early-century photographs and postcards of Letchworth Garden City (GCC, 2023). Similar to a form of the First Garden City branding, these visual documents were produced to capture a representation of the town during its early years (Banks, 2001; Margolis and Rowe, 2011; Holm, 2014).

In this study, ethnography uncovers the translation of the immaterial phenomenon of the food system into tangible everyday geography of practice (Katz 2004, in Watson, 2010), which accounts for the spatial dimension of the case study. Ethnography often associates non-visual (text-based) methods with a visual element to reveal an additional layer of reality "beyond the taken for granted" (Pink, 2009, p.4). Visual methods can uncover concealed insights (Wills *et al.*, 2016), while also recognising the potential constraints of verbal communication (Crang, 2010, p.213; Burles and Thomas, 2014), or the commonplace nature of everyday routines, which are often overlooked and

deemed unremarkable (Pink, 2003, 2001b; Wills *et al.*, 2016). Therefore, visual elements add another truthful or realistic aspect to data based on words (Harper, 2002; Pink, 2003; Crang, 2010; Lapenta, 2011, p.210), highlighting the relationship between context and causality (Cope, 2010).

Relatedly, photography is a valuable tool for gaining insight into the experience of individuals (Miller, 2014; Knowles and Sweetman, 2004), capturing both objective and subjective elements (Basil, 2011). Using photography can overcome the limitation of using interviews alone, and in some cases, photographic surveys can generate a parallel narrative to an interview, demonstrating convergence in data interpretation (Mariapan and Abdullah, 2008). Besides, photography can objectively document a scene, allowing for reflection and analysis (Machin, Moscato and Dadzie, 2021), “an aid to observation” (Collier and Collier, 1986, p.7). Photography, however, also relates to a subjective interpretation that transports back to the pictured scene (Barthes, 1993). This subjective interpretation of the photography is described in Barthes' (1993) concept of "punctum," referring to an image with personal and relative memory, embodying the picture's uniqueness for an individual.

In contribution to the social science field, most articles explore participatory visual methods as an umbrella term for different protocols (Chalfen, 2011). Photographs taken by participants have different terminologies in literature: participant-employed photography (Burles and Thomas, 2014), photo-elicitation (Vigurs and Kara, 2017), photo-elicitation interviews (Miller, 2014), or self-directed photography (Moore *et al.*, 2008). The study initially planned a walk with the interviewees to wander about a dear food place in Letchworth, photo-documented by the author. To offset the absence of this data, participants are proposed to provide any visual elements related to their daily food habits and experiences through visual elicitation techniques. Participants can share pictures, maps, and drawings via email or phone messages (fig. 3.3) alongside a brief explanation in the form of a caption and/or participate in a thirty-minute online interview to further discuss their visual contribution.

Researchers using graphic components underline their work with the visible when the sayable is less accessible (Crang, 2010, p. 209; Watson and Till, 2010, p. 123). Talking over pictures from residents is a powerful way to contribute more actively for the participants. Combining visual and verbal information is arguably a means to delve into the respondents' subjectivity (Crang, 2010, p.213; Pink, 2011a, Pink, 2011b). As an element of narration for better understanding (Crang, 2010, p.216). This combination informs the meaning of the pictures that one thinks are the best representation of daily food practices (Lapenta, 2011) and individual experience (Harper, 2002).

3.3 PROCESSING THE DATA

The findings and their interpretation rely on the triangulation of the dataset described in section 3.2 (Yin, 1993, p.69; Braun and Clarke, 2022, p.278). Section 3.3 presents a comprehensive overview of the data processing and analysis illustrated in Figure 3.7, outlining the sequential application of the data collection methods and analysis.

3.3.1 Data analysis

Spatial analysis: identifying the geographic features.

Spatial analysis is used in both qualitative and quantitative paradigms (Fotheringham, Brunsdon, and Charlton, 2000; Clifton *et al.*, 2008; Parham, 2012). Carsjens (2015, p.12) identifies in the literature three concepts to examine specialisation of food and its organisation:

[...] (1) the physical networks, such as ecological networks and rivers and streams; (2) infrastructure networks, such as road, rail, air, ICT (note: information and communication technologies) and utility networks, and (3) urban networks, which are the resulting structures of the links between infrastructure networks and occupational patterns.

In this doctoral study, the spatial analysis sits between these three models and is analysed using a GIS software. This involves dividing the information into layers, which can either be in the form of vector with shapefile format, a shape-based images, or rasters, which are pixelized images in jpg, png, and tiff formats (Wise, 2018). In Computer-Aided Design (CAD), attributes define the spatial features of vector layers, which consist of information about an element organised in a table (Fotheringham, Brunsdon, and Charlton, 2000, p.41; Wiskerke and Verhoeven, 2018b; Wise, 2018). Depending on the feature, attributes might hold information like name, size, area, and postcodes. Translating the obtained data into geographic information system software facilitates quantitative analysis, including density, distance, and square meters for area calculations. Table 3.2 establishes a list of the layers used in the GIS model with the attribute for measurement of each feature. Points represent the location, polygons provide areas, lines the distances.

Table 3.2.: GIS layers to food-related location in Letchworth Autor, 2023

Food-related components in GIS		
CATEGORY	SUB-CATEGORY - LAYERS	REPRESENTATION ON MAP
Food-related businesses and outlets	Supermarket (SU.00) Mini market (MM.00) Specialist shop (SS.00) Stall (ST.00) Market Square (MA.00) Artisan (AR.00) Wholesaler (WO.00) Restaurant (RE.00) Hotel (HO.00) Pub (PU.00) Coffee Shop (CS.00) Caterer (CA.00) Fast Food (FF.00) Waste management (WA.00)	Vector - Point
Food initiatives	Community-led imitative main outlet LGCHF charitable venues	Vector - Points
Productive land	Orchard Allotment Community garden Pasture and arable fields Farm	Vector - Point - Polygon (area m2)
Natural areas	Open green spaces Garden Wooden land English greenbelt Water	Vector - Polygon (area m2) - Lines
Boundaries / borders	Land tenure – The Foundation Estate LSOA (Lower layer Super Output Area) MSOA (Middle layer Super Output area) UK administrative boundaries	Vector - Polygon (area m 2)
Building	Housing	Vector

	Faith Leisure Education Cultural Community Office and Institution	- Point
Contributors to the study	Participants: non-expert / resident Participants: expert (institution, community group, food partnership, farmer, business owner)	Vector - Large point covering a postcode
Traffic	Train track Train station Path	Vector - Lines - Point
Background	Aerial view Open Map Local Historical maps	Raster image - Tiff and jpg format (tiles)

Whilst the first exercise to locate food-related locations identifies the concentration and lack of food outlets in neighbourhoods (Fotheringham, Brunsdon, Charlton, 2000, p.41), QGIS software provides embedded tools to generate graphic outputs from vector datasets. The use of heatmap tools, which is a form of data visualisation that highlights the spatial distribution pattern that helps identify the intensity or density of data (Kropf, 2017; Wise, 2018; Gu, 2022), transforms a vectorial point layer into raster layers in CAD software (fig. 4.5). Additionally, the QGIS software exports map into pdf, useable to create three-dimensional models in SketchUp, a Computer Assisted Design (CAD) software, using the Digimap dataset informing on building heights, which initiates a part of the UMA process.

Kropf's (2017) research categorises UMA based on three variables: aspect, time, and resolution (fig. 3.6a and 3.6b). Aspect (ibid, p.53) pertains to the choice of urban forms that align with the map's purpose and objective. Essentially, sequencing or overlaying is a technique that combines the urban forms, with different level of detail. Map sequencing (Kropf, 2017, p.61) can provide an understanding of the evolution through social drivers (Kropf, 2017, p.72). Spatial analysis in this thesis aims to demonstrate the site's development with the help of historical maps before the establishment of Letchworth Garden City and during its development from 1903 till today, using Digimap resources, and archives of the development plans of Letchworth. These maps are supported by photographs in order to understand the evolution of food-related land use, developed in Chapter 4. The Garden City Collection (GCC, 2023), a charitable service from the Foundation

that is a valuable data source, possesses materials that document the history of Letchworth, including Parker and Unwin's initial development plans.

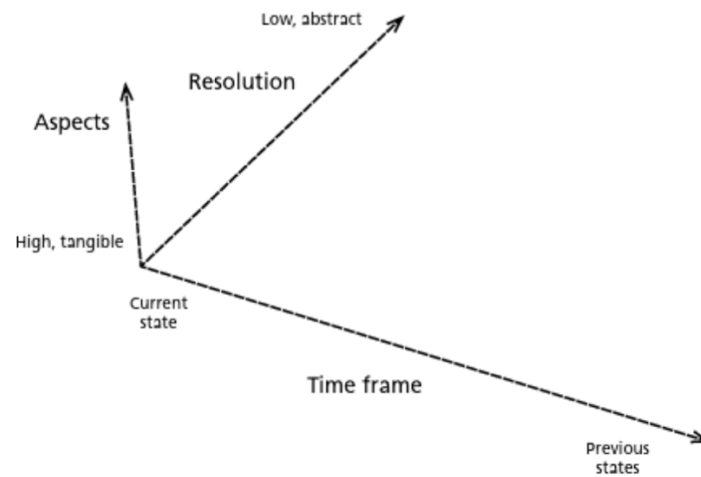


Figure 3.6a: Relationship between the different dimensions or views that make up the scope of the study (Kropf, 2017, p.53).

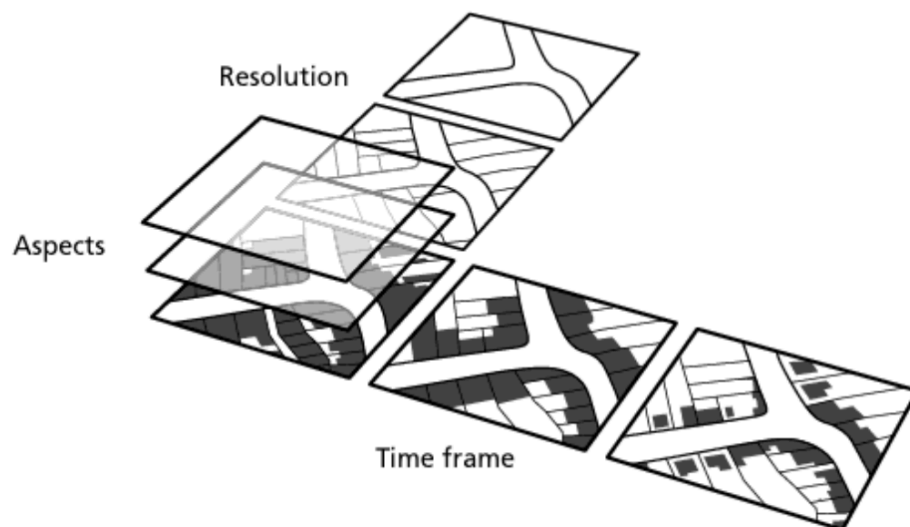


Figure 3.6b: Together the three dimensions of aspects, resolution and time frame constitute the scope of the study along with study area, (Kropf, 2017, p.56).

In terms of resolution, the degree of detail visible in the elements of the urban form, UMA focuses on land use, building structure, plot patterns, and streets (Troglio *et al.*, 2012; Iman, 2017). The inventory of these elements fits into three main categories: built, non-built environment, and movements. The spatial analysis output from UMA represents the land cover and land use to highlight a potential medium for food practice (Table 3. 5) to untangle the hierarchy of interrelated urban forms and practices.

Table 3.3: UMA elements to identify land uses and food elements, Autor, 2023

Land cover - typology of spaces in UMA close-ups.		
<u>CATEGORY</u>	<u>LAND COVER</u>	<u>LAND USE AND ACTIVITIES</u>
Built environment	Houses Institutional building Business Office Recreational building Cultural building Education building Warehouses	Private - domestic – public use Leisure, administration, health, social Retail, industry, agricultural Agriculture, pedagogy, farm food retail Sport and leisure
Non-built environment	Fields and pastureland Private garden Green space Water	Food production and agriculture Leisure Nature strip (see Chapter 4) Semi-common green area (see Chapter 4) Open common green space (see Chapter 4) Woodland Energy use
Taffic space	Permeable surface Impermeable surface	Street Road Pathway and passage

To inform the spatial description outcomes, the participants' input provides a meaning for the spatial analysis, and the following section gives an account of the qualitative dataset process.

Transcript and coding: inductive process for Thematic Analysis (TA)

Coding is an “almost universal process in qualitative research” that fractionates and categorises data into common subjects (Elliott, 2018, p.2850). To compare the various datasets described in section 3.2, it seems relevant to combine common attributes and categorise themes. Exploring different approaches to coding, the Thematic Analysis (TA), which is a method that identifies patterns across a qualitative dataset through a systematic coding system (Vaismoradi *et al.*, 2016, p.101; Braun and Clarke, 2022, p.5, p.248) is a sound yet versatile techniques to bring together the breadth of the data collected as described in section 3.2.

Similar in some ways to Content Analysis, the role of themes in TA is the final analytic unit coming from initial codes (Vaismoradi and Snelgrove, 2019; Braun and Clarke, 2022, p.237). However, Qualitative Content Analysis is limited to achieving a comprehensive analysis of findings because it merely describes and identifies trends in data (Anderson, 2007; Vaismoradi and Snelgrove, 2019), while TA provides a higher level of interpretation and meaning in identifying patterns and heterogeneity of a large spectrum of mediums and contributors (Clarke and Braun, 2017, 2022; Vaismoradi and Snelgrove, 2019).

The TA method applied in the study follows Braun and Clarke's (2022, p.6) six stages: data familiarisation, data coding, theme generation, themes development and review, themes refining, and writing up (fig. 3.4). A first step creates a familiarisation with the data during the transcription of meetings audio-recorded with the informed consent of the participant. This step ignites detailed knowledge and early identification of the content, preparing the meaning of the responses by revisiting the data in the later stage (Mann, 2016, p.199). Conversation drifting from the question grid is noted in the transcription (McLellan, MacQueen and Neidig, 2003). Clearing inputs irrelevant to the question grid helps time and data management for later coding and analysis (Halcomb and Davidson, 2006).

The second step involves the data coding using the Qualitative Data Analysis Software package (QDA), called NVivo, provided by the UH. The initial round of data coding aims at identifying themes with a minimum interpretation (Anderson, 2007) to avoid the multiplication of codes before looking into the nuances of the different themes. The third step entails the reorganisation of the quotes in each code to develop themes within the four-dimension framework identified in the literature review: space, economy, decision-making and social organisation in the garden city

model. The fourth step review and develop further the themes, using the SSIs are the core of the generation of the themes and TA. However, during this fourth stage of TA analysis, additional visual data is included in the NVivo coding system, including fieldwork documents, participants, and archives. Prior to the write-up, the fifth step involves transferring quotes to the four main topics identified in the *garden city* literature to organise the codes generated from the primary dataset. The resulting structure from NVivo was utilised to develop headings for each paragraph (Braun and Clarke, 2022, p.78). The final sixth step of the TA necessitates the reorganisation and removal of similar quotes that inform on the theme's significance during the writing process, framing the findings with academic grounded framework. The sixth and final stage of the TA requires the reorganisation and removal or merging of comparable citations during the writing process, contextualising the outcomes within an academic framework for analysis.

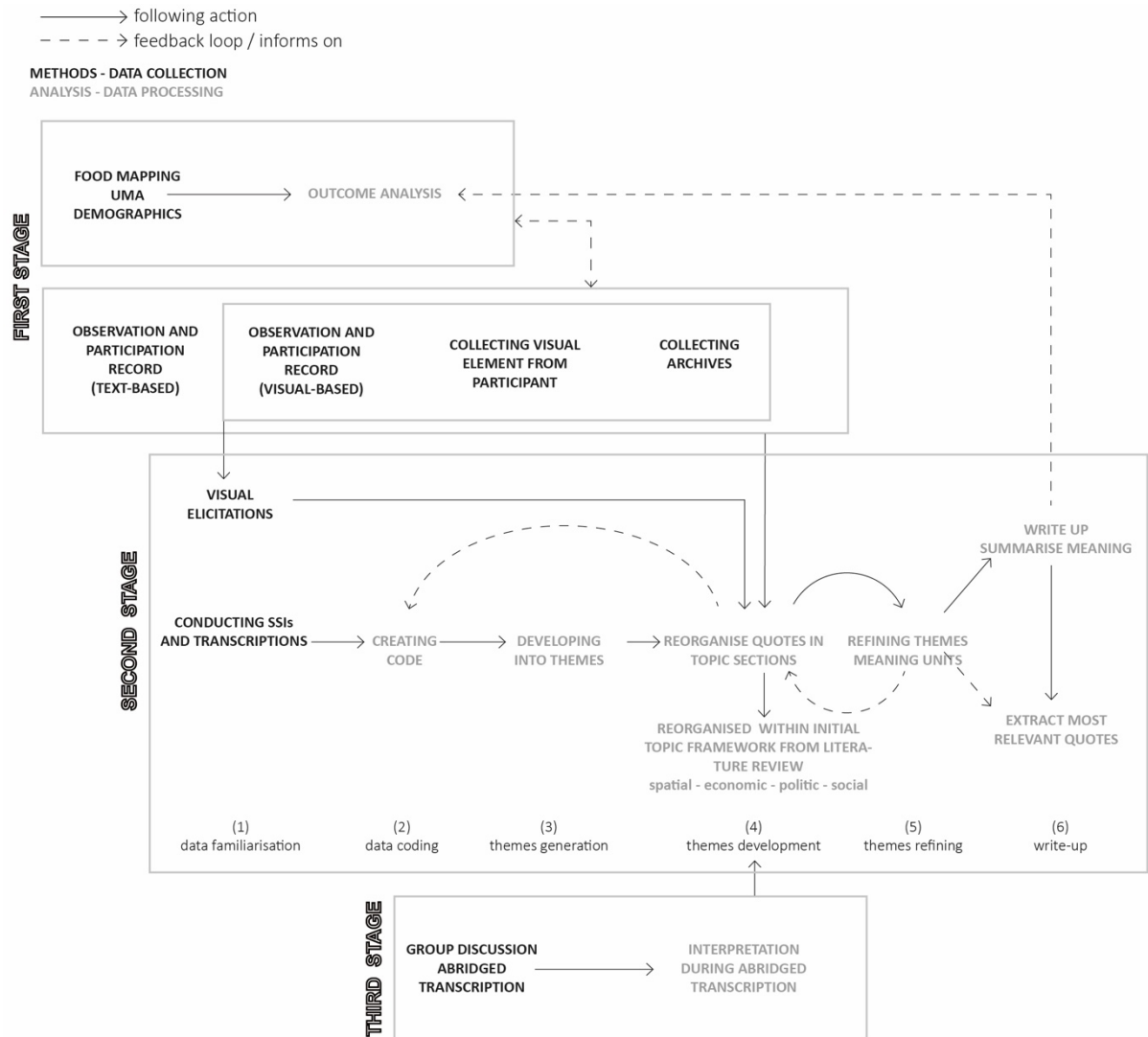


Figure 3.7: Data collection stages and analysis process, Author, 2023

Drawing the datasets together

Drawing the spatial analysis with the TA approach combines the meaning of the site to understand the sense of place in regard to food as defined in sections 2.3.2 and 3.1.1. Figure 3.7 gives an account of the interaction between the spatial analysis and the TA and the triangulation of the quantitative and qualitative datasets.

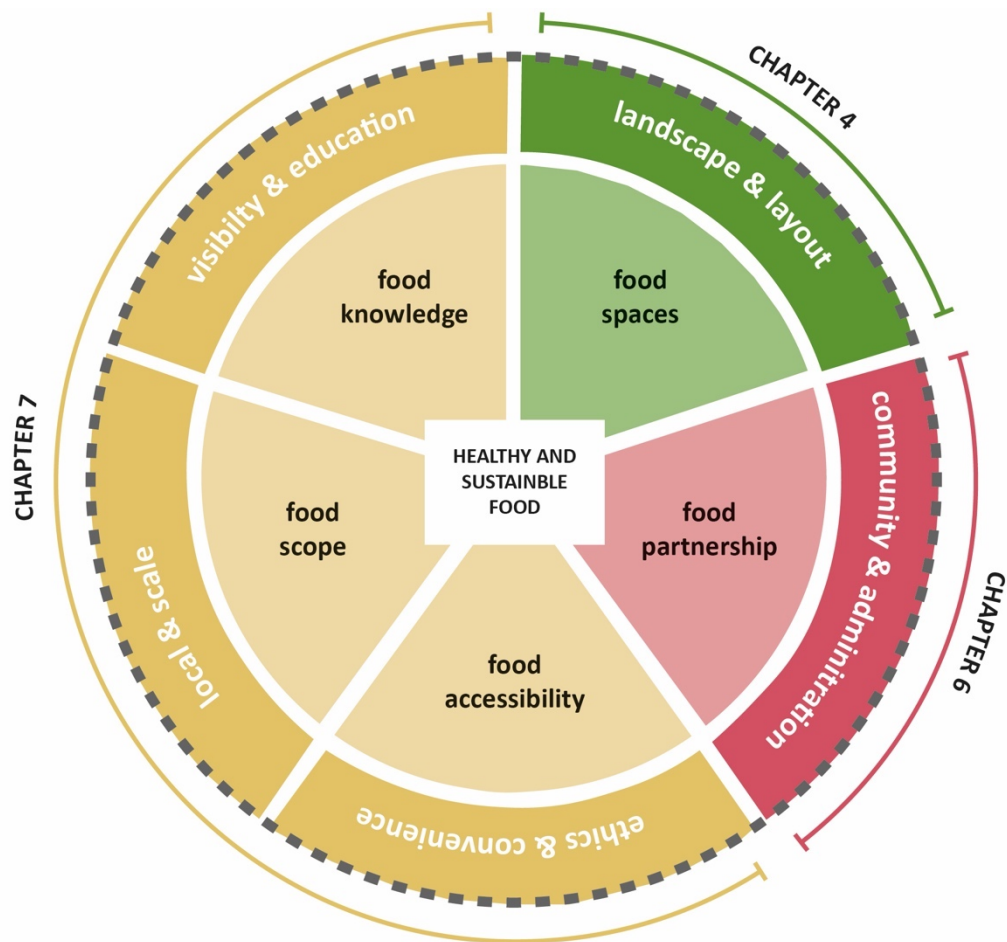


Figure 3.8: Five tensions: framework identified from group discussion to explore food practices in Letchworth, Amelie Andre, 2023

The main objective of the group discussion is to provide further perspectives on the themes and topics identified in individual SSIs. As a result, the group discussion analysis is conducted separately from the initial four steps of TA analysis (fig.3.7). Using an abridged transcript (Krueger

and Casey, 2006, p.131) is a way of “typing relevant and useful portions of the discussion” into a condensed version. These five tensions provide an independent framework for exploring the different facets of the food experience in Letchworth and inform the other data collected and mapped in different chapters (fig. 3.8).

3.3.2 Ethical consideration

Acknowledging the epistemological approach

Constructivism acknowledges the possible biases and interferences of the researcher with the field of their study as a constructed reality (Clough, Nutbrown and Cox, 2002; Hershberg, 2014). The theoretical approach highlights the researcher’s engagement as a member of the community (Blay-Palmer *et.al.*, 2013) and the need to sometimes blend in and restrain a solely academic approach (Fridman and Lenters, 2013).

Undertaking this doctoral journey in a second language, discovering the English context may have been perceived as naïve, with missed implicit cultural allusions. Whether this helped or not, the status of the interviewer needs to be considered as a factor that influences any interaction (Mann, 2019, p.19), linked with the researcher's background (Creswell, 2003) and the critical constructivism background of the study (Pouliot, 2007). Listening to recording while transcribing is the opportunity to improve later interviews: inner criticism observes interviewing skills, assuming ways to be more concise or specific with terminologies so each category of respondents can feel comfortable during the discussion (Crang, 2010; Duncan, 2006; McDowell, 2010; Mann, 2006, p.92).

Reflexivity implies a critical stance that acknowledges the likely impacts of the researcher on the study process and outcome (Yin, 2009; Mann, 2016, p.16; Braun and Clarke, 2017, 2022, p.5). Although this aspect is also discussed further in Chapter 8, acknowledging this part of the doctoral research process tends to capture an accurate representation of the research journey to situate the thesis within the theoretical background, as devised in section 3.1.3. Besides, biases from interviewees, who could tell what they think is expected from them (Yin, 2009, p.102, Mann, 2016, p.16), may be due to the uneven role between interviewee and interviewer. Hence, balancing informal and formal discussions is relevant so that participants are comfortable in their role as knowledgeable people. On that note, direct observation and participation sessions allow for counterbalancing more measured answers where discourse is not in a formal recorded framework.

Ethnographic approach and visual data

Ethnography is associated with the management of ethics and challenges experienced by scientists when using this approach, particularly when combined with visual methods (Hammersley and Atkinson, 1995; Brewer, 2000a; Pink, 2001; Pink, Kürti and Afonso, 2004; Miller, 2015; Wills *et al.*, 2016). Ethical considerations concerning good practice include matters of identity, privacy and personal security (Chalfen, 2011). Therefore, the thesis adhered to the university's ethics procedures and carried out work within an ethics protocol.

Content shared during data collection is used in the thesis in accordance with the ethics agreement (Appendix 3.1: Ethics approval notification letter). Participants may choose to opt out of visual documents by completing an adapted consent form. The faces of individuals who can be identified have been blurred in photographs. Visual elicitation necessitates codes or pseudonyms to acknowledge contributors and protect their anonymity (Lapenta, 2011, p.209). To avoid encroaching on the personal lives of expert participants (McDowell, 2010, p.161) and as residents could not be recruited directly via personal email, professional emails or public social media platforms enable to make contact, together with an advert displaying contact information to enlist in the study.

An ethnographical approach carries challenges to ensuring anonymity. Throughout the thesis, pseudonyms or codes categorise participants to ensure their anonymity. While transcribing, elements that can lead to the identification and some information about organisations and locations are intentionally vague or deliberately hidden in the transcription. Residents have a name of the same gender and the same year trend to humanise the contribution. The organisation representatives and experts have a code composed of a letter assigned to their category and a number assigned to each individual (Appendix 3.1). Placing code on the maps, a knowledgeable person of Letchworth could deduct the actual organisation, however, names and roles within an organisation are not disclosed, preventing tracking back to an individual.

3.4 SUMMARY

Chapter 3 outlines the methodology and situates the study within existing theory and knowledge, informing data interpretation in the four subsequent chapters. It highlights the challenge of urban food studies and the need for integration across traditionally segmented aspects. While Chapters 2 and 3 demonstrate that many researchers have utilised tools to capture this complexity, this study integrates these explorations and employs tools from various philosophical theories. Each method's description presents a distinct perspective to comprehend the diverse realities of the food economy in the initial garden city.

This study is structured with four chapters reporting on the results, commencing with an examination of Letchworth's spatial features to establish the background of the research in light of historical and contemporary approaches to urban planning. Chapters 5, 6 and 7 present the sequence of economic levers in Letchworth (Chapter 5), governance instruments as enablers and challenges (Chapter 6) and practices discovered through interviews with residents considering the preceding findings (Chapter 7).

CHAPTER 4: FOOD LANDSCAPE

The town of Garden City, which is to be built near the centre of the 6,000 acres, covers an area of 1,000 acres or a sixth part of the 6,000 acres, and is of circular form, 1,240 yards (or nearly three-quarters of a mile) from centre to circumference. Diagram 2 is a ground-plan of the whole municipal area, showing the town in the centre.

Howards, 1898, p.14

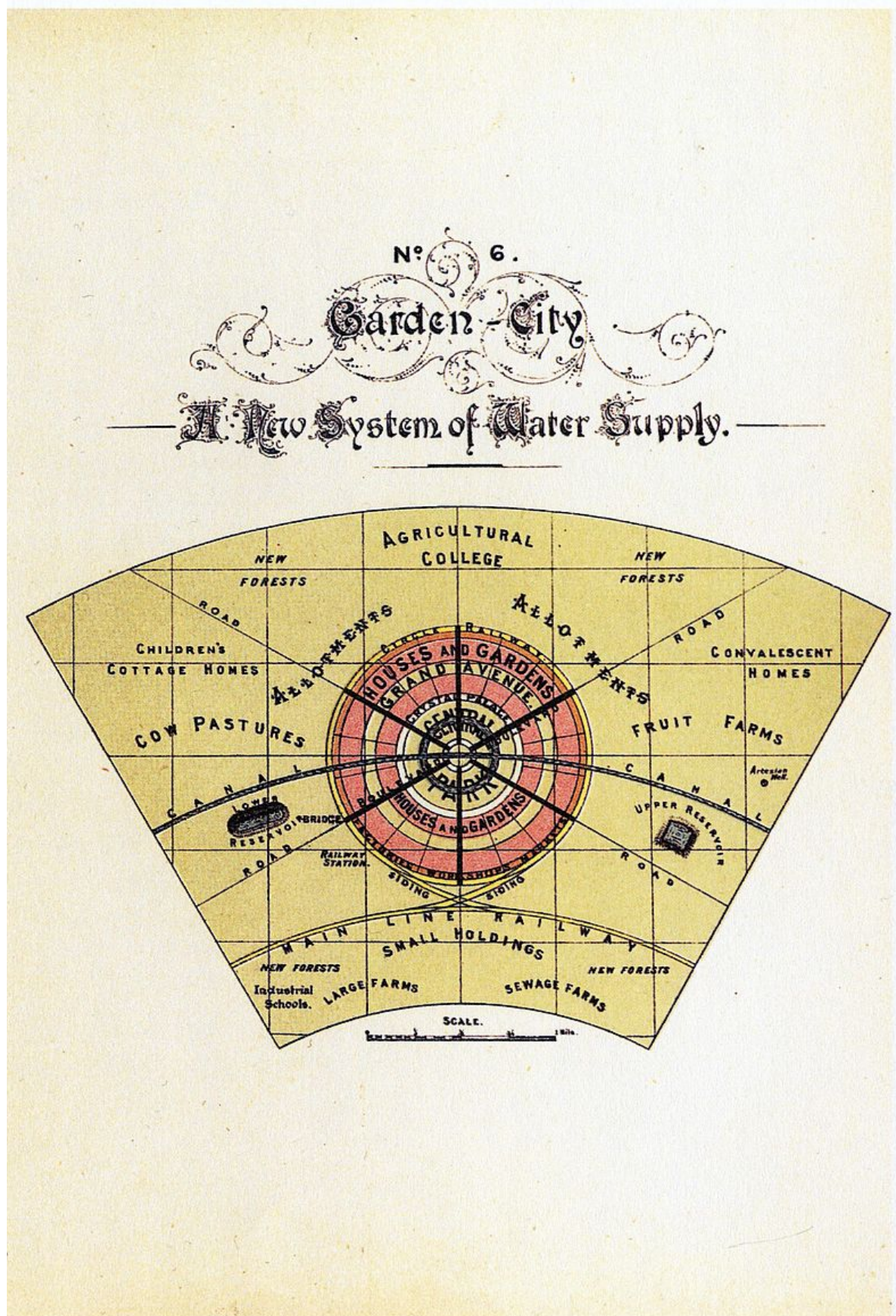


Figure 4.1: Diagram No2 - Agricultural land, Howard, 1898

4.1 SNAPSHOT OF THE FOOD LOCATIONS IN LETCHWORTH

This section examines the food-related locations in Letchworth, identified on maps and verified on-site. It includes food trade outlets and non-built areas such as parks and allotments that offer potential for land use change and edible purposes. The mapping outcomes provide opportunities to characterise the built environment and lay the groundwork for Chapters 5, 6 and 7.

Howard's spatial organisation of the garden city model

Howard's diagrams reveal the role of food in the garden city, characterised by the division of the town into two estates. The agricultural estate encloses the more densely populated town estate, while arable land in the agricultural estate has multiple uses, including food production, industry, education, health, and well-being, as shown in Figure 4.1:

...cow pastures, fruit farms, allotments, orchards, large farms, small holdings, cohabit with children cottage homes, new forests, agricultural colleges, convalescent homes, farms for epileptic, and asylum for blind and deaf...

The overall organisation of the town is crucial to its function. Figure 7.1 provides detailed food location information within the Crystal Palace (Howard, 1898, p.73), suggesting that food production and trade are integral to life in a garden city (ibid, p.38). In the town estate, Howard's diagram in Figure 7.1 shows that each ward, represented by a sixth of the circular site, should offer local employment for every resident (ibid, p.43) to ensure that no one should travel more than a quarter of a mile to reach the nearest shop (ibid, p.72).

Based on the garden city principles examined in Chapter 2, the gathered data identifies structural spatial characteristics useful to explore present-day Letchworth land uses, such as cultivation, allotments, orchards, trading facilities, processing, and waste management. These features define in this thesis the different food spaces, integrating the landscape as a bridge for existing and potential consumable practices encompassing crop growing, pastureland, and common land for community foraging. The doctoral study commences by strategically identifying food sources in the city through food mapping and fieldwork, as detailed in Chapter 3. Chapter 4 also examines the town's development and land usage over time. Morphological patterns connect the current food landscape with the garden city model executed in Letchworth.

Food in Letchworth today: built footprint and example of food outlets.

Geographic Information System (GIS) files provide a base map to create a comprehensive inventory of a primary dataset of food-related venues in Letchworth and its surrounding areas, encompassing food production spaces, retail, consumption, and waste management. At first glance of the nine wards designated by the Foundation for administrative purposes as spatial, population and governance units, it appears that the north-eastern industrial area has a substantial building footprint (fig. 4.1). The industrial area is segregated from the regular neighbourhood and is visually outstanding when the layer of private gardens is applied in the GIS model. Field investigation confirmed the assumption that the industrial areas comprise of food retailer warehouses and other types of businesses. Every food distribution place in Letchworth was determined by using an online directory and verified through on-site visits during field trips.

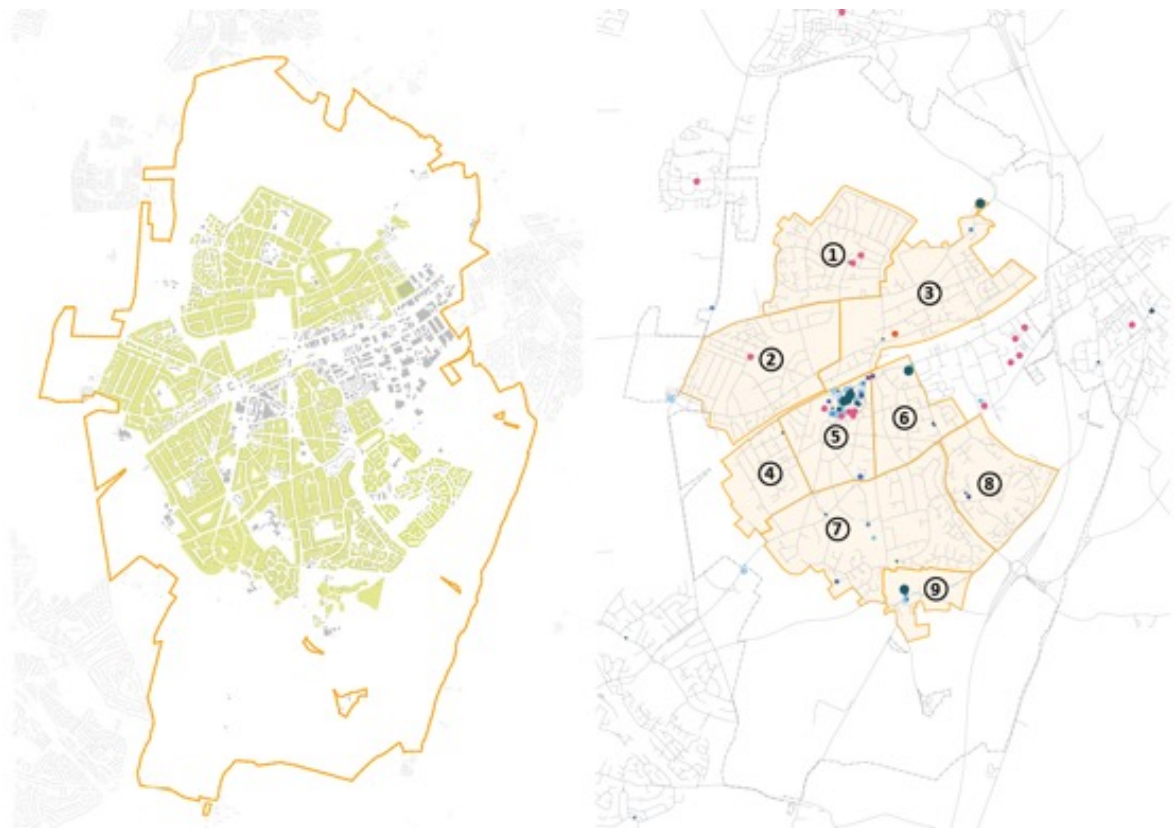


Figure 4.2: Map of buildings' footprint and private gardens in LGC (left) & Map of the different residential estates as defined by the LGCHF (right) - Source: LGCHF, Map: Author 2023 (Contains public sector information licensed under the Open Government Licence v3.0)

Indeed, the industrial area features five supermarkets (SU.03, SU.05, SU.08, SU.09, SU.24), which implies likely the use of a car for shopping due to their remote location from residential areas, as well as the sizable car park facilities offer. The roads leading to this part of the town, are, as well, less friendly to pedestrian and cyclists. These aspects of the car-focused approach to the foodscape as the town's development included an increasing use of automobiles (Creese, 1966, p.196; Miller, 1989). This significant shift had a profound effect on the spatial distribution of food across the town's foodscapes, which is further illustrated in section 4.3, providing insights into the town's evolution, and in section 4.4, where the focus is on neighbourhood morphology. However, one prominent supermarket with an adjacent large car park is available in the town centre (fig. 4.2).



Figure 4.3: Map of food outlets in Letchworth and close up on the town centre, Author, 2023
(Contains public sector information licensed under the Open Government Licence v3.0)

The primary dataset of food-relation locations is divided into layers that display food retailers (supermarkets, mini-markets, specialist shops, outdoor stalls, marketplaces, and artisans), and direct consumption venues (restaurants, pubs, coffee shops, caterers, and fast-foods). Figures 4.3 and 4.4 provide a snapshot of the location of commercial food outlets in the town centre with the marker attribute (fig. 4.3) and the heatmap tool that shows a concentration of venues in the town centre and the industrial estate (fig. 4.4), with only a few outlets in the peripheral residential wards even if some areas in town may have limited offers of affordable fresh food within walkable distances. Yellow marks represent the hospitality venues and pink food retailer. In the town centre, an equivalent of the Crystal Palace, as described by Howard (1898, p.33), is embodied in the Arcade with small independent stores, as well as fruit and veg stall stands daily in the town centre in the town square, (fig. 4.5), where a Farmers' Market takes place monthly with seven eight usual traders (B.02).

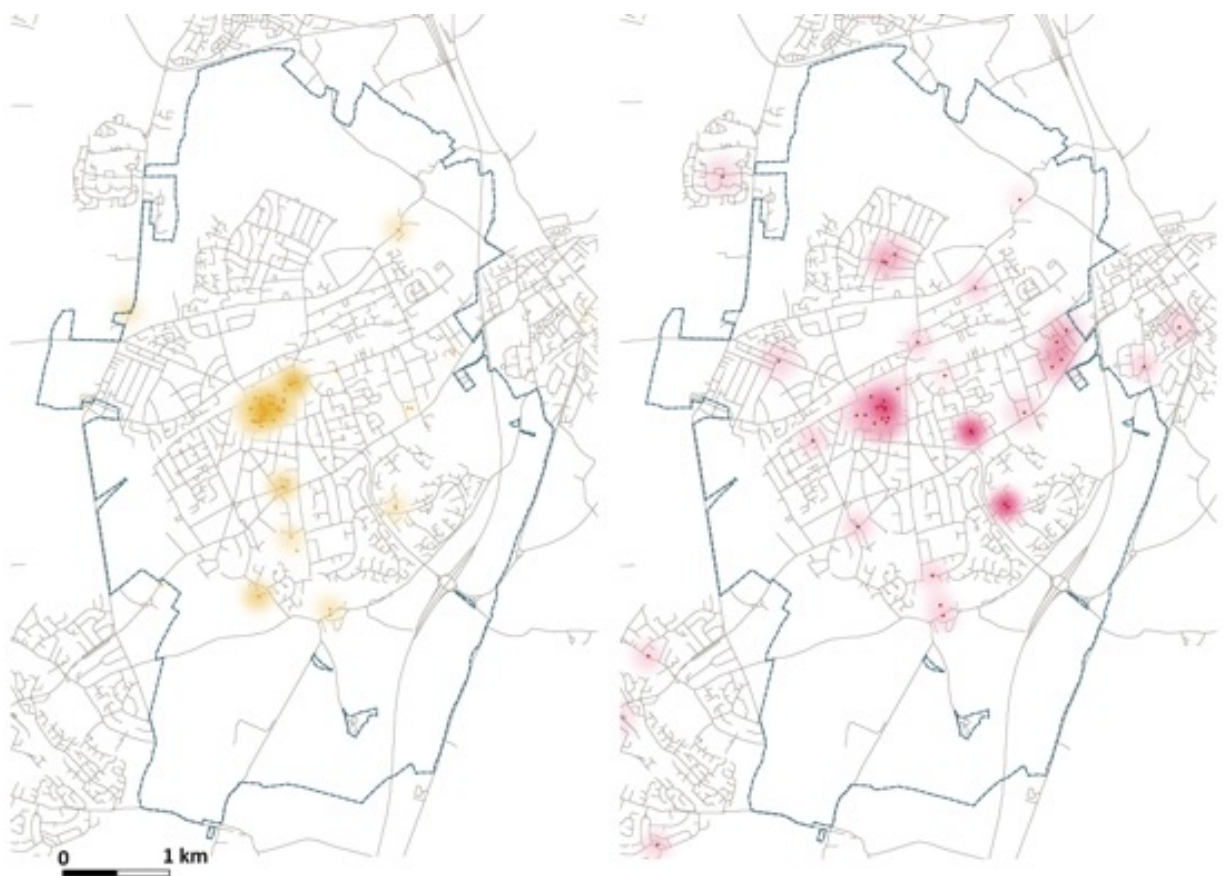


Figure 4.4: Heatmap of the food outlets. Hospitality, including restaurant, pub, coffee shop, hotel, caterer, fast food (left in yellow) and retail, including supermarket, specialist store, artisan butcher and bakery, corner shop, market square (right in pink), Author, 2023 (Contains public sector information licensed under the Open Government Licence v3.0)



Figure 4.5: Photographic survey in Letchworth, from top left to right bottom.: Daily fruit & veg stall in the town centre; Inside the Arcade gallery; Entrance of the Arcade gallery; The Wynd with independent local stores, including a vegan restaurant and a local brewery, Author, 2018/19

Observation during fieldwork documents a varied, independent, and alternative food offer in Letchworth, also acknowledged by some residents (R.03, 05, 13, 14; L.03, 07), such as plastic-free store, vegan restaurant and café, a seemingly popular coffee shop in a library. Between 2017 and 2020, new food businesses arrived in the town centre and successfully settled (L.03, 07, B.02, 03, Observation 2019). Moreover, participation in events in 2019 brought evidence of synergies related to food provisioning between like-minded organisations when a local business teams up with a local community food initiative to create a soup kitchen (December 2029), further explored in section 6.3.

Food in Letchworth: UEI and the non-built layout

This segment looks at the non-built environment in Letchworth characterised under the term UEI, as described in section 2.3.2. Extended attention to the GI concept and its suitability to support for food, is the opportunity to set the role and function of green space in literature. Interestingly, Mell (2008, p.71) acknowledges the legacy of the garden city model in the integration of nature into cities as interpreted in GI, which “promoted the idea of creating and maintaining spaces that provide a steady state of green and service infrastructures to support the communities that resided there, thus lowering continued urban expansion and conversion of green belt lands to housing or industry”.

Various studies tend to characterise GI with features that include "connectivity, multifunctionality, multiscale, integration, diversity, applicability, governance and continuity" (Wang and Banzhaf 2018; Monteiro, Ferreira and Antunes, 2020, p.8). On-site investigations and interviews suggest all these account in the different green spaces (fig. 4.6). Mostly related with the leisure aspect of green feature (see also section 7.3) of the town and. In the rural estate, adjacent to arable fields (LGCHF, 2023k). The Greenway (LGCHF, 20213l) is a pedestrian and cycling loop around the rural estate (fig. 4.7), an initiative of the Foundation to enhance the connection between the town and the rural estate (L.01, 02, 03, 04). Respecting Howard and Adams' visions of the diversity of land for food growing, the food mapping project distinguishes the different plot sizes of green space types corresponding in maps to different layers and polygons that provide measurable areas (fig. 4.6).

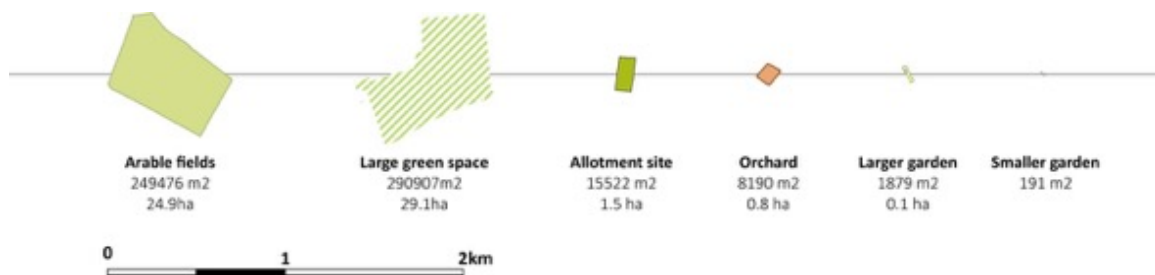
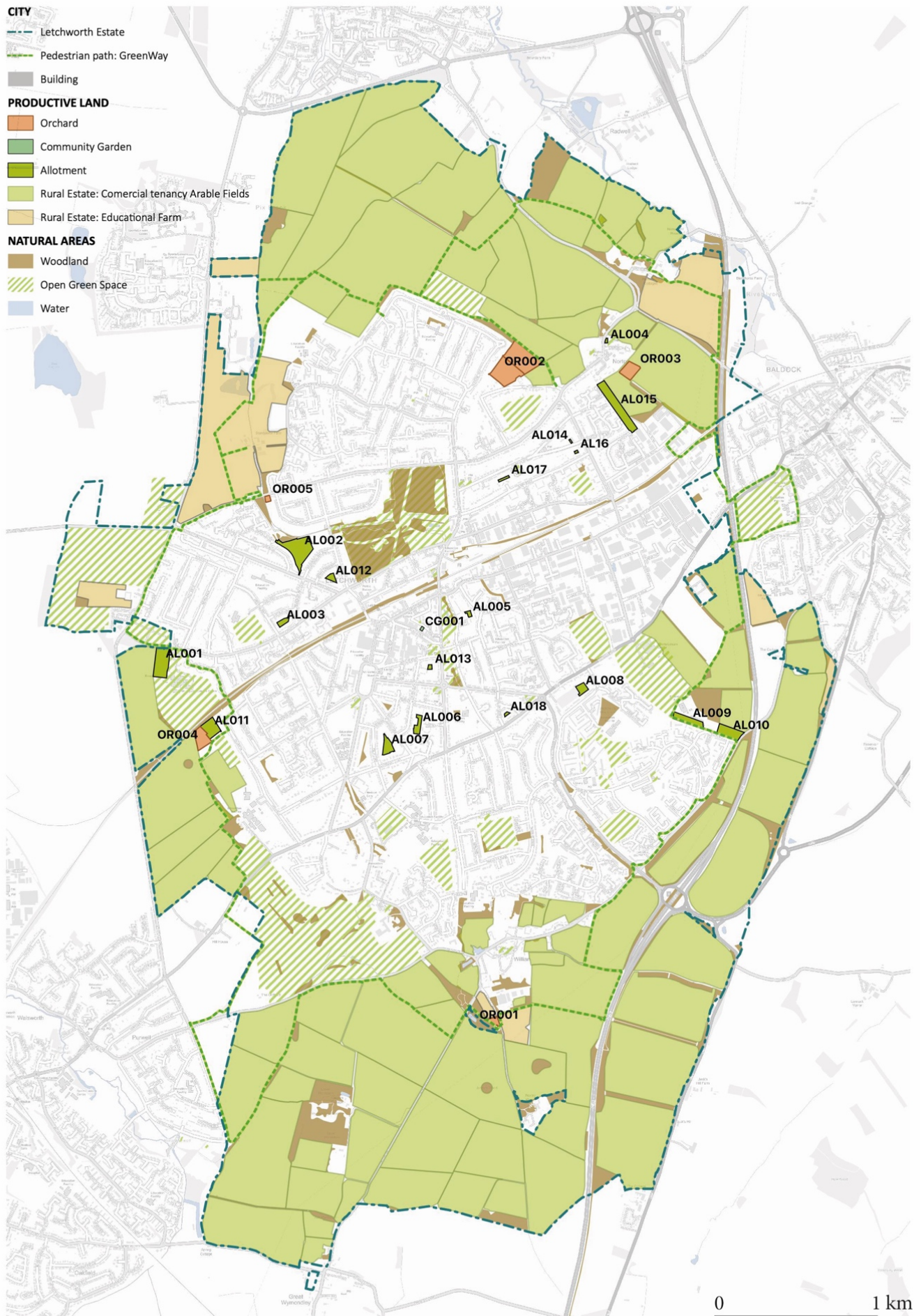


Figure 4.6: Different size of the four main green spaces in Letchworth, Author, 2023



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Previous page

Figure 4.7 Map of productive spaces in Letchworth: rural belt, open green spaces, woodland, orchards and allotment, Author, 2022. Contains © Crown Copyright and Database Right 2018 OS 2333065

The rural estate at Letchworth is primarily used for agriculture today. One smaller portion of the estate, as shown in Figure 4.8, is home to an educational farm open to the public and operated by the Foundation as a charitable service. The majority of the rural estate, also depicted in Figure 4.7, consists of arable fields and pastureland and is leased to an external farming company as a commercial tenancy. The tenants of the agricultural land could not be interviewed during the study, as they did not reply to an interview request. Nevertheless, collecting data from their commercial website and interviews with staff members of the Foundation reveals that they predominantly cultivate crops on a large scale for international market sales (L.01, 02, 03, 09). The two farming operations have financial incomes from different resources. While the commercial tenancy is designed for the farming business to sell their crop, the educational farm's "income, [is] probably 85% [...] from people paying to visit the farm [...], but because [they]'re still a working farm, [they] still produce lambs, [they] still produce beef cattle, [they] still produce pigs [...] marketed in a normal way. But [the educational farm] is not intensive at all" (F.03).

The Foundation's records made available during the doctoral study combined with the District Council's website can be utilised to pinpoint locations for allotments and orchards (fig. 4.8). Typically, small allotment areas are situated amongst residential properties (AL.02, 04, 03, 05, 06, 07, 08, 12, 13, 14, 16, 18, 17) and integrate with the original masterplan. This observation aligns with Creese's (1966, p.188) understanding of the spatial and social discontinuity between rural and urban realms and the role of urban planning in overcoming this challenge. In today's Letchworth, the large allotment sites (AL.01, 02, 09, 10, 11, 15) are on the outskirts of town and rural estates. They are a product of contemporary post-war town planning, influenced by modernist ideals (Livesey, 2019, p.99) (fig.4.15). Most of the fieldwork conducted between 2018 and 2020 indicates diverse usage of the plots across the various sites at that time. While some allotment sites receive intensive use, others remain mostly vacant and unkempt during fieldwork and observation between 2018 and 2020. Section 5.4 examines this aspect in greater detail concerning spatial support for resilience in food. The productive map of Letchworth (fig. 4.7) additionally encompasses open green space to underline the relevance of the edible landscape.

4.2 GARDEN CITY LEGACY: TOWN DEVELOPMENT AND SPATIAL FEATURES

This section explores the town's features dating back to its establishment in 1903 to provide context for the initial observation of the food landscape in present-day Letchworth. It emphasises the original garden city design and the subsequent progress of both built and natural infrastructure to define the structure of clusters and interactions between green infrastructure and buildings.

4.2.1 Early twentieth century, the onset

Three hamlets for a new settlement

The Garden City Pioneer Company Ltd. (see section 2.4.1) selected an area between three hamlets: Letchworth, Willan, and Norton to build the first garden city (Beevers, 1988; Buder, 1969, 1990) (fig. 4.11). The southern and northern boundaries of the site are respectively demarcated by the two hamlets of Letchworth and Willan.

Figures 4.11 and 4.12 initiate UMA in terms of time (see section 3.3.1) and demonstrate the overlay of the early traditional villages' structures, Norton, Willian, and Letchworth to highlight the persistent feature (Kropf 2017, p.63). The overlay of the current building footprints onto a late 19th-century map prior to the development of Letchworth Garden City indicates that the pre-existing arrangement of tracks and lanes had an impact on the town's layout and influenced the development of some housing and road networks within Letchworth Garden City. This finding is consistent with the observations presented by Miller (1989, p.29) and the role of the topology and natural features in the foundation of Letchworth Garden City as a new settlement.

Bounded by two existing towns, Baldock and Hitchin, the site was a strategic location and combined factors that could enhance garden city theories, such as the existing train track connecting London to Cambridge (Beevers, 1988, Buder, 1990) (fig. 4.9). Figure 4.8 is the proposed plan by Unwin and Parker and Unwin, which stands as the overall layout for the First Garden City Company (Miller, 1989, p.50), and the overarching town layout follows the first masterplan Unwin and Parker proposed in 1903 with some adjustments.

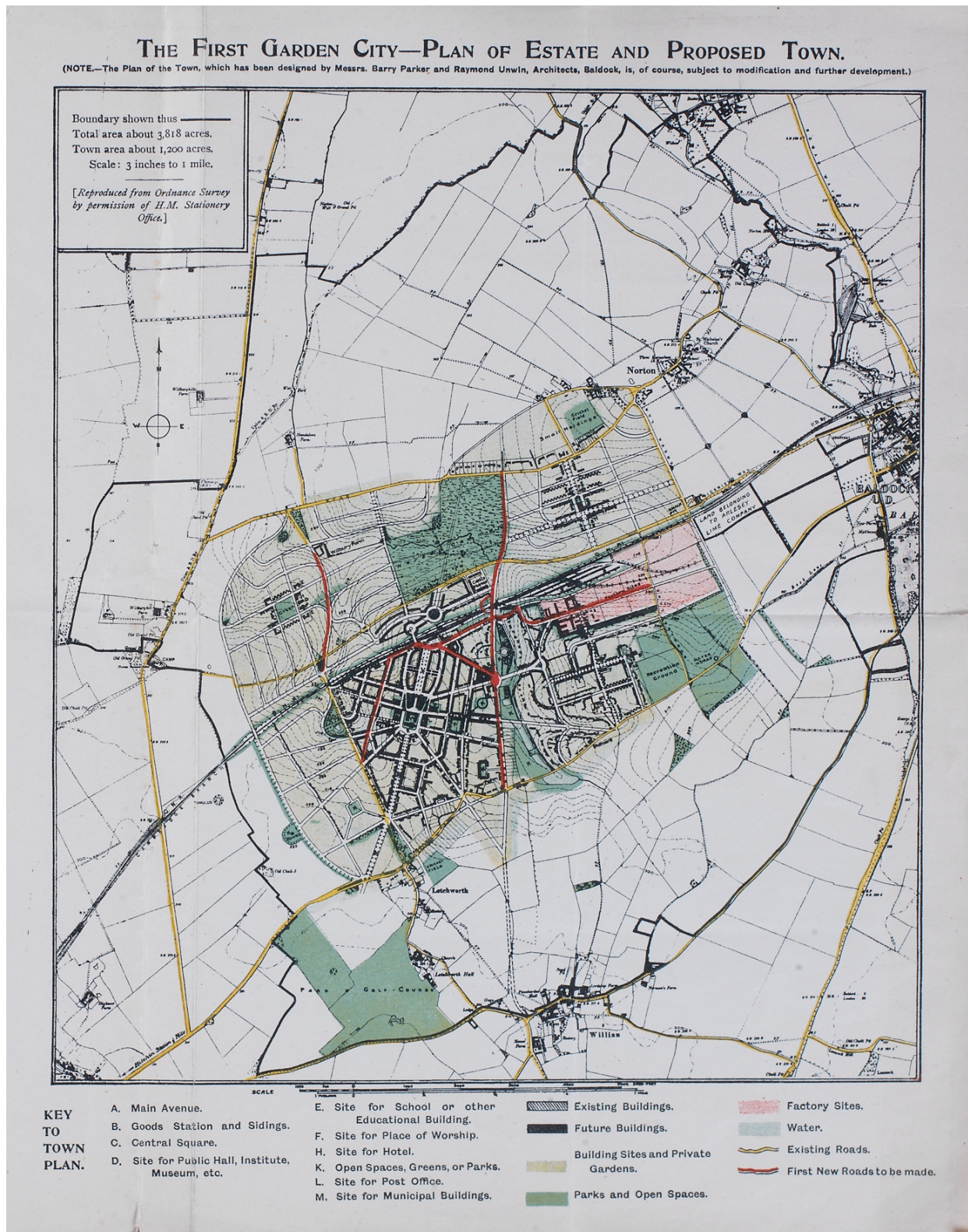


Figure 4.8: The First Garden City Ltd - Plan of Estate and Proposed Town R. Unwin and B. Parker, 1903 © Garden City Collection, the Letchworth Garden City Heritage Foundation.

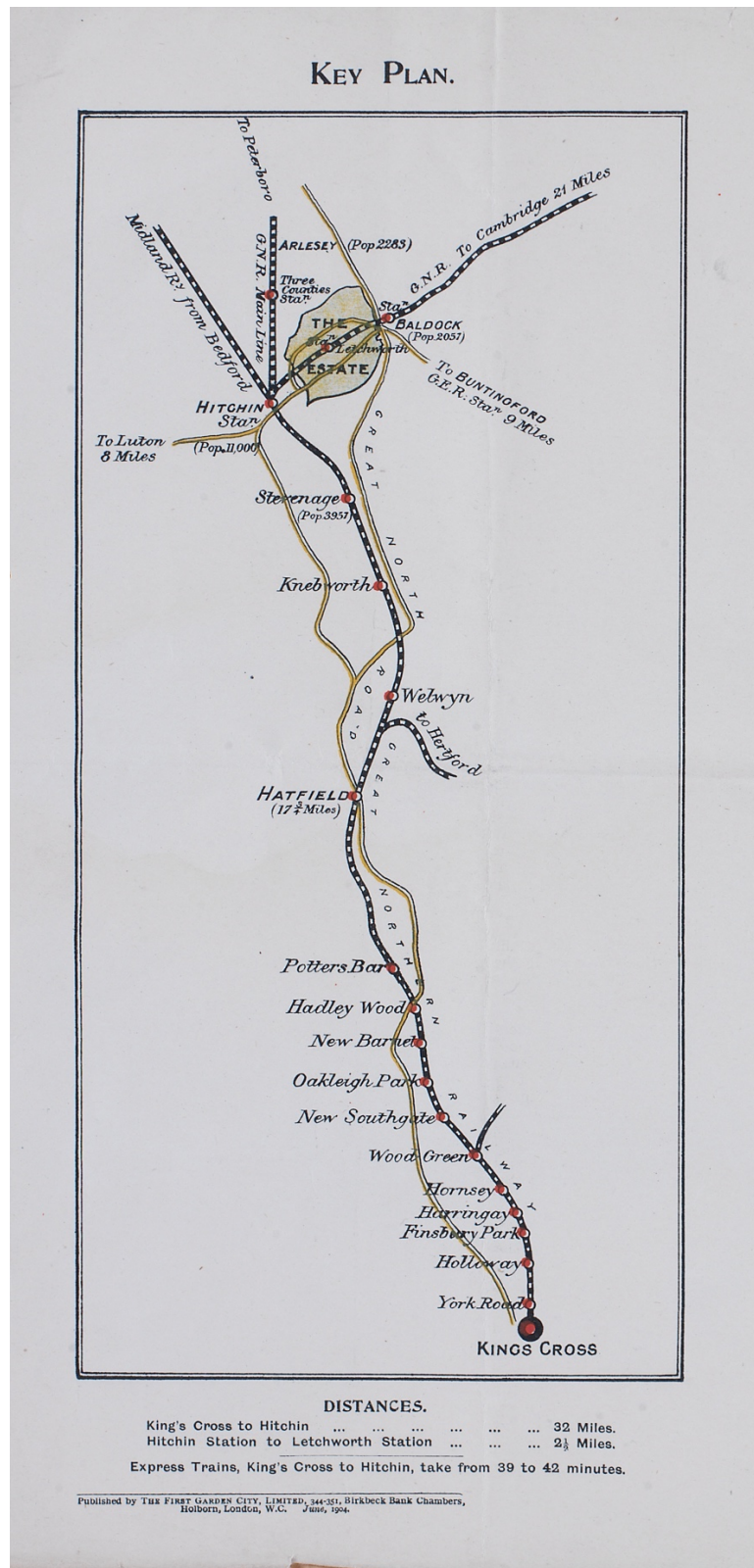
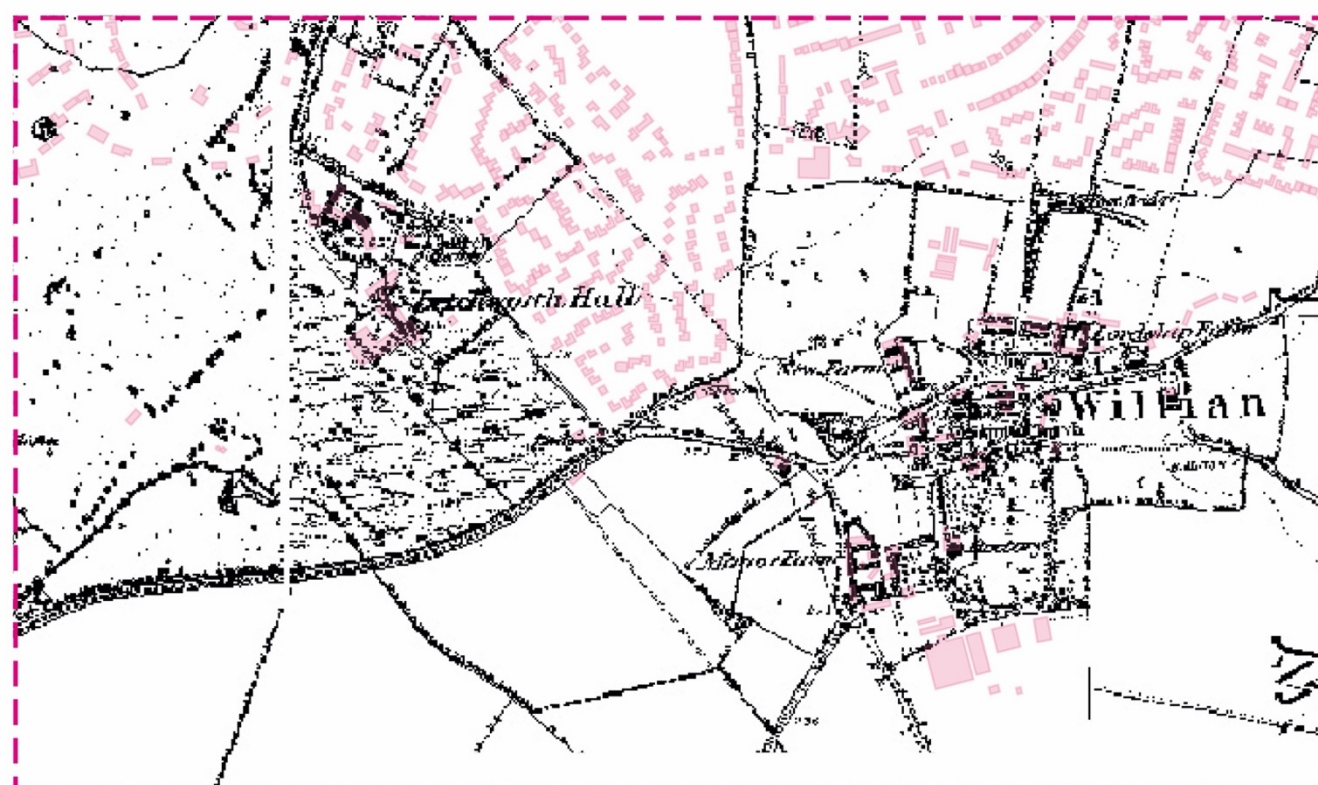
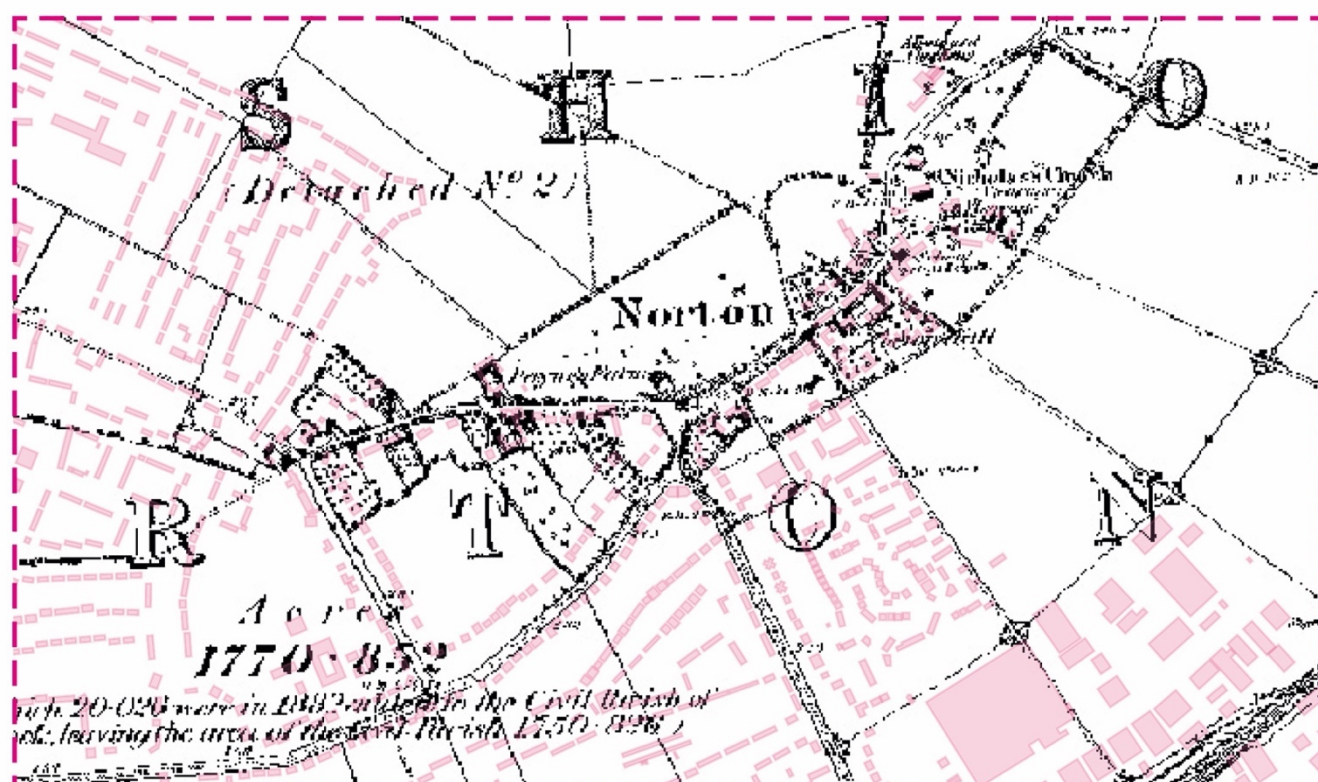


Figure 4.9: The First Garden City – key plan R. Unwin and B. Parker, 1903 © Garden City Collection, the Letchworth Garden City Heritage Foundation.

The town's current arrangement resembles Parker and Unwin's development plan (fig. 4.7 and 4.8). It features a rural domain, preservation of three hamlets, a town square designed with a symmetrical layout known as Broadway, and residential areas as outlined in later sections 4.2.3 and 4.3.1. Although Howard's diagrams show the train station on the outskirts and the periphery of a garden city, Letchworth was originally designed to surround the railway tracks (Beevers, 1988). The development plan displays a central avenue, Broadway, and an axis from the train station to the centre of the town centre (fig. 4.10) (Miller, 1983, p.169). The expansion occurred in the north and south of the existing railway line and encompassed the industrial areas situated in the east and along the northern side of the town, as shown by the red areas in Figure 4.8



Figure 4.10: Aerial photograph taken over West View showing Broadway Gardens, the buildings around it with the railway station and line in the background. Dated 1963. Glued on card. © Garden City Collection, Letchworth Garden City Heritage Foundation.



Previous pages

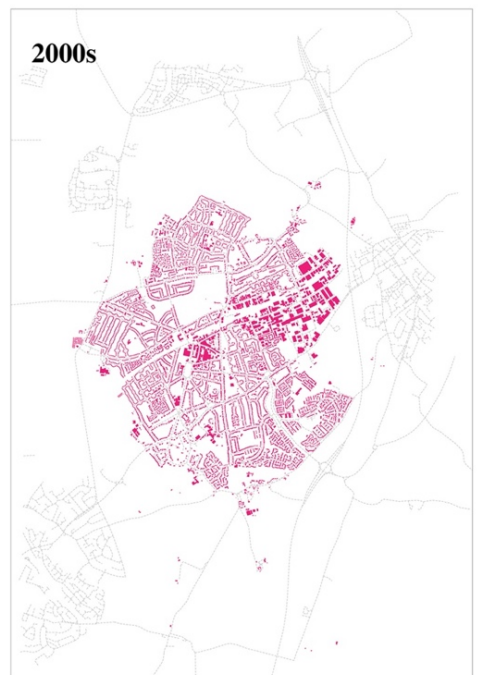
Figure 4.11: Letchworth site circa 1900 - with today's building footprint in pink, Author, 2022
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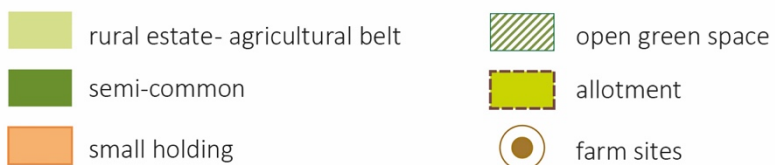
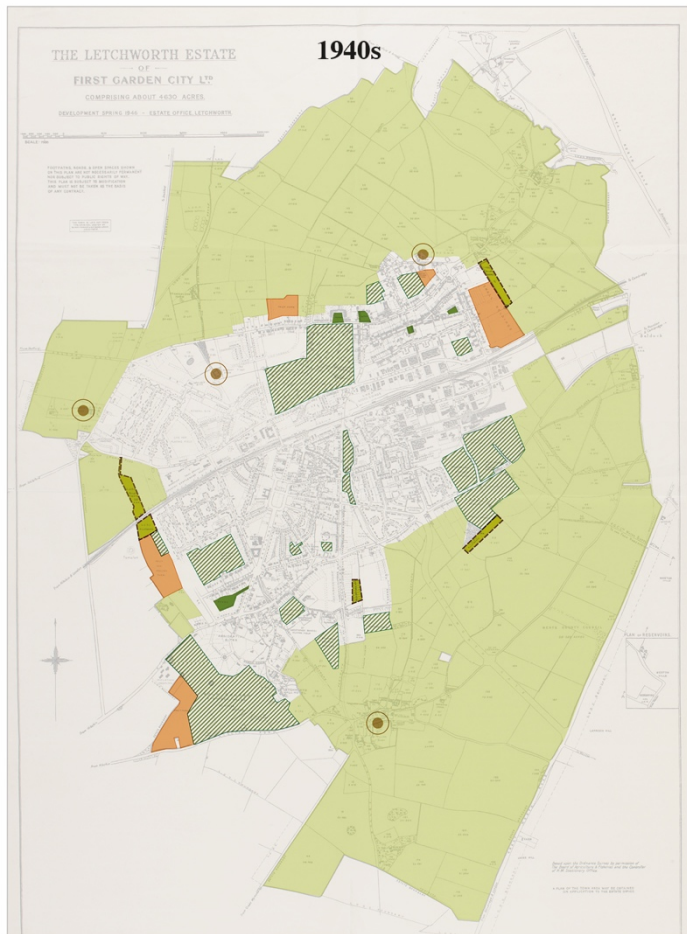
Figure 4.12: Close-ups on Letchworth and Willian villages (top) and Norton village, circa between 1853-1900 - with today's building footprint (below), in circa 1853-1900 with today's building footprint (above), Author, 2022. Contains © Crown Copyright and Landmark Information Group Limited 2023. All rights reserved.

Letchworth's development

Using map sequencing (Kropf, 2017, p.61), Figure 4.13 illustrates the evolution of Letchworth's urban landscape from the 1910s. Initially, the development consisted of housing that was built in a north-south direction, following the future main avenue, Broadway, which connects Norton to Willian. Figure 4.13 also shows the development of the industrial estate, which emerged between 1905 and 1925. Most of the central neighbourhoods were constructed between the 1930s and 1950s, and by the 1970s, additional neighbourhoods appeared in the south and north of the town estate. These later neighbourhoods add a new type of urban design in Letchworth with different post-war design layouts, as explored in the following section. With the exception of a small estate built to the further north of the industrial area's end, the entire town remained unchanged until the 2000s. This map sequencing helps link the different urban forms and configurations examined in section 4.3 with their historical backdrop and reflects the role of food in urban design, translated in Letchworth urban form.

To supplement the built evolution, Figure 4.14 presents the evolution and changes in terms of green spaces from the onset till the 1950s, based on the development plan gathered at the GCC. Figures 4.11 and 4.8 shows that the arable fields surrounding Letchworth, Norton, and Willan are half the size of those in today's rural estate. Developing further this point, Figure 4.14 demonstrates the development of five identifiable types of green areas between the 1910s and 1950s, based on development plans gathered at the GCC: agricultural fields, small holdings (including fruit farms and orchards), open green spaces, and allotments.





0 2 km

Previous pages

Figure 4.13: Town overall building footprint evolution with the current road in the background, Author, 2022. Contains public sector information licensed under the Open Government Licence v3.0

Figure 4.14: Productive spaces based on the development plans of Letchworth 1912, 1935, 1945, 1952, Author, 2022. Contains © Garden City Collection, Letchworth Garden City Heritage Foundation.

The early Letchworth of the 1910s map includes small-holding and allotment sites, as well as common green space in front of certain built configurations. Many husbandries existed around the three villages: Manor Farm, Wilbury Farm, Wilbury Hill Farm, New Farm, Payne's Farm, Standalone Farm, and Lordship Farm. Some green features remain through time, such as the Norton common and the woodland triangle in the Southeast of the town. Miller (1989, p. 136) also gives an account of the agricultural use of the site when purchased: "[...] nine farms of between 252 (102 ha) and 842 acres (2340 ha.), four small holdings from 2 (0.809 ha.) to 79 acres (32 ha.), and 15 allotments on five hectares" with low rent. This is an account of the diversity of the rural land in early Letchworth Garden City. By 1940, leisure areas had increased, and small holdings had slightly changed: with the disappearance of fruit farms and poultry husbandry in the north and west. The 1950s map suggests the total disappearance of small holdings at the urban-rural edges in favour of housing sites. However, allotments and the rural estate remain a strong and persistent aspect of the green infrastructure on a city level. In the 1950s, playing fields became more prevalent than previously, representing a distance from their initial land use as fields for food purposes.

4.2.2 Food in the early garden city (1900s-1950s)

The different development plans over time through map overlay or map sequencing in the previous section provide information on the spaces allocated to grow food from the early Letchworth Garden City to the 1950s. In this section, these plans are supported by photographs of agricultural food growing, gardening, and food outlets for retail.

As Miller (1995, p.9) highlights, referring to Parker and Unwin's Arts and Crafts architecture inspiration: "Letchworth was acutely conscious of its visual image from its inception. Pictorial guides and brochures proliferated, and an amazing range of postcards appeared". The abundance of visual material provides a concrete understanding of land utilisation and food significance, despite acknowledging that the purpose of taking a particular photograph is to capture a portrayal of Letchworth (Banks, 2001; Margolis and Rowe, 2011; Holm, 2014).

Growing food

Photographs of food growing over the 20th century illustrate the different sizes and uses in Howard's vision for food growing that Thomas (1905) advocates further in his book "Garden City and Agriculture", from large agricultural fields to productive gardens, smallholdings to allotments in town. The previous section suggested that Letchworth Garden City developed from agrarian land, and photographs attest to existing agricultural activities at the onset of the town. The set of photographs (fig. 4.17 to 4.21) shows aspects of these, including haymaking in a field in the now town centre, Broadway Gardens (fig. 4.17). It seems that vegetables were grown on a large piece of land (fig. 4.18 & 4.19) usually used for crops (L.01, 02, 03; FA.02; Observation 2018). Photographs also indicate the introduction of mechanisation in agriculture (fig. 4.20 & 4.21), two photographs taken in the following decades, between the 1910s and 1930s, and suggest manual labour compared with machinery and mechanisation a few years later.

The Garden City Collection also possesses photographs of smallholdings identified in successive development plans (fig. 4.19). The photograph series titled "A Smallholding in Letchworth" shows a smaller plot than large arable fields and a variety of crops on the land (fig. 4.24), a central aspect of Howard's (1898, p.17) food and egalitarian interests. In contrast to the vegetable field depicted in Figure 4.18, the smallholdings captured in the photographs seem to be situated in a more urban environment, with houses visible in the background (fig. 4.23): the images in Figures 4.23 and 4.24, along with supplementary photographs sourced from the GCC archives, indicate that these smallholdings are connected to a residential property. These settings showcase a distinct scale and

methodology for food cultivation, different from larger crop production in terms of scale, cultivation techniques and resultant landscape.

The variety of food-growing areas in the early days of Letchworth is also evident in privately owned gardens, as demonstrated by photographs from the 1910s and 1950s. The original houses typically boasted spacious gardens (fig. 4.7) or communal front yards (see also section 4.3.3). Additionally, photographs in Figures 4.24 to 4.27 exemplify sizeable private gardens cultivated for food production as an intentional component of the masterplan's place-making strategy. Gardening and keeping animals in personal spaces (fig. 4.27) provide an opportunity to embrace a "simple life" (Miller, 1989, p.88; Tidy, 2018, p.77): a lifestyle that allows residents to supplement most of their food needs, reflecting the ethos of the garden city concept of blending urban and rural living.

These photos of diverse food growing spaces illustrate the "Back to the Land" movement which was close to Howard and the significance of small-scale holdings (Adams, 1905; Buder, 1990; Beevers, 1988; Buder, 1990; Miller, 1989), also mentioned in modern-day publications on AFNs (Jarosz, 2008). Social drivers for food production in 20th-century Letchworth pertain to urban food practices and community engagement with regard to food. They support social life and knowledge sharing, as evidenced by Figures 4.28 to 4.33 throughout the decades. From the early settlement and valuing of vegetarianism to WWII, where food growing was also part of a national campaign known as the Dig for Victory (Barling, 2017). The significance of community strength through food is evident in the importance of these expanding allotments. Gardening, as demonstrated in Figures 4.28 and 4.29, was critical to the town's existence. People participated in gardening activities both privately and through social clubs, highlighting the educational component of food cultivation, which is an integral aspect of the town's values.

**GROWING FOOD
AGRICULTURAL ACTIVITIES
LARGE FIELDS**



4.17



4.18



4.19



4.20



4.21

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.17: Haymaking in the field later to become Town Square Gardens, Letchworth, circa 1910s

Figure 4.18: From left to right: farmland: plot of growing vegetables, circa 1940s to early 1950s.

Figure 4.19: Postcard showing man in cloth cap holding a kohlrabi in front of a vegetable field.

Figure 4.20: Haymaking at Letchworth Hall Farm, 1915

Figure 4.21: Photograph of an agricultural view, 1919-1929

GROWING FOOD: AGRICULTURAL ACTIVITIES / SMALLHOLDINGS



4.22



4.23

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.22: "A Letchworth Small Holding", Photographs, Barry Parker collection

Figure 4.23: Photograph of the fruit farm, Willian, date unknown

GROWING FOOD: PRODUCTIVE GARDENS



4.24



4.25



4.26



4.27

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.24: Photograph of a house on Letchworth Lane 1955

Figure 4.25: Photograph of house on Sollershott West no date

Figure 4.26: Gardening at the 'Noah's Ark' cottages (so called after their mansard roofs) on Birds Hill, c1950

Figure 4.27: The Simple Life - Mr Baker and his ducks in a back garden on Nevells Road c1910,

GROWING FOOD: SOCIAL LIFE AROUND FOOD LEARNING - SHARING



4.28



4.29



4.30



4.31



4.32



4.33

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.28: Figure Evacuees Pixmore School boys helping out farmers in the local fields

Figure 4.29: Photograph of Letchworth Allotment and Horticultural Association, date unknown

Figure 4.30: Photograph of women who can be linked to the Haven Social Club, 1940s

Figure 4.31: The Letchworth Allotment & Horticultural Association, circa 1940

Figure 4.32: Pupils and their teachers gardening class c1911

Figure: 4.33: Bexhill County School collecting nettles to make soup or shampoo

Food in the town estate: vegetarianism and the co-operatives momentum

Some photographs suggest that green spaces had a social role beyond food growing in the early garden city and were the backbone of a vibrant unity that pertains (fig. 4.35 and 4.36). The role of residents and the different positions regarding food is outstanding from a historical perspective. The photograph of the “Simple Life Hotel” (fig. 4.34), a vegetarian restaurant in Letchworth Garden City, suggests food awareness among early residents. It shows how food was already topical in society and illustrates the role of green infrastructures as highlighted in the previous section, suggesting the conviviality of the outdoors through food as defined in literature (Parham, 2015; Ruth, 2020).

In the town estate, the food economy appears in various representations. Initially, the co-operative model was widely promoted (Culpin, 1913; Purdom, 1913; Ward, 1990) to support local traders and small businesses (fig. 4.37). Photographs of co-operatives show food trade in the town estate, with a dairy factory (fig. 4.38) and a fishmonger’s shop in the town centre (fig. 4.39). Purdom (1913, p.148) praised successful co-operative manufacturers in Letchworth as well as co-operative housekeeping (ibid, p.99). As a part of the daily domestic life and association of household units (Fishman, 1977, p.71), shared kitchen, laundry, dining-room, housekeepers (Purdom, 1913, p.99) in the Quadrangle co-operative designed by Unwin, named Homesgarth saving time, and energy costs (fig. 4.40) (Beevers, 1988, p.108; Borden, 1999; Buder, 1990, p.106; Killock, 2013; Miller, 1991; Parham, 2015, p.34; Pearson, 1988).

Food shops in the town centre seem a thriving heart of the town where most outlets appear along roads for motorised vehicles. Another fascinating aspect of the food industry is the delivery services provided by local co-operatives, as illustrated in photographs 4.41 and 4.42. Some businesses rely on delivery services (Miller, 1995, p. 56), including the Garden City Co-operative (ibid, p.56, 58) that opened their doors on what will Leys Avenue (fig. 4.47). During the first half of the 20th century, Letchworth Hall Farm located in Letchworth village, used to deliver milk via horse-drawn carts. Later, the Garden City Co-op implemented its own milk and dairy delivery system (fig. 4.28). In sum, the pictures in this section depict what Howard's (1898, p.33) envisioned as a local strategy, highlighting the advantage of nearby land for edible production during food shortages and food outlets in town. Although the business incorporated delivery in this scenario, other images propose venues for the vending of local goods.

**GROWING FOOD: SOCIAL LIFE AROUND FOOD
CONVIVALITY**



4.34



4.35



4.36

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.34: Simple Life Hotel, circa 1915

Figure 4.35: Workers relaxing with lunch in a field, c1905

Figure 4.36: Dinner in a garden, c1920

COOPERATIVES & FOOD OUTLETS



4.37



4.38



4.39

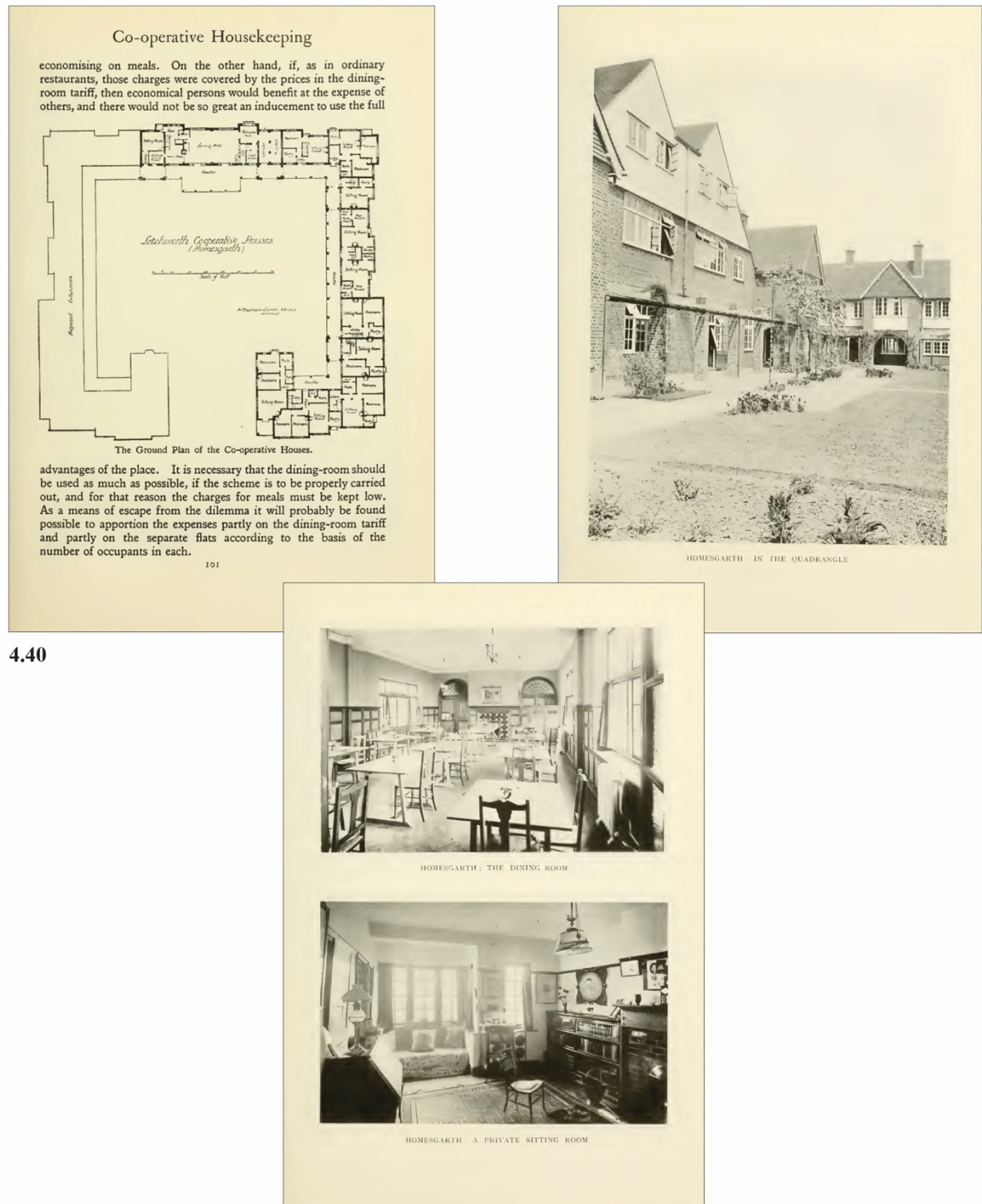
Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.37: Opening day of the Garden City Co-operators Shop on Leys Avenue in 1907

Figure 4.38: Exterior of the Co-op Creamery building on Letchworth Gate

Figure 4.39: Exterior of the Co-operative Society Ltd. Fish Department

COOPERATIVES & HOUSING: THE QUADRANGLE



4.40

Source: Purdom, 1913, p.99-101

Figure 4.40: Plan and Photographs of Homesgarth Quadrangle, Letchworth

COOPERATIVES & DELIVERY



4.41



4.42



4.43



4.44

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.41: Central Dairy milk carts, c1915

Figure 4.42: Letchworth Hall Farm milk horse-drawn two-wheeled cart with cover, date unknown

Figure 4.43: Co-op milk delivery, date unknown, likely 40s given the car

Figure 4.44: Photograph of a lady next to Co-operative van, c1950s.

FOOD OUTLETS: HIGH STREET



4.45



4.46



4.47

Source: © Garden City Collection, Letchworth Garden City Heritage Foundation

Figure 4.45: Postcard of Star Supply stores on Leys avenue, date unknown, likely c1910s

Figure 4.46: Cheetham Bros grocery shop along East cheap c1972 established in the 1920s

Figure 4.47: Leys Avenue (one of the high streets of Letchworth Garden city, c1923

4.2.3 Food and the different urban configurations and patterns

Coming back to a two-dimensional approach, this section provides an analysis of food space and urban patterns and their potential to integrate food. UMA as seen in Chapter 3 is a set of methods that explores the form and structure of settlements and ways they change. This section explores on a city level the different configurations of urban morphology and types (Kropf, 2017, p.14), modulations within a configuration, as described in Chapter 3. This section presents a closer examination of the urban morphology as cases of configurations and types.



Figure 4.48: Example of two types within a configuration: Westholm and Eastholm Estates, close-up of development plan 1910 and Aerial photograph of Eastholm, c.1960s Source: ©Garden City Collection, Letchworth Garden City Heritage Foundation

Configurations, types, and patterns to characterise urban form in Letchworth Garden City

Two of the first groups of houses of the early settlement Letchworth Garden city were Westholm and Eastholm Estates (fig. 4.48), which appear on the Parker and Unwin's 1903 map (fig. 4.9). Both housing sites designs have a shared green, around which the houses are oriented, creating protection from the road and an insular configuration. While gardens embody a sense of enclosure, association of green space with buildings, Parker's and Unwin's design is interpreted as a representation of the

public space seen an urban garden (Batchelor, 1969, p.190). Green areas result in a de-densification of buildings but also open the privilege of garden and park to segment of the population until then excluded from natural environment in the Victorian period (ibid, p.190). This urban configuration oriented toward a shared green patch is also the basis for further developments and influence at a neighbourhood scale as a planning unit (Patricios, 2001), and types of this configuration illustrated in Figure 50.

Parker and Unwin strived to overcome the usual Victorian bylaws layout (fig. 4.49a) (Unwin, 1909, p.7, p.330; Miller, 1983; 2002; Sadoux, 2023) to avoid direct access on the street and limit the vis-à-vis and offer an open view and road at the back of the gardens to most houses (fig. 4.49b). In his book “Town Planning in Practice” Unwin (1909) examines different morphologies for housing configuration organised around series of cu-de-sac. This principle is also the basis of the well-known Parker-Unwin slogan of their book “Nothing gained by overcrowding” published later in 1912. In Creeses’s (1966, p.197) words, the cul-de-sac suggests the “retirement into the back land in order to convert all disorderly backs [...] into orderly front”. Early housing in Letchworth such as Birds’ Hill View and Pixmore built in the first decade of the town foundation are a type of cul-de-sac configuration (fig. 4.49c). Bird’s Hill estate displays a ribbon of houses with dense woodland buffering the industrial estate. Common greens annotated with functions such as allotments, playgrounds, or just green areas not assigned to a specific housing are characterise of the schematic (5) and (6) in Figure 4.50, both configuration C.

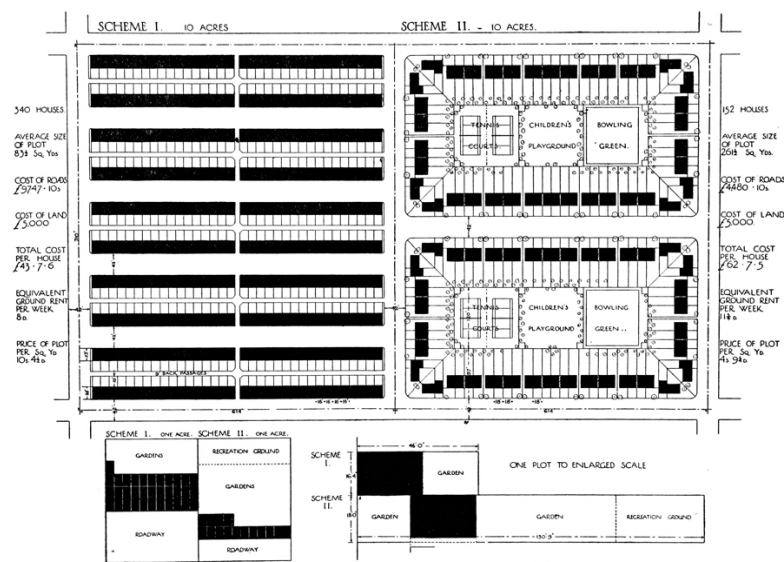


Figure 4.49a: Comparison of “byelaws” organisation of houses compared to garden city principles housing layout (Unwin, 1912, p.4)

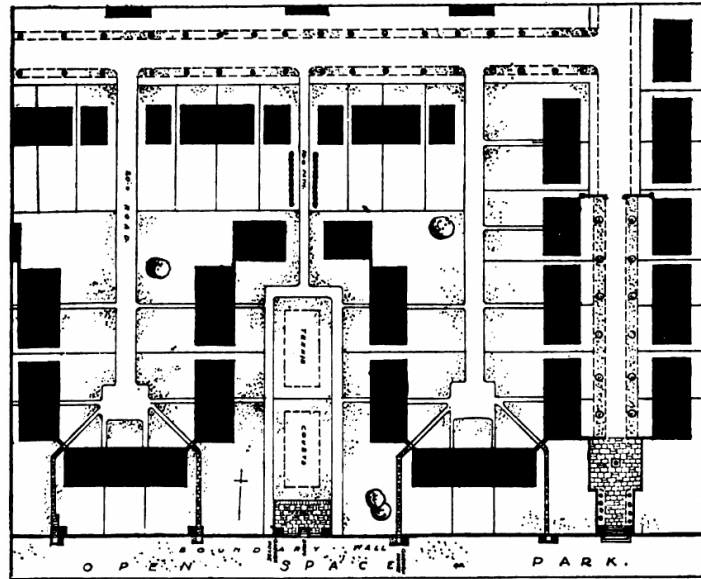


Figure 4.49b: “Diagram showing how the view of an open space may be secured to a large number of houses, also how the land may be developed by roads at the back of the houses” (Unwin, 1912, p.367)



Figure 4.49c: Example of two types of a configuration: Birds’ Hill Estate & Pixmore Hill in Letchworth Garden City, in (Unwin, 1909, p.349, 350) – adapted by the Author, 2022

To characterise urban morphological patterns, Figure 4.50 highlights the different urban configurations and types (see sections 3.2.1 and 4.3.3 for definition) as well as the association of the different urban elements, movement, built environment, and green areas. Based on Westholm and Eastholm, configuration B, type B1 in Figure 4.50, displays green fields adjacent or surrounded by private houses and gardens with or without access to the street. In Croft Lane (configuration B, type B2 in Figure 4.50), an examination of development plans found at the GCC indicates that the land use changed over time from pastureland in the 1920s to leisure and playgrounds in the 1930s. The later estates built between the 1950s and 1970s introduced new urban patterns borrowed from New Towns' influence, called the "Radburn layout" (Parsons, 1998; Patricios, 2001), characterised in Figure 4.50 as configuration D.

The interplay between built and green areas with different land uses for food is striking in Letchworth urban configurations and evolved over the years as show 4.14, characterising a pattern. In each of these seven configuration types, the existing or potential role of food serves as a basis to explore today's urban morphology in Letchworth and its implications for the local food economy. The schematics in Figure 4.50 combined with the build development in Figure 4.13. indicate a pattern evolution in chorological order from configuration B, C, A and D. Later development introduces a radicalisation where the front houses are facing the usual back path. In each of these types.

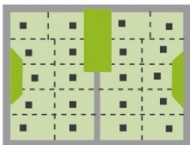
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Figure 4.50: Characterisation of housing configuration and types and examples of location in Letchworth Garden City, Author, 2023

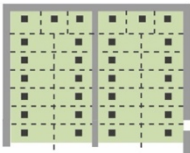


CONFIGURATION A

TYPE A1

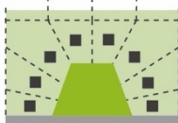


TYPE A2

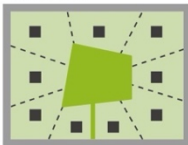


CONFIGURATION B

TYPE B1

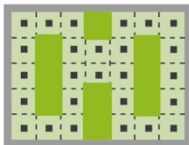


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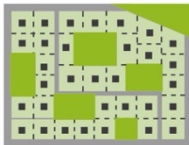


CONFIGURATION C

TYPE C1



TYPE C2



CONFIGURATION D

TYPE D



Configurations and typologies: green spaces for food

The characterisation of configurations shows relationship pattern between roads, buildings and green spaces (section 3.2). Participants refer to the various green spaces in Letchworth and see the potential these carry. Some participants identify the potential of the different green spaces in Letchworth: the rural estate is clearly for food production and are mentioned frequently in interviews (Karin, Harriet, Sophie, Gary, H.01, L.02, 09). The town estate is acknowledged for its large gardens of the early neighbourhoods and green areas behind backyards as Figures 4.51 and 5.54 illustrate.



Figure 4.51: Unused green space in between houses in the southeast of the town, Author, 2018

The small pieces of land ... as well as people's own gardens which, in Letchworth, are obviously sometimes much larger than you would get in other properties elsewhere ... I think there is an enormous asset base, and again, under-utilised I would say, overall. (L.09)

The green spaces, surrounded by residential areas, as illustrated in Figure 4.51, have the potential to “encourage biodiversity in the city” and to “look after some of the small spines, small plots of woodland around the town that were originally buffer strips that Ebenezer designed to keep industry away from housing” (L.01). Harriet and Karin recognise these areas as possible sites for additional allotments. If some of them are utilised for food growing (observations in 2018), the majority of patches remain unkept, or not used for food cultivation, in favour of the conservation of biodiversity

and wildlife (Karin, Stephen). The legacy of Unwin and Parker's urban design combined with the garden city ethos is considered instrumental in maintaining green spaces across the town (Stephen, L.04, 06, H.01).

When you look at the masterplan, particularly in the areas originally allocated for workers and the people with close links in the local factory sites, places like [north of the town], were clearly designed so that people could grow their own food. There are great big communal gardens at the front, massive great front gardens were clearly so that people could grow their own food. But that isn't the case. (L.03)

The subsequent section will delve deeper into six distinct housing configurations to define and portray distinct urban features. The different configurations, A, B, C, and D characterised in Figure 4.50 are further analysed in food terms with three-dimensional representation of food outlets and green spaces, in Figure 4.54.

4.3 NEIGHBOURHOOD MORPHOLOGY

4.3.1 Green space characterisation in a later neighbourhood of Letchworth

Using the Radburn layout to identify UEIs

Figure 4.13 (section 4.2) informs on the built development in Letchworth Garden City. In the southeast of the town, the Jackmans Estate emerged from the ground between 1950s and 1970s. The Jackmans Estate layout is recognisable as a Radburn layout, originating from American urbanist Clarence Stein during the latter half of the 1920s. Named after the second original implementation in Radburn, New Jersey in 1928 and recognised as an urban configuration in 1933, the Radburn layout was introduced to the UK by Mumford just after the Second World War (Atkinson, 1966, p.380).

The layout is characterised by pedestrian-oriented features that facilitate high transit use, creating an attractive public space (Fagence, 1972; Handy, 1993, p.23; Banister, 2012). The layout aims to separate pedestrian and motorised movement to enhance safety. This residential development morphologically entails open space designated for recreation, access to walkable amenities, segregation of motorised and pedestrian traffic, as well as hierarchisation of roads (Atkinson, 1966, p.380; Handy, 1993, p. 23; Banister, 2012). Radburn introduced novel urban configurations that emphasised the importance of greenery and social interaction. The distinctive characteristics of the Radburn design promote increased transit use and create an attractive public space (Fagence, 1972; Handy, 1993; Banister, 2012). Contemporary planners in the latter half of the 20th century followed Radburn's principles of New Urbanism to advance eco-friendly urban growth with pedestrian-friendly communities (Sharifi, 2016).

Radburn layout was designed to address the issue of motorised and pedestrian movement by segregating the two modes of transportation. Moreover, it involves the provision of open spaces for recreation, amenities, traffic, and hierarchy of roads (Atkinson, 1966, p.380; Fagence, 1972; Handy, 1993, p. 23; Banister, 2012). The use and evolution of cul-de-sacs is noteworthy due to the reversal of the traditional front entry of homes from the car to the pedestrian, resulting in variation and nuance in the green spaces of the estate. The absence of a central green and limited access to dwellings are common issues in cul-de-sac design, with private gardens facing onto the interior footpath leading to a central garden (Atkinson, 1966, p.380) shows Stein's adaptation of cul-de-sac pattern inspired by Parker and Unwin's design.

In the Southern Estate of Letchworth, the food-related investigation highlighted the importance of green space, food outlets, and amenities with the absence of food shops. In urban design, the Radburn plan created some green space that does not serve a conventional function. The goal of

the investigation illustrated in Figure 4.5 is to characterise and project various edible applications based on their size, location and morphology, incorporating research on edible landscapes. The green typologies differ somewhat from the residential configuration developed in the first five decades. Figure 4.52 provides further insight on the green spaces based on Radburn layout. Upon examining the various components, Table 4.1 analysed the green typologies generated by the Radburn layout, using the mapping in Figure 5.52. The layers of the GIS mapping analysis utilise secondary data, which in turn generates primary data in the form of vector-based shape files. In other words, these shape files are utilised to delineate the green structure in instances where it is absent in the secondary data, thereby facilitating the generation of primary data extracted from the Digimap platform and fieldwork. Additional layers added to the doctoral research include private garden, allotment, orchard, and finely detailed green structure with the purpose of enhancing the research.

Figure 4.52 displays diverse attributes and lays the groundwork for examining the linkage between constructed and green infrastructure in different areas of the town. Table 4.1 presents each attribute as a starting point for the subsequent exploration of other neighbourhoods in section 4.3.2.

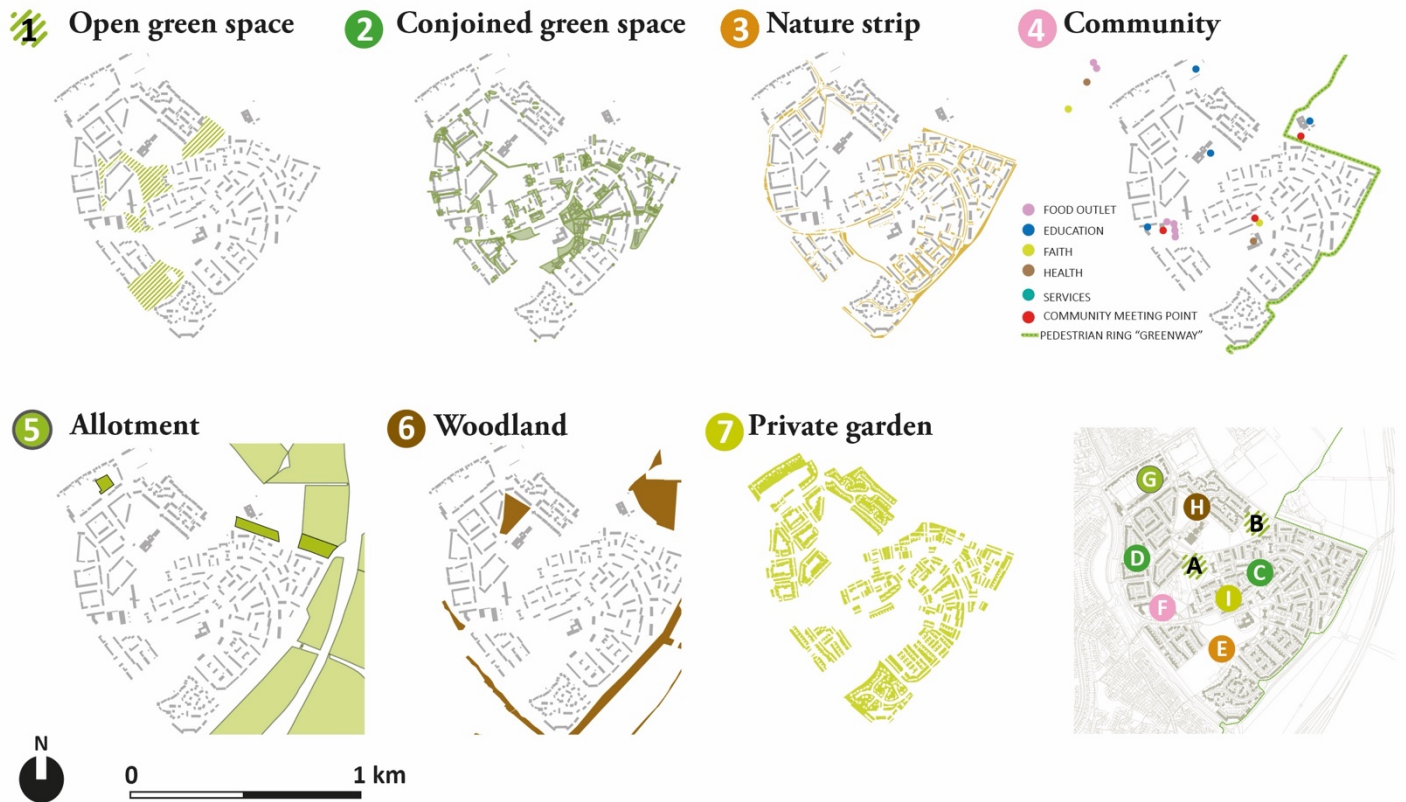


Figure 4.52: Characterisation of green typologies in the Southeast state, Author, 2023

Table 4.1: Green and community space categories/layers after mapping, Author, 2023.

CHARACTERISATION OF GREEN STRUCTURE	PRIMARY OR SECONDARY DATA	DESCRIPTION
(1) Open green spaces	secondary: shapefile from Digimap	<ul style="list-style-type: none"> - Open green space is any public park that are accessible to the public. - This layer is based on the dataset from Digimap.
(2) Conjoined green space	primary: generated from LGCHF shapefile	<ul style="list-style-type: none"> - Term coined for the thesis: Open green space that are located near or between housings and thus not embedded into open green space or seen as park. These green areas form a sort of a buffer zone between private housings or front gardens and public space.
(3) Nature strips (buffer)	primary: generated from LGCHF shapefile	<ul style="list-style-type: none"> - Term borrowed by the Couchman (2005) that characterises a buffering green ribbon between road / street for motorised vehicles and pedestrian path / pavement. - Controlled by the local authorities for maintenance.
(4) Community	primary: fieldwork survey	<ul style="list-style-type: none"> - Location and venue that are related with food catchment and socio-cultural venues: community hubs (church, school,
(5) Productive land Allotment & Shared patches	primary: generated from LGCHF shapefile	<ul style="list-style-type: none"> - Include pieces of land whose use is clearly defined as productive. These areas include the arable fields of the rural estate managed by the LGCHF, as well as urban gardening, such as allotment and orchards. - Piece of land located between houses and not directly visible or accessible from the public space (also describe in section 4.3.3).

(6) Wooded land	secondary: shapefile from Digimap	- Lot of land planted with trees and no associated clear meadows or paddocks.
(7) Private gardens	primary: generated from LGCHF shapefile	- Piece of land that belong to a particular house,

UMA techniques to prepare close-ups on six e urban configurations.

According to Kropf (2017, no page) a typo-morphological approach examines structure details and historical processes to understand the formative processes of building types, while a spatial analytical approach “focuses primarily on human activity as sets of spatial interactions [...] “the view that cities are complex adaptative systems involving a dynamic iterative and reciprocal relationships between social and economic interactions and the physical form of settlements. Thus, while there is a focus on patterns of interaction and networks such as transport, social and economic exchange and material energy and information flows, those patterns are seen as both giving rise to and being fundamentally affected by the physical form of the cities”.

To prepare the next section with UMA close up, Figure 4.53 focuses on streets, open spaces, buildings, and space between buildings. A 300-square-metre square in the key of Figure 4.53 provides a sense of the walkable vicinity. Following the identification of the historical pattern in the previous section and characterised in Figure 4.50 and Figure 4.53 examines four aspects, using the element overlaying and sequencing technique of the urban composition today, the building footprint, the green infrastructure that includes private gardens, food-related outlets, and the grid of roads.

The examination of the six different neighbourhoods in Figures 4.53 and 5.54 helps understand the residents’ environment and their food access possibilities, combined with the characterisation of green typologies in Figure 4.52 and Table 4.1.

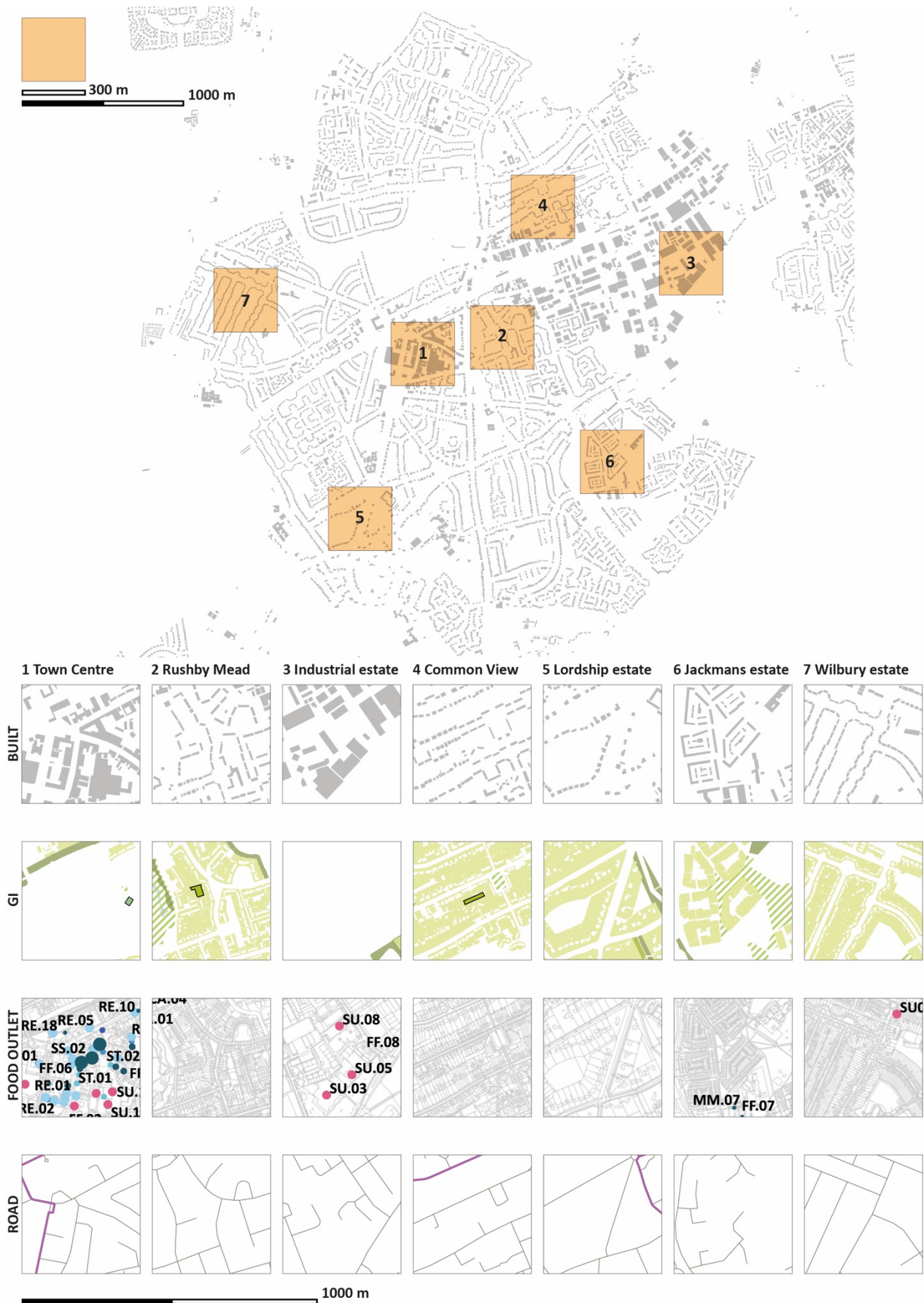
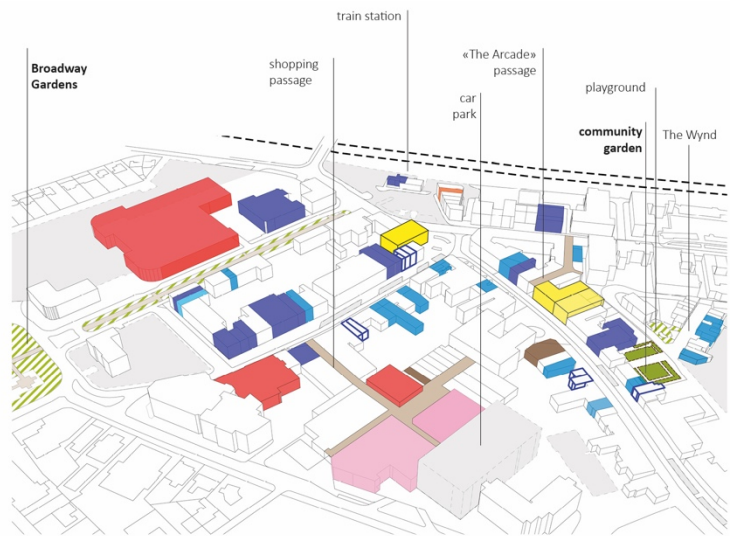


Figure 4.53 Urban elements in Letchworth today: building footprint and corresponding infrastructures: green spaces, food outlets and roads, Author 2023

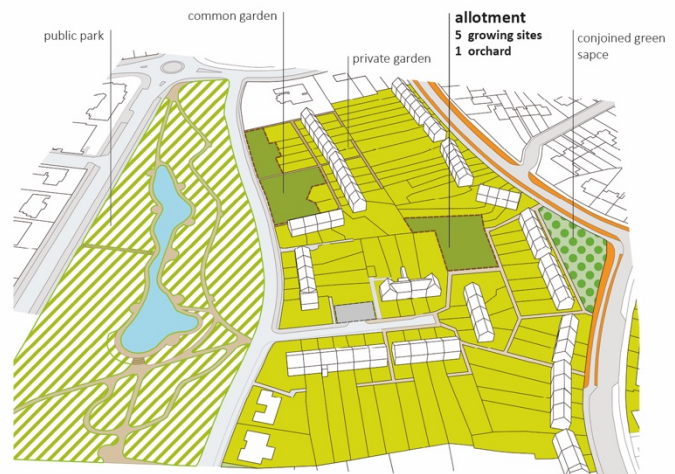
4.3.2 Close-ups on specific configurations, exploring the role of food.

Three dimensional representations

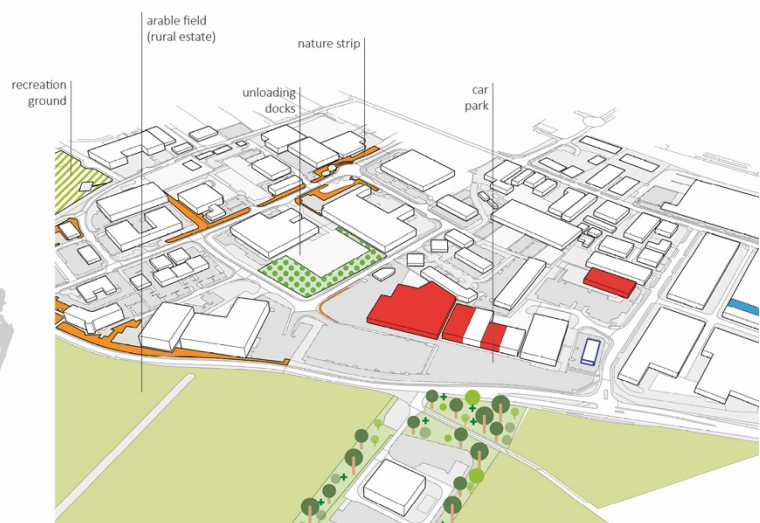
(1) Town Centre



(2) Rushey Mead - developed 1900s



(3) Industrial Estate



0 500 m

Productive spaces
Open green space

Coffee shop Institution Restaurant Supermarket
Private garden Wooded area Specialist Shop Fast Food
Conjoined green Nature strip Pub Car park

(4) Common View - developed 1920s



(5) Lordship Estate - developed 1950s



(6) Jackmans Estate - developed 1950s 1970s



0 500 m

Productive spaces
Open green space

Coffee shop
Private garden
Conjoined green
Institution
Wooded area
Nature strip
Restaurant
Specialist Shop
Pub
Supermarket
Fast Food
Car park

Previous pages:

Figure 4.54: Characterisation of food-related locations with building typology and green spaces six area of Letchworth, connected with UMA close ups in Figure 5.43, Author 2023

Fieldwork and participants' descriptions

(1) Town centre: social and economic centre

Item (1) in Figure 4.53 and 4.54

The town centre is also the economic and social economic hub (B.02; L.03). Adrian, who moved recently in a flat in the town centre, likes *“living in a more urban buzzing environment, I think. I’ve always been more of an urbanite than a suburbanite and I think Letchworth has a bit of both”*. Local organisations, including the Foundation, are working to preserve and enrich life in the town centre, as B.02 explains: *“It always can be improved (laughter) [...] People lack experiences in the town to do something, then have a shop walk. What we lack is having something to do, especially for families. Family spaces.”* In this instance, the observation indicates that local institutions strive to shift this attraction, mainly consumption oriented, to an ever more convivial area, with yearly and monthly events and festivals (B.02; L.01, 04; R.01, 03).

A three-dimensional representation of the town centre in Figure 4.54 shows the concentration of food consumption places, with many hospitality venues such as restaurant, coffee shops, three supermarkets, including one with a significant parking facility that is usually found in the commercial centre in the periphery of the town, and two bargain stores. The Wynd areas, with independent shops and a community garden initiated by the Foundation. The three main shopping streets (East Cheap, Leys Avenue and the Wynd) are connected via two protected shopping galleries (see fig.4.54). However, the endeavours to make the town centre attractive fall short in B.04’s opinion, as she points out that many commercial units are empty in the town centre. L.09 also notices the mineral environment of the town centre and regrets the insufficient green spaces in the town centre.

I think it’s a very harsh environment. I kind of tried to understand it from a historical perspective, because I thought it was all recent, you know all the paving that we have and everything’s... it’s like everything’s in concrete, doesn’t it? [...] From the photographs I’ve seen it never appears to have had very much green in it.

The attractive aspect of the town goes along with green spaces (B.02, L.09), and the initiative from the Foundation to create a community garden in the town centre (fig. 4.54), which is a positive element by a business representative (B.02, 03), but a bit “*concealed*” (L.01, 09, Rs, observation). L.09 views on the green area is that The Wynd community garden (fig. 4.54) is hidden, and the Broadway Gardens is cut off by the road, “*a roundabout because it’s quite inaccessible to get to*” Accessibility, associated with the town centre’s attractiveness, may be connected by car park availability that “*makes it quite easy for shoppers to find us*” (BU.03), while BU.02’s partnership considers physical accessibility for all the demographics of Letchworth, using IT and an app that indicates the different levels of accessibility for disabled people.

(2) Rushby Mead: early development 1910s

- Item (2) in Figure 4.53 and 4.54
- Configuration C in Figure 4.50

Rushby Mead is in the town centre and within walking distance of food supply outlets of the town centre (fig 4.55). This development is one of the first housing configuration planned by Raymond Unwin and Barry Parker in Figure 4.1, who designed a layout with collective green spaces. This area in Letchworth, close to the town centre represents for Adrian the essence of the garden city, with the “*layout of the suburban street, how you can find sort of passageways and pathways. So, I was testing if there was a pathway at the end, and there was. There was a cute small path going through past. I think a lady in her garden pruning the roses. It’s just a typical suburban image.*”

H.01, a housing association representative for this area, refers to the historical masterplan to implement a community garden and allotment there (AL.05 in Figure 4.7):

Originally designed by Barry Parker and Raymond Unwin. (Inaudible) extremely long front garden till the road. So originally, each house had been allocated a long front garden the reason for the front garden would be to use the space for an allotment. So, each of these properties have their own allotment space and a small back garden.

A few years ago, consultation with the local tenants of the housing association led to reassigning plots of land for nearby residents. (H.01) The first became a common front ornamental garden that faces the street and protects the private gardens, featured in Figure 4.54 (2). The second plot was turned into an allotment hidden between the houses, with an orchard and a growing area for the local school. Communal spaces are a legacy of the garden city layout. H.01 explains how he was “*guided by the historical value of this area*” and how “*coming back to the custodianship of the*

Garden City, [...] is the right thing to do, to maintain this rear as close as it would traditionally be maintained and used as possible”.



Figure 4.55: Photograph allotment between houses, Author 2019

(3) Industrial Estate: warehouse and car-based design

- Item (3) in Figure 4.53 and 4.54

While the industrial area in the original idea of the garden city was supposed to be walkable and cyclable from residential zones. (Howards, 1898, p.147), today the distance between each warehouse in the industrial estate is mainly car-based (Pauline, Alice, Stephen, Adrian).

If you get a car, everything with the car, if you get a car, you make big shops. [...] I think people might just be used to use their cars anyway, but if you don't have any car, you don't go to certain part of Letchworth. (Pauline)

In Figure 4.54, the three-dimensional model suggests spaced-out large supermarkets designed for car access with similar car-dependent area (Tachieva, 2010) infrastructure, road, and carpark. The layout of the industrial estate facilitates the formation of "nature strips" (Couchman, 2006) (see table 4.52), which are buffering lawn lanes between two tracks. This design suggests a functional

purpose relying on car use for this area. Observation during fieldtrips by bike indicated an unpractical zone and potentially dangerous crossroad, which corroborates with Emma and Sonia's interview when they ventured by bike in this area.

(4) Common View, cottage organisation

- Item (4) in Figure 4.53 and 4.54
- Configuration A in Figure 4.50

Common View cottages were built between 1910 and 1920 (fig. 4.56) according to development plans provided by the GCC (fig. 4.13). The site, which was intended for workers, faces the northern part of the factory site. The morphology of the built environment shows a central area of grass with houses around it. The gardens are long and, although not as large as the Lordship Estate, are quite large compared to the size of the house. Today, Common View areas may lack food outlets within walking distance, but the proximity of a large allotment and patches behind houses suggests that potential food growing spaces still exist for households, although observation in 2019 shows that most green patches behind houses were not used for food growing.



Figure 4.56: Postcard of a row of terraced cottages - 'Common View, Letchworth' © Garden City Collection, Letchworth Garden City Heritage Foundation

(5) Lordship Estate: large private gardens features

- Item (5) in Figure 4.53 and 4.54
- Configuration B in Figure 4.50

The Lordship Estate was slowly built from the onset of Letchworth Garden City until the 1950s (see Figure 4.13). The gardens are particularly large, and the houses are mostly large, detached properties. In contrast to Common View and Rushby Mead, the nature strip (in orange in Figure 4.54 in reference to 4.52) provides mostly a buffer between the houses and the street. Figure 4.53 shows the large green patches located between the houses' gardens and the pavement. When cycling, the layout of the Lordship Estate was more complicated to understand, with numerous cul-de-and vast properties that blurred the perception of the neighbourhood (observation 2018, figure 3.5). The three-dimensional model illustrates the exceptionally large gardens, which are characteristic of the early houses in Letchworth, similar to Croft Lane in the north of the town (4) in Figure 4.52 and 4.54, configuration B in Figure 4.50.

(6) The Jackmans Estate: Radburn configuration

- Item (6) in Figure 4.53 and 4.54
- Configuration D in Figure 4.50

As seen earlier in this section. the Jackmans estate displays the Radburn layout. The connection of the estate with the town centre and the other parts of the town, may be difficult because of the dissociation of traffic road isolating the Estate for pedestrians and cyclists:

If you're coming from there for the town, you can either on the 40-mile an hour road, or you can come up with a footpath, but it's really, really, steep. I haven't tried cycling up there, but it would be a struggle [...]" It's narrow, it's dark there's no house around and you have to walk pass this building that has graffiti on, it's pretty scary [...] but yeah, it is isolating because of the infrastructure and public transport. There is only one bus and it's not that frequent. (Emma)

With two entrances suitable for slow means of transportation, getting to Emma's interview location in the Jackmans Estate was complicated. Two entry points for bikes or pedestrians have been found during observational field trips (observation 2018 and 2020). This situation might increase the

sentiment of insularity if the estate has already been mentioned by some participants (Emma, Catherine, L.05, 08). Open green spaces provide, however, continuity of car-free paths and allow a small-scale variation of land use as Figure. 4.54 demonstrates in detail.

4.4 FOOD SPACES: LANDSCAPE & LAYOUT SOCIAL REPRESENTATION OF FOOD

The first tension from the group discussion concerns the understanding of landscape and food and is relevant to the spatial aspects of Letchworth in Chapter 4, as illustrated in Figure 3.8. From the residents' perspective on the interplay between green spaces and food, this section draws initial conclusions about the notion of placemaking through the interplay of food and garden city principles. This section also serves to inform Chapter 7, which explores residents' relationships with the food environment.



Figure 4.57: Support for visual elicitation during the group discussion, picture presented by the Author to the participants, April 2021 © Garden City Collection, Letchworth Garden City Heritage Foundation

4.4.1 Some account of the perception of food in Letchworth

The residents' perception of Letchworth Garden City

When asked about the reason for living in Letchworth, many residents pragmatically mention the affordable housing market, attractive for a segment of the population, whether they settled in Letchworth thirty or two years ago (L.02, Adrian, Stephen, Sonia). The housing market offers large houses with a garden (Sonia) and a strategic location (Adrian, Gary, Karin, Sonia, Sacha). Only Grace mentioned the garden city element as a decision factor to move to Letchworth: *“Well, it was the garden city! I am a gardener, I am a keen gardener, have been forever, and I just love the green the greenery just blew me away, really”*. A feeling of a “very green” town with many trees and a large garden is prevalent amongst residents (B.02, G.06, Sonia, Karin, Janet, Gary, Grace, Rosaline, Pauline), family-friendly with many amenities (Sonia, Karin, Rosaline).

The reason why we moved to Letchworth is there is lots of trees and established trees. So are lucky to live in a road where there are a lot of beautiful trees. [...] I do like the fact that Letchworth is still quite small, and you can just. I love the fact that we've got the Greenway.
(Sonia)

Despite the palpable disconnection of food and landscape in Letchworth for some residents (Alice, Patrick), further explored in this section, some of the residents recognise allotments and large gardens as distinctive features that contribute to the unique ethos associated with the history of the place (Janet, Karin, Dawn, Richard, L.09).

One of the things that really struck us when we were doing our tour around Letchworth is the number of allotments! That's absolutely incredible, there are allotments everywhere. [...] We kept seeing people walk ass with rhubarb, that's before I realised there was an allotment down the road. Why are these people walking around with rhubarb? It's because there is an allotment just down the road. So, I think it's an amazing thing. (Janet)

It strikes me that, as an area, it's very into the growing, and so on. There are a lot of allotment sites. A lot of opportunities for people to grow their own food. (Richard)

The role of the green spaces in town can influence the lived experience of the residents and the interpretation of the place. When observing food stalls distributing surplus produce (fig.7.11), Adrian draws connections to the historical significance of Letchworth Garden City:

It was nice to see that there is an establishment. It's established food sharing and saving as sustainability in Letchworth that seems it is built-in to the sort of the network and the structure of the town.

The “environmental ideal” (Buder, 1969, p.397, 1990, p.65) of the garden city model is thus palpable in residents’ perception of Letchworth, but the functions, and locations of food-growing areas are not always visible and can constitute an obstacle to a form of accessibility. Referring to five of the local orchards, Karin says “*You need to be in the know to know which one they are*”, perception that Emily shares too:

I know the orchard down on [street] is a fruit orchard. But again, I don't ... (she laughs) ... you know when you think “Oh, lovely, apple trees ... but who are they for? Can I go pick them? Is it open to everyone?” I think I understand is it understood by the ... [Local administration]? Or they take the apple and they ... Maybe (name) do you know? (Emily)

Oh, yes! These are interesting. These are little spiny that exist. That one of my ongoing Heritage questions, because I started asking in 2014, ‘what is going with this, because it’s a bit of a mess. [...] So, it’s not clear who’s got the right of access to this thing if anyone has. I’ve started the questions in 2014, I still await the answer. To know if it’s just the Heritage piece of land or actually one of the households actually has a peppercorn rent and that then that they should be looking after it. (Karin)

Linking green spaces with food: the residents’ perspectives

Visual material from the Garden City Collection (GCC, 2023) during the group discussion initiates a focus on the landscape and layout of the town (fig. 4.57) to interpret different spaces for food growing in Letchworth: private gardens, orchards, large fields, and small holdings.

I look at these pictures and I don't see Letchworth today. I see money being made out. There is this commercial contract managing their farm. You don't see the products. The [pedagogic farm] is just there for entertainment rather than, actually selling produce. (Karin)

I walked down the Greenway recently, and I walked about two miles, and on both sides, it was the same crop, one huge monocrop. [...] So, it's a long way from what I see [on the pictures]. (Patrick)

The Greenway, featured in Figure 4.7, is known as a key infrastructure for pedestrian access to the rural estate (Janet, Harriet, Adrian, Sophie, Emma). However, when asked whether participants connect Letchworth Garden City with food, responses are mitigated and connect green spaces primarily with nature and well-being:

For me Letchworth is not connected with food, is connected to a garden city with lots of space, between the houses [...] This is what I have got in my head but absolutely not related to food. It's more like the notion common, many commons a little bit everywhere, so it's very green and you've got some space, but I would not relate it to food. (Alice)

I suppose when, we do look at the food, when you go around it and you're seeing what's in that field, you do see the fact that it's growing food. But I supposed you don't necessarily connect with the food in Letchworth. I suppose we know it's grown for [international brand of cereal]. (Karin)

Not only do agricultural activities in Letchworth not serve a food purpose, but the land stewardship carried out by the Foundation in the rural estate (see sections 2.4.1 and 5.2.3) does not reflect some participants' expectations and could be more significant in adding value to local farming activities and biodiversity (Harriet, Karin, Patrick, Grace). However, the Foundation's role as a landowner (see section 5.2.1) with control over land use and standards is recognised as an exceptional feature in Letchworth (Karin, Gary, Dawn):

I think it definitely helps that the Foundation owns the whole of ... to my knowledge the whole of the green spaces in Letchworth, so that gives them the flexibility to do what they like with their land. (Gary)

Whenever the tenancy is up for the farms. Their (the Foundation's) fields are let on a commercial agricultural. [...] If some part could be taken back to grow food for the town locally, that would be fantastic and reduce our need to import food. (Karin)

Participants highlight the correlation between biodiversity and land stewardship and agricultural techniques, including “small-scale organic farming” that is “good for biodiversity and very good for local food production ... that's what I would like to see that land turned into”.

These reflections from residents who participated connected with the literature suggesting that the multifunctional operations of AFN farms through organic farming, quality production, direct selling, agri-tourism, nature and landscape management (Cerrada-Serra *et al.*, 2018; Hinrichs, 2000; Jarosz, 2008; Morgan, 2009; Renting *et al.*, 2003; Vittersø *et al.*, 2019) are an opportunity from a political standpoint to meld foodscape, urban food production, public health, leisure and

food in a community economic development context (Goodman, 2004; Morgan, 2015; Summer, 2018).

The multifunctionality of the green spaces in Letchworth is evident in their ability to serve both productive and leisure purposes (Grace, Sonia, Alice, Harriet, Janet, Rosaline). Foraging was also mentioned by a few residents (Dawn, Rosaline, Emma, Patrick, Adrian and Alice), based on habits, proximity, and knowledge of “the place on the greenbelt [where] you can get [berries]” (Karin). Reference to foraging in Letchworth includes blackberry picking (Stephen, Rosaline, Janet, Sophie, Karin, Gary), apples (Karin, Gary), nettles and elderflowers (Rosaline), sloe, rosehips (Janet, Rosaline), chestnuts (Alice) and walnuts (Janet). Pictures sent from two residents represent blackberry picking (fig. 4.58): one downloaded from the internet, which suggests the universality of blackberry picking, yet strongly connected with the knowledge of the place.



Figure 4.58 Blackberries, pictures from an online data, sent by Sophie (on the left) / View from the rural estate with blackberries in the foreground, personal picture sent by Adrian (on the right), sent to the Author, 2021.

These observations reinforce the multifunctional feature of the food landscape as a potential for spatial and place-based reconfigurations of the relationship between country and city. This idea refers to the core vision of urban-rural interplay in the garden city (Livesey, 2019, p76), where the role of the green infrastructure becomes crucial in this association (Marsden and Sonnino, 2008; Livesey, 2019, p. 123).

4.4.2 Developing the foodscape

Gardens and allotments: a space to grow food of one's own

Many participants (Sophie, Grace, Rosaline, Stephen) connect the history of Letchworth with the overall urban growing space “that is a bit more evident than other places” (Adrian) for residents who have settled recently in Letchworth:

It strikes me that, as an area, it's very into the growing, and so on. There are a lot of allotment sites. A lot of opportunities for people to grow their own food. And the local authority is very supportive of these ideas of growing their own and people growing for other people. There is definitely an ethos. [...] Yes, I do think. there is probably a thread running through history of this place that is very much in tune with environmental issues and growing and all that sorts of things. (Richard)

The thing that really strikes me is the allotment and the fact that people are growing their own food and walking down the road with the produce where they [...] I know you can't do that in other places, but I've never been anywhere where there are so many. And I think that is a big difference. (Janet)

Out of 15 residents, only one does not have a garden and two have an allotment. In general, the early houses' gardens are quite large (Patrick, Stephen, Sonia, Gary, Emily, L.09), which allows for food growing and raised beds (Grace, Gary, Stephen, Karin). Many of the residents have fruits trees in their garden, commonly apples trees planted at the same time than the house was built, but also plums, figs, apricots, berries, rhubarb, herbs, garlic, onion, lettuces tomatoes, elderflowers (Emma, Rosaline, Karin Stephen, Sophie, Janet, Pauline, Alice). Due to the apple trees planted in many gardens, it is not unusual to see apples on the street for free (Janet, Pauline, Karin, Observation October 2018). As a result, the competition is fierce: “You can't give them, honestly, you're walking around apples everywhere” (Karin). Participants explain how they puree, press, preserve, and freeze garden fruits (Pauline, Sophie, Grace). Karin comments on the picture of the apple tree in her garden. The apples and the bottle are staged in the picture and conveys some care and pride (fig. 4.59). She comments:

My Victoria plum tree and apple tree are my most consistent food supply [note: from the garden], with the fruit either frozen, made into jam or pressed for apple juice. I tried home pasteurising the apple juice for the first time this year in reusable glass bottles in an attempt to cut down on juice bought in cartons. Photo is my apple tree and the final bottled product.

Large gardens mean some residents don't need an allotment (Stephen, Karin, Patrick). If food growing is described as a source of joy (Stephen, Grace, Rosaline, H.01), an allotment provides an extra room, a space for leisure for some residents: *"We've replaced the roof on the shed. That's all nice. And we've got a big table and chairs and ... We've got fruit tree already, and quite a lot of raspberries, two gooseberry bushes"* (Rosaline).



Figure 4.59: Karin's apple tree and her apple pressing in bottle, sent to the Author, 2021.

Café and whatnots

Building on work exploring the concept of conviviality through food (Illich, 1973; Parham, 1990, 1992, 2012; 2015, p.6) and “how particular spatial forms might influence behaviours and expressions of conviviality” (Parham, 2015, p.20). Linked to sustainability through everyday life, this section also looks at the sense of place that emerged from the interviews, linked to specific elements of history (Sophie), including education (Grace, Roseline) and food outlets (Rosaline, Gary, Pauline, Emily). Walkability is a component of conviviality in academic work (Southworth, 2005; Speck, 2012; Bereitschaft, 2017), which is confirmed in the participants' perspectives (Sonia, Grace, Harriet, Pauline, Janet). Adrian lives on the high street in the city centre and associates walking with running errands and a form of sensory experience with eating in the city: *"It's a 35-second walk (to buy bread). It's almost too close, in a way (laughter)! Because you can smell it ... you can smell the bread"*.

To illustrate his direct surrounding and local food shops, Adrian shares a picture of the interior of a local organic store (fig. 4.60), commenting on its “*alternative vibe*”:

It's quite a cute cafe, good coffee. Probably a little bit pricy but a nice street. I also like the way that it's decorated. You've got that sort of green roof (inside the shop, in the ceiling) and some crawling and stuff.” (Adrian)



Figure 4.60: Inside an organic food store in Letchworth, Adrian's picture, collected by the Author, 2021.

Grace, Adrian, Harriet, Pauline, Janet have noticed the number of independent and local food. As examined in section 7.2.1, supporting the local independent businesses is also a part of defending a form of conviviality in town against empty units (Harriet, Pauline). High streets and town centre are usually the epicentre of hospitality venues. On the other hand, in the south east estate, Emma reflects on the welcoming feel of the community centre in south-eastern estate and its inclusiveness:

The community centre is a brilliant resource or private hire, it's great it's cheap, it's often available and there is a shop next door to it and a cash point. [...] But it's usually full of drunk people ... and they've got screen showing the football. And it's usually ... it's 90 % men in there, so it's not inviting. But on the other hand, those people live here and have the perfect right to socialise anyway they like.

The independent coffee shop culture has evolved over the recent years (Emily, Janet) and outing and eating out are strongly connected with mundane event and treat (Gary, Karin, Sonia, Janet, Adrian, Harriet). Authenticity of food of world cuisine also an element residents enjoy, as there are many international restaurants in town centre (Alice, Sonia, Gary, Grace, Harriet, Janet). The notion of particularity is important, going there accentuates a sense of living in an outstanding place: not only because of the food offer, but also the store itself that create a trendy vibe.

4.5 SUMMARY

Topics explored and methods used in the chapter

Chapter 4 explores the links between the Garden City legacy in terms of physical organisation, land use and the perceptions of Letchworth's residents in relation to their food environment. Chapter 4 builds on the original concept and masterplan of Letchworth Garden City to examine the role of spatial factors and food diversity. The literature review presented in Chapter 2 has identified the importance of the foodscape at the heart of the garden city model, which relates to physical patterns, along with social and economic influences on food economy. In essence, Chapter 4 represents the initial stages of the research as it sets the context for discussing the interrelated issues of the food economy in Letchworth.

Using Letchworth as a case study, one objective of the doctoral research is to gain a deeper understanding of the foodscape, starting with the physical aspects of the commercial and productive food activities. The techniques used to emphasise the spatial aspects of food-related landscapes were based on visual methods adapted from the disciplines of geography and urban planning, including photograph survey, food mapping and urban morphology analysis, with procedures as presented in section 3.2 and 3.3. Time and sequencing maps are employed to document the building development of the town and land use for food production. These maps facilitate the comparison of the layout of built and green spaces from the establishment of the garden city original masterplan until the present day (section 4.2.1).

To corroborate the maps, an historical investigation utilising visual techniques through archives, photographs, maps, track back the evolution of food matters, such as agricultural methods, horticultural activities, retail, convivial space, a form of providing testimony of the early residents. In a more detailed analysis, Chapter 4 looks at the morphological approach of the garden city legacy in the context of urban planning theory and typology as set out by Unwin and Parker, the authors of the masterplan. The aim is to identify the various land uses for food. Finally, Chapter 4 employs visual data collection techniques, including photo elicitation and interviews (section 4.4) to allow for insights from today's residents to be incorporated into the analysis, offering an interpretation of the maps and UMA outcomes.

Key findings

The principal finding of Chapter 4 is the demonstration of the reminiscence of green features for Letchworth masterplan. The translation of the fieldwork into graphic elements establishes the existing food outlet types and locations and actual food production, as well as listing the UEIs in section 4.3. A key feature of the garden city model is the agricultural estate, which surrounds the town with a multifunctional use of the agricultural estate. Additionally, the visual elements in this chapter illustrate the importance of food spatiality, demonstrating a strength that offers a multitude of green typologies to support food-related and edible landscapes.

Urban morphology suggests land use and potential practices linked with the built environment that require further investigation in terms of administrative and social support. The recommendation of having food outlets accessible to any neighbourhood, as set forth by Howards in 1898 (p. 43, 72) within the context of the garden city, is not reflected in the current situation. This phenomenon could be attributed to the ubiquity of the automobile (Freestone, 2002; Parham, 2015), a topic that is explored in greater depth in Chapter 7 through an examination of specific practices and the availability and convenience of food outlets. As Chapter 2 posits, the availability and readiness of food procurement can influence choices.

The various typologies identified during site visits and documented in maps and graphic reports (see Tables 4.1 and Figure 4.52, used in Figure 4.54) form the basis for the subsequent exploration of the UEI, notion outlined in section 2.3.2. This exercise facilitates the delineation of diverse land uses, including green spaces that appear to be unallocated or underutilised. The categorisation outlined in Section 4.3 is instrumental in elucidating the subsequent sections. In Chapter 4, section 4.4 delves into the urban green spaces and the landscape of Letchworth, offering insights into the residents' perspectives. It is imperative to provide an interpretation of the UEIs, as this serves as a contextual foundation for understanding the diverse typologies. This is useful to the fifth chapter, which provides a comprehensive analysis of the proportion of the rural estate and the potential of green areas: section 5.2.1 (cf. Figure 5.8) explores the proportion of the rural estate, while section 5.3 discusses the potential for small-scale food production, an opportunity that residents have identified. These observations made in Chapter 4 are a basis for the subsequent examination of the resilience characteristics of green spaces in Letchworth in section 5.4. Finally, Section 7.4 will also use these characterisations from Chapter 4, since this segment focuses on the visibility of food in town, including food production.

Discussion and contribution to knowledge

The characterisation of the physical organisation demonstrates the various potential benefits of green spaces, both planned and residual, and contributes to the enhancement of urban planning for food production and sustainability (Childers *et al.*, 2019; Ying *et al.*, 2022). This characterisation is conducted within the broader context of nature's contribution to environmental, social, and economic outcomes/levers related to sustainable development (Mell, 2008; Wright, 2011; Russo *et al.*, 2017; Wang and Banzhaf, 2018; Bohn and Chu, 2021).

Furthermore, the findings are in accordance with the existing literature that asserts UEs play a role in placemaking by fostering the creation of distinctive spaces (Urquhart and Acott, 2013; Arefi, 2014; Scott *et al.*, 2018; Ferris, Norma, and Sempik, 2019). The initial experiences of the town and the subsequent social drivers for food, as observed in the food literature and the photographs, both historical and contemporary, serve to illustrate the form of day-to-day food practice and daily life (Bösehans and Walker, 2022; Pilar *et al.*, 2019). The legacy of the multifunctional of the green spaces and agricultural land in the garden city model are somehow technical solutions that benefit from use while respecting ecosystems (Marsden and Sonnino, 2008; van der Jagt *et al.*, 2017). This multifunctionality of greenspace and edible landscape is also a defining feature of today's food system approach (Morgan, 2013). Similarly, the AFN approach underscores the significance of cooperative and delivery initiatives for and social life around food production, as evidenced in the literature on food outlets, such as hub, markets, and cooperatives (Sonnino and Marsden, 2006, p. 183; Winter, 2006; Anderson *et al.*, 2014; Koutsou and Sergaki, 2019).

In conclusion, Letchworth's unique legacy is evident, and the present thesis contributes to knowledge in terms of the connection between spatiality and use. This is in addition to the social aspects of literature explored in Chapter 2 and contributes to the claims that urban design plays a crucial role as a structural influence in facilitating compatible routines (Mikkelsen, 2011a, 2011b; Shove and Walker, 2010). However, the subtle masterplan and embedded food production in Letchworth can be difficult to discern for some residents (section 4.4). The distinctive character of Letchworth is ultimately defined by its history, particularly the town's early settlements and the evolving perception of the town. The garden city illustrates ideas of a contemporary nature. Despite being influenced by mainstream food production, as evidenced by the size of the agricultural lands and food outlets in the industrial estate mostly, the town's unique identity is shaped by its history. The town's approach to food is characterised by a timeless approach to social drivers to food, evident in literature that examines crisis' impact on food systems (Lang, 2012; Moragues-Faus Sonnino and Marsden, 2017).

This approach is further exemplified in the educational initiatives undertaken by the Foundation and the community in the town and agricultural estate, further explored in Chapter 5, 6 and 7. The spatial dimension of food in Letchworth, as explored in Chapter 4, serves to establish a nexus between the economic, administrative, and social dimensions of the garden city model, which manifest themselves in terms of the town's food supply. The subsequent three chapters direct their attention to these dimensions. Building upon these observations, Chapter 5 with an examination of the land economy and stewardship in Letchworth, placing particular emphasis on their contemporary implementation. It delves into the economic aspects of land value capture, employing both quantitative data and qualitative insights derived from interviews to elucidate the spatial dimensions that underpin the groundwork of the food economy in Letchworth.

CHAPTER 5: LAND ECONOMY FOR FOOD

With a growing intelligence and honesty in municipal enterprise; with greater freedom from the control of the Central Government it may be found – especially on municipally-owned land – that the field of municipal activity may grow so as to embrace a very large area, and yet the municipality claim no rigid monopoly, and the fullest rights of combination exist.

Howard, 1898, p.64

No. 4.

The Vanishing Point of Landlords' Rent.

RENT & LOCAL RATES

of an average population
unequal to that of

GARDEN CITY

working under present
conditions are about



— £144,000 —

— per annum

being **£4.10s** per
head of population, and
— with a constant
— tendency to rise.

By migrating to **GARDEN CITY**
rents and rates are at once reduced to
£2 per head,

out of which a

Sinking-fund

is provided

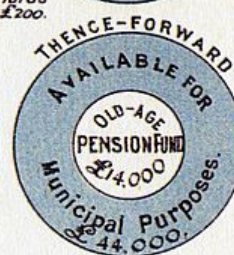
for the gradual

extinction of

Landlords'

Rent.

This end being



attained, all

the funds

hitherto devoted

to that purpose

may be applied

municipally,

or to the

provision of

Old Age Pensions.

Figure 5.1: Diagram No4 - The vanishing point of Landlord's Rent, (Howard, 1898, p.23)

5.1 THE LAND VALUE CAPTURE PRINCIPLE UNDER SCRUTINY

Chapter 5 examines Letchworth's current economic implementation, which originates from Howard's 1898 idea and follows the modern Land Value Capture (LVC) scheme (Mittal, 2014; German, 2018; Catney and Henneberry, 2019). This economic principle requires a particular administrative organisation. Chapter 5 examines the status and economic responsibility of the Foundation that enables the LVC scheme. The subsequent section analyses the nature of land ownership as a critical condition for the land economy in Letchworth Garden City. Finally, Chapter 5 examines the allotment sites to showcase the role of land management in urban agriculture and the resilience characteristics that the Letchworth layout offers.

Howard's land economy vision in the Garden City model

In his book, Howard (1898, p.34, p.52) provides detailed calculation to demonstrate how the garden city model is financially achievable and realistic. Communal land ownership and wealth reinvestment for the benefit of the community stand behind a central economic tenet that allows fair agricultural tenures (ibid, p.20). The economic tent in the garden city model has the social purpose of protecting the tenant from market instability for professional enterprise opportunities (ibid, p.27, p.79, p.97) and affordable land for agricultural activities (ibid, p.109, p.141).

The increasing value of the land in the first years plays out in favour of the initial investors who help purchase the site (Howard, 1898, p.32; Beevers, 1988) but also benefits the community with the use of the "unearned increment" (Howard, 1898, p.21) that is not redistributed to a unique landlord for their own profits but "collectively earned" (ibid, p.21). Rudlin (2016, no page) identifies the unearned increment and its impact on modern planning:

Many of these problems are concerned with what Ebenezer Howard called the "unearned increment"- the increase in the value of land that results from development. This value uplift has increased to such an extent that it is distorting the whole system and is the main difference between our planning system and the much more successful housing and planning systems elsewhere in northern Europe.

The establishment of a sinking fund (Howard, 1898, p.60) involves opening an account that receives rental payments to cover the "interest on debentures" for those investors who provided the "purchased money" (ibid, p.32), which commonly represents the landlord rent. Once the initial investment is reimbursed, the landlord's rent eventually disappears (fig. 5.1), to benefit the townspeople. Investors are reimbursed at a 4.5% rate per year, while the remaining amount is

retained and reinvested to benefit the residents (ibid, p.52). The sinking fund transforms into a fund for old-age pensions or other welfare and social purposes (fig. 5.1).

Entrepreneurs and co-operatives pay a “rate rent” to the municipality (ibid, p.28, p.39), who own the shop units, so “businesses are not entirely municipal nor individualistic, but benefits to both” (ibid, p.72). This rate-rent is blended into municipal taxes for the overall smooth running of the garden city and public services (ibid, p.21, p.39, p.61, p. 141). This public-private collaboration supports healthy competition amongst local entrepreneurs and prevents any monopolistic behaviour that could impede fair pricing and quality products. Contrary to certain interpretations (Keefe *et al.*, 2016), the garden city encourages the imports, as well as national, regional, and international distribution, while also promoting local produce (Howard, 1898, p.74-76).

As documented by Culpin (1913, p.3): “It was really the creation of new economic conditions”, and Howard’s idea that townspeople collectively own the land is central (Howard, 1898, p.64). This economic organisation works within a municipal administration of the garden city (ibid, p.72), which is instrumental in implementing the “unearned increment” (ibid, p.21). This administrative and economic model is designed to emancipate the garden city from the central government (ibid, p.110), avoid the domination of powerful corporations to balance the different involved parties (ibid, p.74), and provide a framework for local individual commercial enterprises (ibid, p.97).

Letchworth today applies the LVC, a unique communal asset where the rents from property and rural activities benefit the local community. The purpose of this section is to provide a comprehensive overview of the LVC model implemented in Letchworth today and understand the economic specificities of a garden city.

5.1.1 What is land value capture principle today?

The Foundation's portfolio and sources of incomes

Land-value capture in Letchworth is possible thanks to the landowner status of the Foundation, which bestows the power of decision regarding land use and management. Figure 5.2 shows that the Foundation owns around 56% of the land today but used to own 83%, with parts of the town sold.

The diverse land statuses are crucial, and L.10 outlines the four categories of land ownership and management prevalent in Letchworth today. Firstly, ground leases are a type of leasehold whereby the homeowner owns the property yet must *"pay a peppercorn rent (for the land), which would be five pounds a year"*. The commercial agricultural land also falls under ground lease status, granted for a 10-year tenure through a bidding process to a farmers' company (L.01, 02, 10)

Secondly, block leases consist of numerous ground leases owned by the Foundation and managed by housing associations (L.10). These block leases can enable residents to acquire a freehold, which is a permanent and unconditional right of ownership over land or property, allowing owners to dispose of it as they see fit. The Foundation, acting through its Governance Board on behalf of residents and operating through its executive arm, grants final approval (see sections 2.4.1 and 6.2.1). Third, the category of rack-rent pertains to the properties, land, and buildings for shops and industrial facilities possessed by the Foundation (L.10). The fourth category includes the extensive areas of land that were sold to the local Council for housing development post-World War II (L.06, 07, 10). These extensive areas of land that have been sold in the north and southeast of the town, as shown in fig. 5.2 in yellow, lie beyond the remit of the Foundation for home alteration. Conversely, freehold owners are bound to comply with the Scheme of Management (fig. 5.4) (LGCHF, 1967, 2023a), which illustrates the correlation between land ownership and land management.

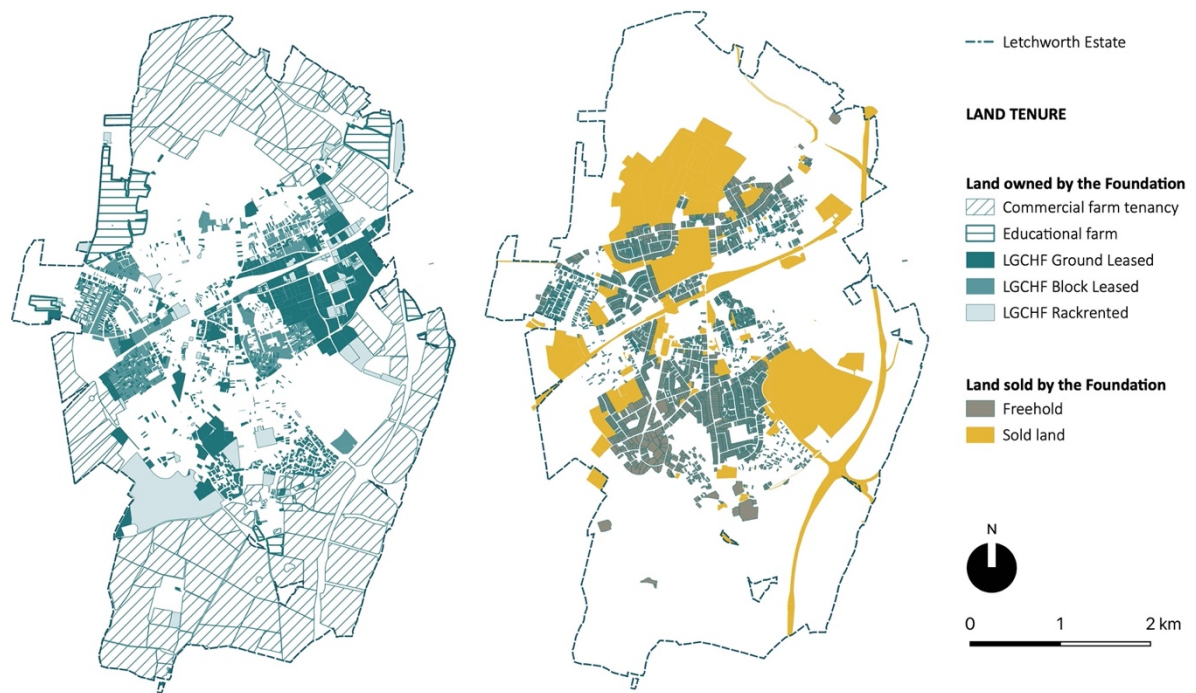


Figure 5.2a: Map on the left: land owned today by the Foundation. Map on the right: Land sold and privately owned freehold. Author, 2023. (Source: LGCHF, 2023)

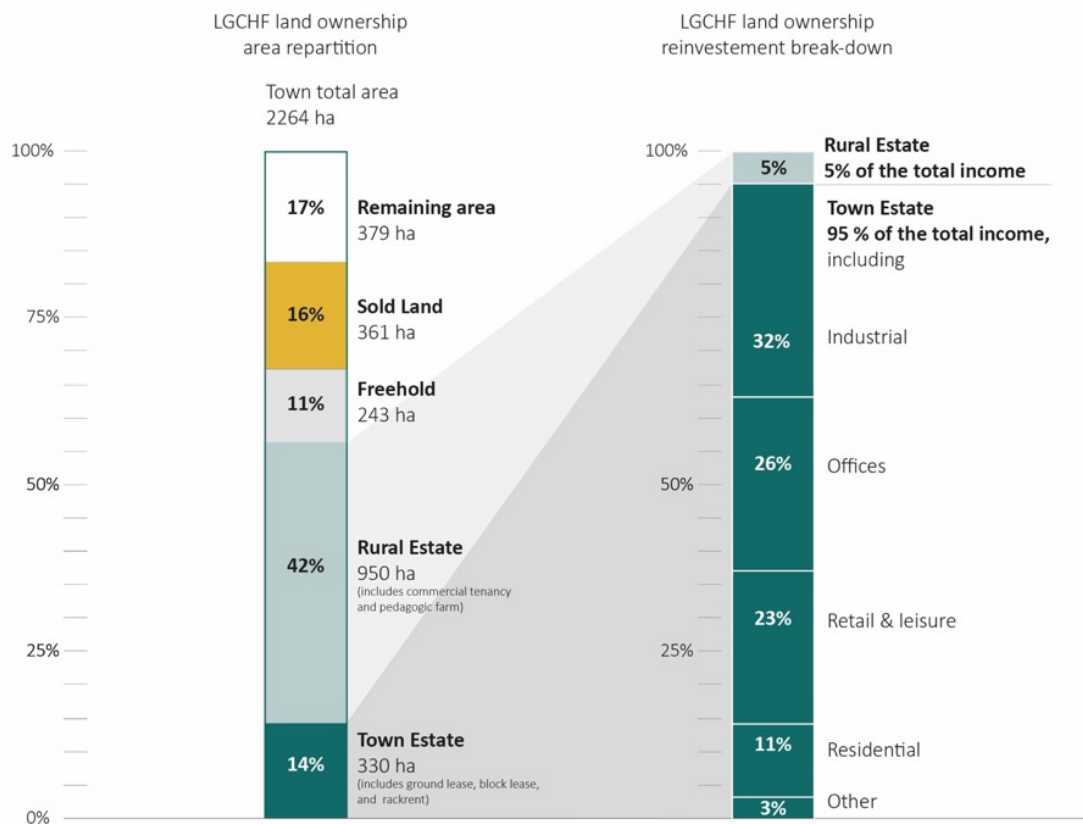


Figure 5.3: Land ownership and proportion of wealth reinvestment, Author 2023. Source: LGCHF, 2023a

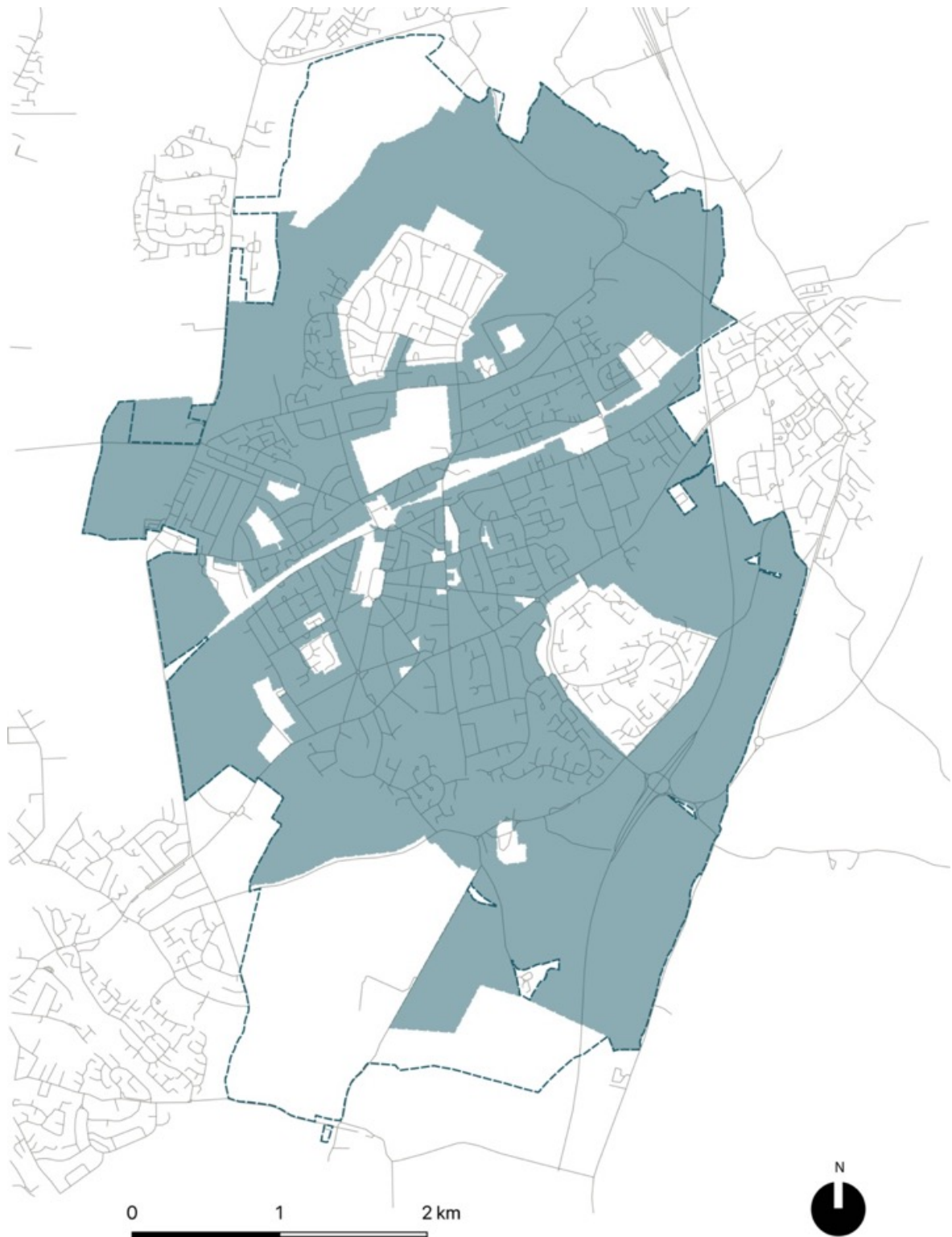


Figure 5.4: Scheme of Management spatial scope, Letchworth Garden City, Source: (LGCHF, 1967) Contains © OS Open Roads [SHAPE geospatial data], Scale 1:25000. Updated: 10 October 2022, Ordnance Survey (GB), Using: EDINA Digimap Ordnance Survey Service,

The LGCHF's landlord status today and its economic implication

The Foundation's leasehold and charitable services generate an income stream through the LVC, as illustrated in Figure 5.3. The rural estate accounts for a significant portion of the town's overall area (42%) but only contributes 5% of the total revenue - roughly 400,000 GBP per year. This suggests that the rural estate generates proportionally little income for reinvestment relative to its spatial area (fig. 5.2 and 5.3, see also section 6.2.1) (LGCHF, 2023a). The lower lease fee for agricultural land, in comparison to commercial properties, indicates the concealed value of food production. This feature of commercial leases in rural estates is detailed in sub-section 5.2.3.

The garden city administration is financially self-sufficient, as defined in Chapter 2 section 2.2.3, has been realised today in the form of a self-funded charity in Letchworth (LGCHF, 2023b). The Foundation *“gets income essentially from commercial rents on the property portfolio. [...] all of the shopkeepers, all of the industrial estate tenants, they all pay their rent ultimately into the Foundation”* (L.07). As a landowner, the Foundation is accountable to the local businesses and community. They reinvest their income in the community to support *“good causes around the town”* (L.07), such as cultural venues and social support for local groups (see Chapter 6).

The money reinvested allows for undertaking cultural venues and activities in the town *“to fulfil [...] charitable objectives by trying to reinvest as much as that income as we possibly can back into the community and really, around improving the quality of life for our residents, [...] so making sure it's a great place to live”* (L.09). Charitable services take different forms across the town: cinema, educational farm, community gardens, grants to support financially local community-led initiatives. All *“would not be here if it wasn't for the land value capture model”* (L.03). This place-based land value capture approach enabled by the Foundation means that its financial reinvestment can only be within the town, and the Foundation *“cannot go off and invest in something in Cornwall or whatever, because [...] it is capturing value form the land in different ways, for the benefit of the local community”* (L.03).

Land value capture scheme applied today in Letchworth Garden City

The Foundation, as a landowner, implements an adapted form of the collectively earned increment (Howard, 1898, p.21). The land value capture model is a distinctive feature of Letchworth as a garden city, whereas *“in most other towns unless the local authority owns a large amount of property, that just goes, that's not seen by the community at all ... the surplus of that”* (L.03). The Foundation as an institution is accountable to the resident for fair management of its portfolio and publishes public financial reports for transparency purposes regarding the money reinvested

(LGCHF, 2023c). Figure 5.5 shows that incomes (in green) and expenditures (in orange) remained relatively stable between 2018 and 2020 despite the start of Covid pandemic and the grim outlook on the COVID-19 impact on the Foundation (L.03, 06, 07, 09). However, charitable services and venues (light blue) yielded 1 million GBP less income in 2020, with previously around 2.5 and 2.6 million in 2019-2018, compared to 1.5 and 1.9 million in 2020 and 2021 due to the venue closures following social distancing during the COVID-19 pandemic (L.03, 05, 06, 07, 08, 09) (see section 5.1.2). In 2021, the investments' income seemed steady, but properties sold made up the reduced flow of income from charitable services with 2.2 million in 2021 after the 1.1 million from property sale is deducted.

The reinvestment for the town is divided into two categories: support for charitable activities and property management. The Foundation delivers between 7,000,000 and 5,000,000 GBP a year dedicated to the community, which means that through the LVC, *“the community gets to see seven million pounds a year through services and so forth, which wouldn't happen”* (L.03). The Foundation reinvests the money for charitable services in venues, but also under the form of grant funding packages (L.03, 06, 07, 08), discussion of which is developed further in Chapter 6.

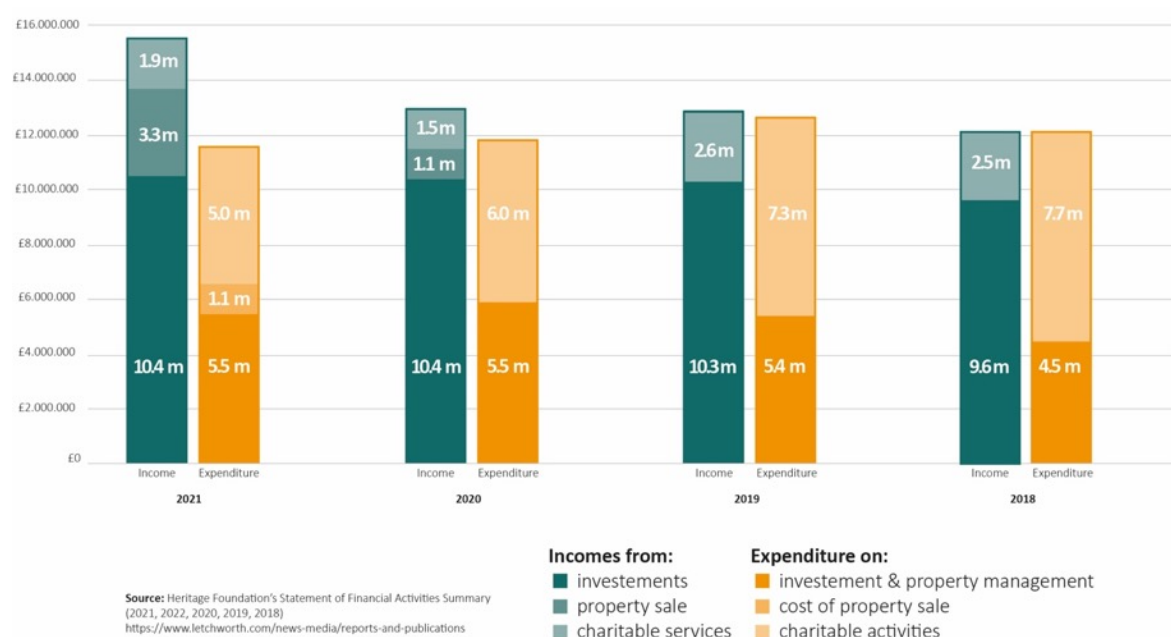


Figure 5.5: The Letchworth Garden City Heritage Foundation Annual Financial statement from 2018 to 2021, based on data from Letchworth Garden City Heritage Foundation Annual reports (LGCHF, 2023c), Author, 2023.

5.1.2 Some challenges and limitation to the land value capture system in Letchworth

Understanding the land value capture principle

The principle of recognising the value in reinvesting money is a fundamental belief in Letchworth, endorsed and practised by other organisations in the locality (H.01, B.02). However, various interviewees indicate that understanding land value for the community is not straightforward (L.03, 06, 07, R.03, 13) and seems to stem from three reasons. Firstly, land value capture sits at the crossroads of two apparently opposed spheres of financial rationale, community benefit and economic profits: *“That’s fair enough that people focus on that (profit)”* (L.07). A second dimension is the complex arrangement of asset reinvestment, which blurs the perception of the LVC: *“where people lack understanding is all the money ... well the percentage of the profit that [Heritage Foundation] goes back into Letchworth”* (B.02). Finally, the complex spreadsheets and the *“broad range of things”* the Foundation offers without a specialisation blur the perception of the benefit of the LVC: *“there are all these different charitable headings, and they’re very broad. Which is good and bad in different ways, I guess ... but it’s surely confusing sometimes with the local community”* (L.03).

The impact of the Covid pandemic on the Foundation’s stream of incomes

Another constraint to the LCV scheme appears in the Covid outbreak that challenges many businesses and organisations, including the Foundation. The Foundation adapts its operations, temporarily shutting down most of the charitable venues, creating a community response, and simplifying the grant application process for local community groups (L.03, 06, 07 09; G.05). After a profound restructuring of the organisation, the Foundation is able to provide rent relief to their professional tenants (L.02, 03, 06, 07, 09; B.03).

L.03, 06, and 09 estimate a significant loss of income for the next three to ten years. During this financial pressure due to Covid, The Foundation representatives indicate that the decision Board of Trustees must reorient priorities and adapt their strategy, to first protect the Foundation’s integrity while supporting the community, as L.06 rationalises: *“We have protected our grant budget as much as we possibly can, and I will die in a ditch before we cut it back any further ... but we’ve got to be realistic”*. L.09 explains the financial strain:

Very quickly people stopped paying their rent because their businesses were shut. [...] We had such a big drop in income, so we have to get hold of that and get control of it. [...] We completely rewrote our budget, we ripped our strategic plan, and we worked our strategy

in terms of cuts in our expenditure and we went into the mobilisation phase of that. It was really about stabilising the organisation again for a new financial envelope.

This quote shows the versatility of the local administration, that also mean unfortunate redundancies and service closures (L.03, 06, 07, 09). As a result, staff and expertise have shrunk temporarily (L.03, 06) and the Foundation must reinvent itself: *“It’s trying to find ways of doing what we did, but differently, and hopefully more cheaply, and I do see our role as much more of the facilitator going forward”* (L.06).

Local food production seen as a “missed opportunity”.

In the 1990s context, Hall and Ward commended the agricultural belt in England for smallholdings and organic production (1998, p.207), blaming big-farm corporations that run the conventional industrialised subsidised food production under the Common Agriculture Policy (CAP) (p.201). They suggested a local-based solution, underpinned by local governance and willing customers in farmers’ markets and direct sales, saving costs and allowing for balance in business risks, similar to Howard’s vision. The role of the Foundation, in combination with the land value capture model, theoretically represents a means of controlling the local food economy, particularly within rural estate.

That does impact on local food production. Because it means that we’re able to take a view of how the rural estate is farmed. I know there is sort various sorts about how things are farmed, but it could be farmed more intensively and more commercially. (L.03)

I’m sure the original ethos behind the whole garden city movement is that you were almost self-sufficient so that arable land would have been grown, crops and everything grown, to benefit the community itself. It’s obvious, it’s not the case. It’s commercial. (L.02)

Given the proximity of arable land, some residents and Foundation representatives considered a stronger connection between local food production and the town (R.03, 07, 08; L.07, 09). However, despite this potential, produce from the rural estate is not sold locally but rather integrated into a larger market: *“It would be lovely if all of [the residents] would be able to get local produce of local farms, but [...] we haven’t managed to close that”* (L.07). This prospect is also noted by residents: *“if you want to get out and buy local fruit and veg grown in Letchworth, it’s impossible. And so that’s a real area that needs working on”* (R.08).

Likewise, L.09 acknowledges a “*missed opportunity*” of local food production for local consumption, echoing Howard’s vision (1898, p.33). L.09 explains his perspective on the situation as a representative of the Foundation:

It’s easy for us at the moment, relatively, compare to what it would be to probably manage a lot of small-scale producers and lettings and people, and all the complications that go with it, and the scale of it is large. [...] We’re almost more in an industrial scale of producers, aren’t we?

The administrative burden of managing farmland is currently remote from the purview of the Foundation, which is “*not in the position to directly farm the land*” (L.02) due to the extended expertise and capacities needed to address rural and urban management, which are issues also highlighted in current literature exploring rural-urban governance (Ye and Liu, 2020).

We don’t advise ... we’re not knowledgeable enough [...]. I think it has to be a certain freedom in this tenancy agreement. (L.01)

The potential is limitless really, because of the greenbelt that you have around Letchworth and obviously the large open space within, but obviously it needs the resource to be able to tap into that, and actually do something. (L.02)

I don’t know the breakdowns of what type of crop they’re growing or how much sugar beet there is, or you know, what the yield is going to be year on year. (L.03)

The missed opportunity in the rural estate that L.09 identifies is linked to management and farming practices, a view shared by F.02, a farmer in Hertfordshire engaged in sustainable agricultural methods who is familiar with the Rural Estate at Letchworth:

It was a great opportunity just because Letchworth owns 400 hectares of land all around the town and they just let it to one of our neighbours, who farms it in a traditional way, producing crops, which disappear [...] to the sugar beets factory, to the mill or in London or whatever. It’s not contributing at all to the local food system or feeding Letchworth. It’s just a shame because of the sort of town that Letchworth is You think that the Heritage Foundation or however would have come up with a more imaginative system, but anyway, they didn’t.

Economic pressure and farming scales

In contrast to potential small-holdings that could lease arable fields in the rural estate (L.09; R.07, 08), the commercial farm company operating it since 2011 and “(has) a farm in (City in Hertfordshire, 12 miles away from Letchworth), but because the processing ... the grain dryers and the ... the set up they have in (City in Hertfordshire) is quite high-tech, they’re able to mill the grain to a higher grain so they actually they buy more from local farmers and then they would sell it further” (L.02). The scale of the company enables specific agricultural methods: “The technologies are more advanced, the machinery they’re better equipped to farming than we (the Foundation) were. The grain dryer that was used I think at [farm site in Letchworth] was quite old and antique, whereas what they use is quite [...] state of the art”.

Interviews reveal that the Foundation used to operate a commercial farm in the rural estate, called the Letchworth Garden City Farms Limited, now dissolved (L.01, 02, F.03). Little was found about it, but the website of the local educational farm for the local community indicates that the commercial activity for the sole purpose of commodity sales was discarded in 1980 (Standalone Farm, 2023) in favour of an educational farm engaging with the public and when “[Farming Company] took over the wide agricultural estate. [The Letchworth Garden City Farms Limited] has been absorbed into the [Heritage Foundation], [...] run alongside other venues like the cinema, and theatre, the [art gallery]” (F.03). The rural estate has thus been divided into two areas for commercial tenure and educational farming activities. L.02 explains the mechanism that led the Foundation to lease out the rural estate to make the farmland profitable:

The decision was taken in 20... 10, I think. It was to tender out the farming in order to guarantee an income rather than ... Because we were operating at loss through having to support the farm. By tendering it out, we could guarantee an income. Regardless of what the yields were, we would have that income. It was down to that farmer to generate his profits.

The 10-year tenancy ensures the LGCHF a steady income: “about 400,000 pounds a year, which, as we’ve grabbed a bit of land back, has gone down. I think at the moment it’s 370,000 pounds in a term”. The former structure the Foundation that used to run the farming on the rural estate “was limited because they’ve never farmed all of it at the same time. So, their yields or their income was never potentially as higher as it would be for a bigger farmer”.

To understand further the LVC scheme, the next section will focus on land ownership as an instrumental aspect of the garden city model, but also an influence fostering a place-based food economy in Letchworth.

5.2 LAND OWNERSHIP AS A LEVER FOR THE FOOD ECONOMY

Building on the previous section delving into the agricultural activities in the rural estate, this section assesses land ownership as a vital condition for LVC implementation. This section explores land ownership, which informs on the potential for adopting the local option, as discussed in Chapter 2, to support a localised food economy in Letchworth. Subsequently, land management in Letchworth, raises the questions on rediscovering small-scale farmland access. A further aspect concentrates on the idea of land stewardship to sustainably support Letchworth, especially in the rural estate. Land management affects farming practices and the leaseholder's agricultural methods.

Unfortunately, the study cannot include the perspective of the current farmer's tenant of the rural estate on this matter: requests for an interview remained unanswered. Nonetheless, interviews from other farmers indicate that land stewardship implemented throughout the rural estate, to some extent, influences agricultural methods for a resulting landscape and wildlife protection. Three farmers participated in the study: F.01, a farmer working on the land for a non-governmental land trust in Cambridgeshire, whose input is relevant to reflecting on a similar situation in Letchworth and the large landowner; F.02, an independent farmer based in Hertfordshire with no-dig techniques, engaged in regenerating farming methods, and familiar with the rural estate in Letchworth and the opportunities this represents. Finally, F.03 is employed on an educational farm in Letchworth and is intimately acquainted with the functioning of the rural estate and the issues related to large-scale farming in the area.

5.2.1 Land ownership potentials for urban food production

Access to the agricultural land and land pressure

Urban spaces dedicated to agriculture are often “marginal areas that are vulnerable to changes in planning designation. In the literature, spatial issues about UA have either addressed structural questions of land use, governance, and planning, or have highlighted social and personal benefits of UA” (Koopmans *et al.*, 2017, p.154). The role of the Foundation as landowner is critical in the implementation of the LVC. While the rural estate in Letchworth offers a unique opportunity, in line with Howard (1898, p.75) idea to stabilise rent for tenants from, the literature suggests that regaining or retrieving space for food production by local authorities and institutions is challenging

due to limited land availability, land status, or land ownership (Fainstein, 2011; La Rosa *et al.*, 2014; Koopmans *et al.*, 2017).

For F.01, a farmer in Cambridgeshire who farms a comparable large rural estate rented from a substantial landowner, the issue for land access to farmers in the UK stems from “*tax, [...] people who own land, and subsidies for large business farms*”. Unpacking his thoughts on taxes, F.01 connects access to land with land status and financial incentives:

Land access in the UK is very hard. And the primary reason for that, in general, is because, when you own land, you get significant tax relief, and as a result, there is a big incentive, particularly inheritance tax. You don't have to pay inheritance tax on that. So basically, rich people, to avoid paying inheritance tax, buy that to avoid paying. So, it's a big issue and that puts land, that pushes the price of land up.

Two UA projects in a European Capital illustrate how land ownership is critical: “*There is less land than we thought. In any case, there is land, but it is difficult to access. [...] In [another region]..., I'm not saying that it's easy to access land, but there are larger areas*” (E.02).

Land access for farmers recognised in literature but its scope is also often limited in urban areas to grow food (Fainstein, 2011; La Rosa *et al.*, 2014). This tendency is confirmed in the primary dataset collected during the doctoral study: interviews with experts working on urban agriculture activities in the UK and in Western European Capitals help understand the challenges to accessing land and how land ownership can play out. (F.01; E.02,05). First, land owned privately can create inertia due to long leases: “*land is qualified as agricultural on the urban plan, but [the landlord] still think[s] it's going to change and become a building site, and they don't want anything on it*” (E.02). These laws are seen as “*unbreakable*” agricultural leases that “*protects the farmer for life*”. E.02 sums up: “*The problem obviously, it was made to protect the farmers, but it's so strong that the owners don't want to get involved in it anymore because they are actually dispossessed*”, which discourages actions to make arable fields available for agricultural tenancy. Land ownership plays a vital role in embodying the connection between the farm and the community in regard to F.01's reflection: “*Big companies farm on land for people who do not live on their land [...]. A lot of people won't know who's managing the land in their village and who owns it ... You don't meet the farmer down the path*” (F.01). The role of the Foundation as landowner for arable fields is particularly exceptional in providing such access through farming tenure.

Although the Foundation protects its rural estate around the town, Letchworth is no stranger to land pressure and housing shortage (L.03, 06, 09, R.11): “*It's finding the balance between keeping a population but also the provision of the green aspect of the estate*” (L.02). The Foundation has

recent plans to use some of the rural land in the north of the town to provide housing. Carefully curated, the Foundation pays particular attention to the integration of food into the design, in line with garden city principles (LGCHF, 2023j), suggesting again the Foundation's role as landowner and strategic planner, alongside its role as custodian of garden city principles.

Urban food production: small scale capacities and international trade

Considering agricultural activities in the rural estate, a resident highlights the double difficulty of local and direct trades but equally stresses large-scale specialisation challenges: *“I think it’s very difficult for the local farmers to specialise in local food production. It would be quite uneconomic for them in many senses” [...] you’re risking a lot if you only have one specialisation and only one market”* (R.12).

As a preamble to the next segment, three ideas in the data, further examined in section 7.2, revolve around UA and small-scale farms. First, several respondents posit that local businesses are more likely to prosper if acknowledged and endorsed by the neighbouring community (E.01, 02; R.03, 07, 11). Second, some participants also contend that small-scale agricultural holdings imply locally distributed produce that aligns with the principles of sustainability (R07, 08, 11). Third, on the whole, residents perceive UA and food production spaces, such as orchard sites in Letchworth, as a promising economic opportunity for Letchworth.

Growing crops and breeding cattle on a small scale can be difficult (E.01, 02, 03, F.01, R.12) (see also 5.3.2) due to the national and international policy that seems to encourage large-scale farms in a race for output performance (Renting *et.al.*, 2003, p.395). The international trade framework suggests large-scale default settings, with the European Common Agricultural Policy (CAP) that shaped the UK conventional food system until the Brexit agreement was signed in January 2021: *“The other issue is that due to Common Agricultural Policy. The payments, or the subsidies, are on the amount of land you own, it’s encouraged businesses to get bigger, bigger, and bigger farm businesses, which means that they buy big kits, and they need land to spread the costs”* (F.01).

However, the EU food policy framework presents vulnerabilities (Moragues-Faus, Sonnino and Marsden, 2017, p.190), including a failure to deal with the different scales of the food economy, inequalities in food, sectorial interdependencies, related askew power relationships for small-scale food agriculture, and conflicting values and interpretations of food security across its geopolitical scope.

In terms of food economy on the national level, the UK is considered “*highly integrated into the global food market*” (Renting *et al.*, 2003, p.395) with faint attention on AFNs (Kirwan and Maye, 2013) and like most wealthy countries, relies on food imports (Maye and Kirwan, 2013). Since Brexit, the Government's food strategy (Defra, 2022) seems to follow a large-scale approach and conventional food system, promoting home-grown food. However, in the last decade, voices have risen for better coordination of food and agriculture in an integrated UK cross-sectorial National Food Strategy (Marsden, 2010; Buttriss, 2019; Caraher, 2019; Dumbleby, 2021) that embraces health, production, consumption, and protective resources to redefine the local food system (Ingram *et al.*, 2013; Barling, 2017).

Food economy on a small scale: output conundrum

Data drawn from interviews with experts engaged in UA suggests that food produced for local purposes requires specific logistics, such as co-ordinating production and processing (F.01; E.01, 03, E.04) and as a result, the size of farms matches the number of their consumers, corroborating Jarosz’s (2008) findings on AFNs in an urban context and who argued for a need to create new markets.

Similar to Born and Purcell’s (2006) line of reasoning, it is also contended that there can be little transparency in the local food system, whether about the price or the process: some residents find certain specialised stores pricey in Letchworth, such as organic or plastic-free independent stores (R.01, 02, 03, 04,09) (see also section 5.3.1). Similarly, F.02 acknowledges that for farm economic activities to predict market stability, “*for some things, supermarkets will always be cheaper*” (F.01). In this sense, F.01, E.03, and E.04 statement help understand local and small-scale food systems.

Firstly, the logistics of food volumes for distribution differ between large-scale trade and local food systems (F.01; E.04). SFSCs with a smaller customer base (E.03, 04) compete with conventional food systems, which dispatch large volumes of food on a national scale (Jarosz, 2008; O’Keefe *et al.*, 2016), but also expand their supply of off-season products, ultimately blurring the knowledge of local seasonal foods (R.01 L.07; E.04; B.01). Secondly, when promoting local producers, it is important to embed transparency and fairness regarding the products in the commodity price. F.01 delves into the pricing challenges that small-scale production faces due to quantities and short-term demand. Although literature recognises issues in the global north, diversification of small-scale food producers can overcome seasonality yields and increase margins for local small businesses (Sage, 2003).

In interviews, farmers refer to nested economies and the difficulty of avoiding them (F.01, 03), echoing literature about the commodity markets' predictability, niches, and added value (Maye and Ilbery, 2006; Maye, 2013; Lang, 2010). First, market predictability is critical for farmers' livelihoods and to that extent, growing conventional commodities provides a form of stability: *"If you produce something as a commodity, there is a lot of other people producing that commodity, so the price is very transparent. You can see it on your phone [...] but when you produce something niche, something value-added, [...] the price offset is harder to see"* (F.01). Corresponding to some academic sources observing local food and SFSCs (Maye and Ilbery 2006; Vittersø *et al*, 2019): *"the more you add value to your product, you think that the market becomes ... because the supply chain is shorter... the market becomes more transparent. I don't think it does"* (F.01).

In other words, as Born and Purcell (2003) note, proximity to food production does not necessarily result in increased transparency or reduced cost. In addition, the findings support their claim that accessing the traditional food system can be difficult for smaller-scale operations.

We grow a crop called spelt. And hundreds of tons of spelt. It takes five years to get rid of it because it's so niche. We grow rye, the problem is that when the thing is so niche, the market is smaller, so you can add value, but you also add risks. And also, the demand is so much smaller. I grow wheat because I know I can always sell it. I grow oat because I know I can always sell it. I also grow rye, and quinoa, and whatever, but on a small area, because it adds value and if I grow too much, I can't get rid of it. (F.01)

The pricing of food crops sold in large quantities for processing in the conventional agro-food industry is stabilised by commodity index prices, while niche crops fail to comply with conventional food trade standards. Facing similar barriers, F.02 tries to avoid an externalised food transformation stage and wants to include it into their process by *"getting hold of a mill to grind our own and sell flour locally. That would be the next project to find people who want to buy locally grown and milled flour and grow more heritage wheat"*. Economies of scale do not work always together, and food distributed in a small quantity can be more expensive than in a large volume. Regarding these distinct food-supply streams that communicate scarcely, intermediaries are important and F.01 disagrees when *"people often say, let's get rid of the middleman, but my life would be a complete pain"*.

Both farmers F.02 and F.01's discourse describes for instance that meat production on a small scale cannot work without the large-scale market. This perspective challenges the idea that small-scale food economies are by default set locally, and instead, data suggests that for some produce, different scales work together. Although supermarkets and conventional slaughter will take small-scale produced goods, the parallel food supply leads farmers to question the mechanisms of food systems

and their vision for small-scale, local produce or rare crops. The economy of scale is even in the management, not reachable, too big, or too far:

The reason I can't is ... they're all too big. The big digesters, a few big digesters, the nearest one for me is in Baldock. It's to get the staff from the digester onto the field. Because is half an hour away, the nearest digesters, but it's massive. If they localised some of these kinds of things so I can farm ... It's not cost effective. If these were a little bit smaller, yeah.
(F.01)

Finally, in Letchworth today, small husbandries cannot co-operate either with larger neighbour farm due to a different scope and scale that cannot be linked. F.03 refers to their farmers neighbours:

We have very little to do with them the that they are the next-door field to us. They're on a massive scale and the land they have here is about 2 - 2,500 acres, but it's a small part of what they have of rural land, but I think they have something like 10.000 acres (note: 4046 ha) all together. [...] They were charging more and more for (straw). and it was easier for us to buy somewhere else. So, we have very little to do with them.

This complexity observable in Hertfordshire and close county provides greater insight into the existing literature which argues that locally-based and specialised food businesses co-exist with the conventional food system on various degrees (Winter, 2003; Donald and Blay-Palmer, 2006; Maye and Ilbery, 2006; Kirwan, 2006; Sonnino and Marsden, 2006; Lang, 2010a; Kneafsey *et al.*, 2013; Laforge, Anderson and McLachlan, 2017; Cerrada-Serra *et al.*, 2018; Vittersø *et al.*, 2019; Chiffolleau *et al.*, 2019).

The difficulties that hypothetical smallholders might encounter in the rural settlement of Letchworth Garden City would probably stem from wider problems that inhibit their implementation. Addressing a place-based food economy today faces complex issues, similar to the concerns raised by Howard (1898, p.65) with alternatives to middlemen and market monopoly. Therefore, these ideas seem relevant today and are the focus of the following section in the light of today's Letchworth, exploring a connection between land ownership and local option.

5.2.2 Land ownership and the local option.

Chapter 2 defines the local option concept (Howard, 1898, p. 73), which provides an advantage to the local economy through a place-based trading system (ibid, p. 68). This system creates opportunities for professional producers to sell their products at a fair price (ibid, p. 74), making it a favourable option due to the reduction of intermediaries (ibid, p. 24). Ultimately, the local option provides individuals with the opportunity to operate their businesses (ibid, p.73) under a local shopping policy that still allows for external competition (ibid, p.33, p.75). Additionally, to secure economic activity in the town, most shop units hold 99-year leases from the town's administration, which should guarantee fair conditions and stable trade activities, especially during sudden economic changes (Howard, 1898, p.75; Fishman, 1997, p.66; Beevers, 1988, p.95). Howard's (1898, p.73) vision of the role of the local municipality is critical to implement the local option:

On the contrary, our so-called "public markets" are for the most part, carried on by private individuals, who pay tolls for the parts of the buildings which they occupy, but who are not except on a few points, controlled by the municipality, and whose profits are personally enjoyed but the various dealers, Markets may therefore, be fitly termed semi-private enterprise.

Is there a local option today in Letchworth?

As outlined in Chapter 2, city-level institutions and authorities can assume a pivotal function in executing local food strategies, and their reach spans facilitating and initiating policy momentum (Halliday, 2015; Morgan, 201; Halliday and Barling, 2018; Moragues-Faus and Carroll, 2018; Coulson and Sonnino, 2019). Nonetheless, the literature rarely discusses their role as landholders, which holds fundamental position for managing and transforming land use (Fainstein, 2011; La Rosa *et al.*, 2014; Sadoux, 2023).

It appears in interviews that municipalities as landowners can make a difference in food businesses' economic success (L 02, 03, E.02, F.01, 02; Rs). The terminology local option is not mentioned during interviews with the representatives of the Foundation, or found in consultation documents, but the role of the Foundation as owner of several shop units contributes to the economy of the town centre (L.03, 07; B.02). However, an overarching gap in Letchworth's in terms of the economic strategy concerns food: *"I think it's fair to say that the Foundation doesn't have a single policy on food within the town"* (L.07). The town used to face a commercial struggle in recent years (L.07, 09). As a result, there are lower rents compared to retail units in close towns, which L.07 sees as a part of the problem and a solution to address the economic life of the town centre:

One of the things that surprised me was to find that the shop rents of Letchworth are often less than what they are in Hitchin. It's a dramatic difference, it really shocks me. Of course, if you are going to shop in Hitchin, look at how many people walk past your shop front. And then look at how many it is in Letchworth? I think that would be one of the things that attract [vegan food restaurant], [plastic free shop], [organic food and coffee shop] and so on, into this town.

Further discussion and interviews with food business owners in Letchworth suggests that independent food business projects start with an idea and need an appropriate context to flourish. In some instances, low rents in Letchworth represents an opportunity for food business experimentation.

We started to discuss how difficult it to shop plastic free. We both sort of come from different backgrounds but perhaps have the same interest in this. We couldn't shop plastic free ourselves, so we decided to open a shop. (B.01)

The enablers ... well for me personally that's where we're situated in the Wynd in Letchworth like business rates and rent is actually quite competitive it allows you to experiment more with the business because your overheads aren't that high. (B.03)

It would be nice to lovely for you to say: 'This policy of the Foundation has caused [organic food and coffee shop] to turn up, or [vegan food restaurant] to turn up' But I think to a very large extent, it happens by itself. But certainly, one factor is that the rents that we charge in the town centre are quite low. Not as a matter of policy, not because we want to be generous, but because that's what the market does to us. (L.07)

In addition to lower rent, entrepreneurs starting a commercial venture take advantage of the garden city history as a part of a 'brand' embedded in their business's ethos (B.01, 02, 03, 04).

Local option: land ownership as a lever for food-related business opportunities

In addition to affordable rents, property ownership can theoretically be an opportunity to create new commercial environments. The Foundation's portfolio, which includes local orchards, available buildings, or derelict land, attracts the attention of active members of the community who do not understand what they see as a missed opportunity to use these facilities for the benefit of local people (B.04, O.03, G.04, 08). B.04 contacted the Foundation because an underused building had sparked their imagination to create co-working spaces. The potential for retrofitting and reusing

an old building is an observed phenomenon in cities that sparks the imagination of a community-led culture (H.01; B.04).

Besides, green spaces in Letchworth offer a promising opportunity for experimenting with small-scale food businesses. Interviews indicate that the position of the Foundation as a landowner is perceived as influential for experimentation, including initiatives such as market gardens and CSA (G.07, 08; R.03, 07, 08, 09).

I think it definitely helps that the Foundation owns the whole of ... to my knowledge the whole of the green spaces in Letchworth, so that gives them the flexibility to do what they like with their land. I know they need money out of it as well. But for the market garden we're talking, [...] it's a very small proportion and I think you can make a big impact on Letchworth. [...] I think there is a market for it. But it's not something that the [Heritage] has ever ... I don't know, looked at doing. (G.08)

I think there is an enormous asset base, and again, under-utilised I would say, overall. I think and we probably perpetuate some of this, I think we're trying to think about plots' splits of big gardens and give more common land and maybe this is something we could do better. We're a bit rigid I'd say in terms of some of that in terms of redefining plots. That's something we need to think of. (L.09)

The role of the Foundation as landlord is crucial to support businesses in adversity and during the COVID-19 lockdown, the Foundation delivered to commercial tenants a three-month rent waiver (L. 03, 07, 09; B.03) to “give people the maximum chance” of economic continuity (L.06). The Foundation wants to embody a reliable and responsive institution and landlord to create a relationship with their tenants with a direct point of contact (L.07, 03). To be a support as well as a partner for local enterprises is critical to create a trust relationship between owners and tenants, which may bolster the recent food outlets in the town centre, as noted by L.03.

When we look at some of the businesses that have opened out over the last few years, like [vegan restaurant], [organic food store] it is much about looking at local food production, the [local brewery and pub], for example, [...] these businesses have been keen to engage with us, it's been a really positive experience, and all of these businesses are thriving. Not because they engage with us, but because they are engaging, they want to work with the community, and they want to be part of the community. (L.03)

Feedback from food businesses renting the Foundation's units is positive, recognising the strong support of the Foundation as a landlord in helping to set up and keep the business afloat, but mentioning a double-edged sword in relation to the limitations in refurbishing or adapting shop

units to suit their business purposes (B.03, 04), sharing a perplexity between the Foundation's role and the properties under the Management Scheme (1967), also noted in sections 5.1.2 and 6.4.1.

The potential of a charitable umbrella for a food procurement and local option

The Foundation finances charitable facilities such as a cinema, an educational farm, a gallery, and a museum. All of these facilities come directly under the Foundation's supervision and the Foundation's significant connection to its funded charitable services could result in a collaboration with local food providers (L.02; F.03; R.03), in line with Howard's (1898, p.73) local option model. The Foundation's charitable, such as cinema, gallery, or educational farm, service with cafés and have food on offer food that is not locally sourced or processed. Considering the Foundation's significant role in providing charity services to the town that could create a food procurement strategy to bolster the local food economy through charitable services. This approach is consistent with the Foundation's objectives.

At the moment, it tends to be a national supplier that supplies most things for the café, company [...] We, as an organisation, and especially since COVID, are now talking about sourcing locally much more and using local services where we can, that's right, across the business for all supply, not just food. (F.03)

As a result, a large umbrella organisation allows for a “virtuous cycle” and “visible results” (E.04) on-site and thus helps small local food actors to enter the market: *“the universities and the bigger venues come together [...] and these are where we bring together the people who buy lots of food. We reckon it's about a million meals a month between them”* (E.05). Experts in food partnership illustrates examples of large food buyers, such as university or Trust can centralise large volumes of food for distribution and consumption, echoing the role of the Foundation and a potential food procurement on a local scale.

5.2.3 Land stewardship, an influential tool for sustainability?

The Foundation is responsible for the town's "*stewardship, making sure that we're caring for both the built and natural environment in terms of the highest standards, but also reflecting public expectations, particularly around things like climate change and sustainability, greater appreciation of nature [...]*" (L.09). For the government, environmental stewardship is a framework that provides guidance and grant incentives, mostly focussed on the countryside (Defra, 2023a) for environmental management (Defra, 2023b), which deal with landowners regardless of their size or status (Bennett *et al.*, 2018; Defra, 2023a, 2023b). In academic literature, land stewardship or landscape stewardship is linked with the idea that land is seen as a common good (Foster, 2021, p.12) that should be managed sustainably and for conservation and preservation (Squires, 2012; Bunce and Aslam, 2016). Associated with land reform two decades ago (Bryden and Hart, 2000), the definition of environmental stewardship presents an increasing emphasis on local communities (Torres, Nadot, Prévot, 2017; Bennett *et al.*, 2018). Bennett *et al.* (2018) enquire about the absence of a coherent interpretation of environmental stewardship in scholarly works. They suggest a theoretical outline that regards the stewards, their incentives, and skills as factors to appreciate the various opportunities of stewardship. As a result, motivations to implement land stewardship are rooted in ethical values, beliefs or the quest for autonomy and sustainability.

In a large sense, stewardship refers to supervising and caring for natural spaces and referring to land stewardship signifies the need to apply a set of guidelines to land management. The relationship between land stewardship promoted by the Foundation and the different stakeholders in Letchworth could inform on the potential food growing opportunity and sustainable agricultural practices in Letchworth.

Land stewardship to protect landscape and biodiversity.

In order to ensure biodiversity and sustainability embedded in the local landscape management, the Foundation uses an agreement provided by Natural England (L.01, 02), a governmental body established by an Act of Parliament (Nature and Rural Communities Act 2006). Funded by the Department for Environment, Food and Rural Affairs (Defra), Natural England (2023) provides a framework document and funding to implement its guidelines (L.01, 02, 03): "*The whole of the estate is under countryside stewardship [...] and (the farming company) needs to abide by the rules and the layouts that we've put down in that agreement*" (L.01). The agreement is a five-year framework, renewed each year, which offers different options in the guidelines to implement in

Letchworth for instance “*the vast majority of the hedgerows are delivered by the farmers*”, following the Natural England guidelines (L.02).



Figure 5.6: Rural estate north, commercially leased field, Photograph Amelie Andre, 2019

Many respondents acknowledge the rural estate in Letchworth as a potential avenue for local food production and sustainable agriculture, which could strengthen the town's economy and environment and ultimately benefit its residents (F.02,.03; L.02, 03, 07, 09; Residents). The farmland and grazing pasture of the rural estate, as well as the footpaths and picturesque scenery (fig. 5.6), provide versatile green infrastructure for relaxation and wellness (in residents' interviews), which illustrates the multifunctionality of productive land (Marsden and Sonnino, 2008; Urquhart, Acott, 2013; Monteiro, Ferreira and Antunes, 2020). The visible effects of land management are manifested in this outcome. Nonetheless, this resulting landscape is perceived as a somewhat reduced outcome. While G.03 appreciates the resulting landscape and recognises the efforts that have gone into it, R.05 would like to see more concrete outcomes:

The margins of the farmers' fields... really wide margins of the fields, full of wildflowers, it's beautiful. It's an absolute joy having during your daily walk that we were told we had to do. Advised. That was lovely. I did write to the [Heritage Foundation] to say that, actually. (G.03)

There aren't loads of butterflies and birds. So, there is something not quite right. The fields margins are reasonable ... they could be bigger. (R.05)

In Letchworth, the Natural England stewardship agreement can conflict with two spheres of interest between preserving biodiversity and its potential effects on agricultural practices (L.01, 02; R.02; F.02).

[The tenant farmer] is on strict guidelines on what he can and cannot do. Sometimes there are problems with that. and we have to reiterate the rules a little bit because farmers are being farmers, they like to try to maximise the amount they get out from the land, but on the whole, he's not too bad. He's sometimes naughty with the hedge cutting. We differ very much on that opinion, and we have come to blows (laughs) about he's cut the hedges because I think they're too severe and it does reduce the number of berries for the birds. [...] We have no saying on what he grows. (L.01)

I don't have an awful lot of involvement with the farming side of ... I deal with the [Farmers Company] because obviously, we have an environmental agreement in place. They're responsible for carrying out some of the subscriptions of that agreement. But the actual farming processes I don't really understand or get involved with. (L.02)

These considerations reflect the concerns raised by Bennett *et al.* (2018) who emphasise the importance of motivation and understanding in establishing a stewardship program that connects food cultivation and landscape management. The land stewardship may help shape the landscape. The Foundation's staff members concede their remit stops at the landscape. If the farming tools and techniques used by their agricultural tenants are out of the scope of the Foundation in a literal sense, the land stewardship framework of Natural England enables the Foundation to keep a form of control over farming activities that could otherwise damage or reduce biodiversity to a greater extent.

Can land stewardship encourage sustainable agricultural methods?

As just outlined, the Foundation does not impose farming methods on its tenants. Their independence is, however, set within a contractual framework of land stewardship agreement with Natural England (2023) that the tenants must respect, transferring via this tool the responsibility to the farmer. This is also suggested as creating A possible gap between farmers' understanding of the contract of and their likely engagement (Raymond *et al.*, 2016). The land stewardship implemented in Letchworth requires the educational farm to adapt their agricultural procedures:

Yes, we are in the high-level stewardship scheme. [...] we limit how many animals we have to the area that we have ... and don't use a lot of artificial fertilisers, in fact, we don't use

any artificial fertilisers at all. We don't do much in the wave spraying, chemical uses kept a minimum. (F.03)

High-technology and “*state of the art*” (L.02) engineering of commercial tenants make commercial leasing arable fields in Letchworth rural estate more effective in terms of production volume and output. Interviews with farmers who implement alternative approaches defend another form of efficiency in terms of time spent on the land, animal welfare, and soil health (F.01, 02).

I didn't get to see first-hand what their methodology was or whatever All I know is that it was quite evident that when the [Farmers Company] came along, in the last few years [...] the technologies are more advanced, the machinery they're better equipped to farming than we were. (L.02)

And then you realise there is an alternative. [...] We just changed the whole farm to the no-till system, and it changed our lives. (F.02)

F.02 admits that alternative methods such as no till techniques are “*actually harder but much more satisfactory work*”. For F.01, the link between sustainable farming and landscape translates into a holistic approach to sustainable practices: “*You want to be engaged in sustainable consumption, and we want a wide landscape to demonstrate sustainable production. To demonstrate the two together create sustainable markets. Because you can't have one without the other one*”. This holistic stance includes the costs of sustainable farming methods for public benefit, supporting Foster's (2021) key idea that land stewardship benefits the communities.

A lot of these things that we're trying to deliver is the value of public goods and private goods. Because our farm has healthy soil it's profitable for me, right? I'll make good profits. But healthy also prevent flooding, because they're not compacted, they help promote wildlife. All of these things that farmers are not paid for, because I can't sell wildlife, I can't sell flooding prevention. It's just the community that gets the benefits. It's working out what should I get pay for to deliver to the society as a farmer and should not be paid for because it's a private benefit. (F.01)

To a certain degree, there are benefits for the framers in the crops relying on pollinating insect for example so if you have wildflower margins, that attract bees and other pollinating insects. Alongside your fields then obviously that's going to be a benefit. There's always going to be a plus and a minus. I'm sure most farmers would like to ensure their hedgerows are cut nice and neatly and low. (L.02)

This stance towards land stewardship echoes Howard's idea of land benefit to the community (Howard, 1898, p.109). Also suggested in the literature (Foster, 20121; Bennett *et al.*, 2018 the environmental management agreement in Letchworth confers benefits to both farmers and the community. However, divergent perspectives have been reported between the Foundation and agricultural tenants (L.01, 02) on the time, energy and financial costs of more sustainable farming practices (F.01, 02, 03).

5.3 LAND USE FOR FOOD PRODUCTION AND URBAN RESILIENCE

Chapter 5 thus far explores the significance of land ownership and stewardship in Letchworth. This segment explores the potential land availability for food production in Letchworth, building upon the findings outlined in Chapter 4. To understand elements of sustainability in the garden city model, the doctoral research explores the contemporary notion of resilience gaining popularity in urban studies (Folke, 2006), to examine changes within land availability in allotment sites, observed between 2019 and 2021, during the COVID-19 pandemic.

While spontaneous understandings of resilience have focused on the ability to absorb shocks and adapt to disruptions (Folke, 2006, p. 243; Leitner *et al.*, 2018, p. 1277), urban resilience is increasingly considered a vague concept due to its appropriation by different disciplines (Meerow, Newell and Stults, 2015; Zhang and Li, 2018). However, the common denominator of urban resilience is the social and ecological domain (McIntyre, Knowles-Yáñez and Hope, 2008; Beilin and Wilkinson, 2015; Sellberg *et al.*, 2020), reflecting the environmental and urban approaches. Indeed, urban systems represent a conglomerate of ecological, social, and technical components (Chelleri, 2012) but with a central approach that includes the dynamics of socio-ecological systems (Folke, 2006). As a result, resilience is a concept of process and change that is bounded by time and action (Bartel *et al.*, 2015; Bennett *et al.*, 2018; Leitner *et al.*, 2018; Glaeser, 2022).

This notion of change embedded in the conceptual framework of everyday life, discussed in Chapter 2, is also mentioned by Beilin and Wilkinson when discussing resilience (2015, p. 1214):

Urban resilience begins with the ordinary business of telling stories, creating networks, and revisiting initiatives – and these reinforce the everyday and ordinary capacities of people. It is a work of imagination and storytelling and a process that engages cross-scale, relational and emergent activities.

Thus, the role of governance has been strongly explored in papers on urban resilience (Meerow, Newell and Stults, 2016; Ribeiro and Pena Jardim Gonçalves, 2019). Scholars emphasise the top-down process of using land for mitigation strategies (Leitner *et al.*, 2018), while also acknowledging the role of communities and bottom-up dynamics (Meerow and Newell, 2015; Ribeiro and Pena Jardim Gonçalves, 2019). If the scope of the challenge in urban studies dealing with ecological issues such as wildfires, floods, and climate change (Meeran, Newell and Stults, 2016, p. 42) has become a concept influencing the decision-making of urban policymakers with global reach (Leitner *et al.*, 2018; Meerow, Newell and Stults, 2016, p. 323). However, the motivation and capacity of stakeholders take place within an approach that can “help locate the territorial dimension that mediates this change by identifying cities as complex adaptive systems”

(Mehmood, 2016, p. 416). For these reasons, a place-based approach is argued crucial to capture the different meanings of urban resilience (Meerow, Newell and Stults, 2016. p.323), for which scholars have identified the need to address urban resilience within spatial morphology and spatial aspects (Masnavi, Gharai and Hajibandeh, 2019).

With these elements in consideration, the following dataset characterises first the total amount of available natural land for food cultivation, with a specific emphasis on allotments. Preliminary fieldwork conducted in 2018 and 2019 revealed that allotment plots situated on the periphery between rural and suburban Letchworth were not being fully utilised (fig. 5.9), corroborated in an interview with O.01. This initial investigation prompted careful monitoring of changes in the allotment vacancy rate and this section reports on the interplay between the town layout and the opportunity to access green spaces.



Figure 5.9: Leek flower, unkept allotment in AL.15, Photograph Amelie Andre, March 2018

5.3.1 Productive land availability

This section explores land availability through the use of descriptive statistics to gain insight into the potential or current availability of food production. The primary objective is not to quantify food output, but rather to explore the impact of COVID-19 on land usage and investigate how increasing Urban Agriculture (UA) could reduce the size of foodsheds. Although such affirmation is a part of the equation, this section mostly associates such consideration with the social motivations and changes in attitudes towards green space in the face of global upheaval.

Land availability for potential food growing.

The food mapping dataset showcased in Chapter 4 presents varying arrangements of urban morphology and types of natural areas. Figure 5.8 illustrates the proportion of the rural estate, private gardens, green spaces, and urban gardening sites (the latter including community gardens, allotments, and orchards), using the GIS dataset and layer attributes.

The bar chart provides an approximate estimate on a city-wide scope (fig. 5.8). The entire space should not be, nor is it, for productive purposes. This metric quantifies the significant portion of permeable soil present in Letchworth Garden City. Additionally, it offers insights into the potential impact of home-grown produce on urban gardening's overall potential (Parham, 2020, p.10). L.09 highlights the untapped potential of private gardens and green spaces between houses.

I think in terms of some sort of the cover land [...] the small places of land ... as well as people's own gardens which, in Letchworth, are obviously sometimes much larger than you would get in other properties elsewhere I think there is an enormous asset base, and again, under-utilised I would say, overall. (L..09)

The area extracted from the GIS dataset does not represent the current land use for food growing but an account of the proportion for potential home-grown food: 16% of Letchworth represents private gardens, the rural belt represents 42% of the Letchworth area and has a productive purpose, divided in two areas with 38 % commercially leased for food production and the remaining 4% for educational farms. The large part of permeable soil represents a setting that characterises the potential of the town's layout to retrofit food growing (Viljoen, Bohn, Howe, 2005; Parham, 2016; Bohn and Chu, 2021).

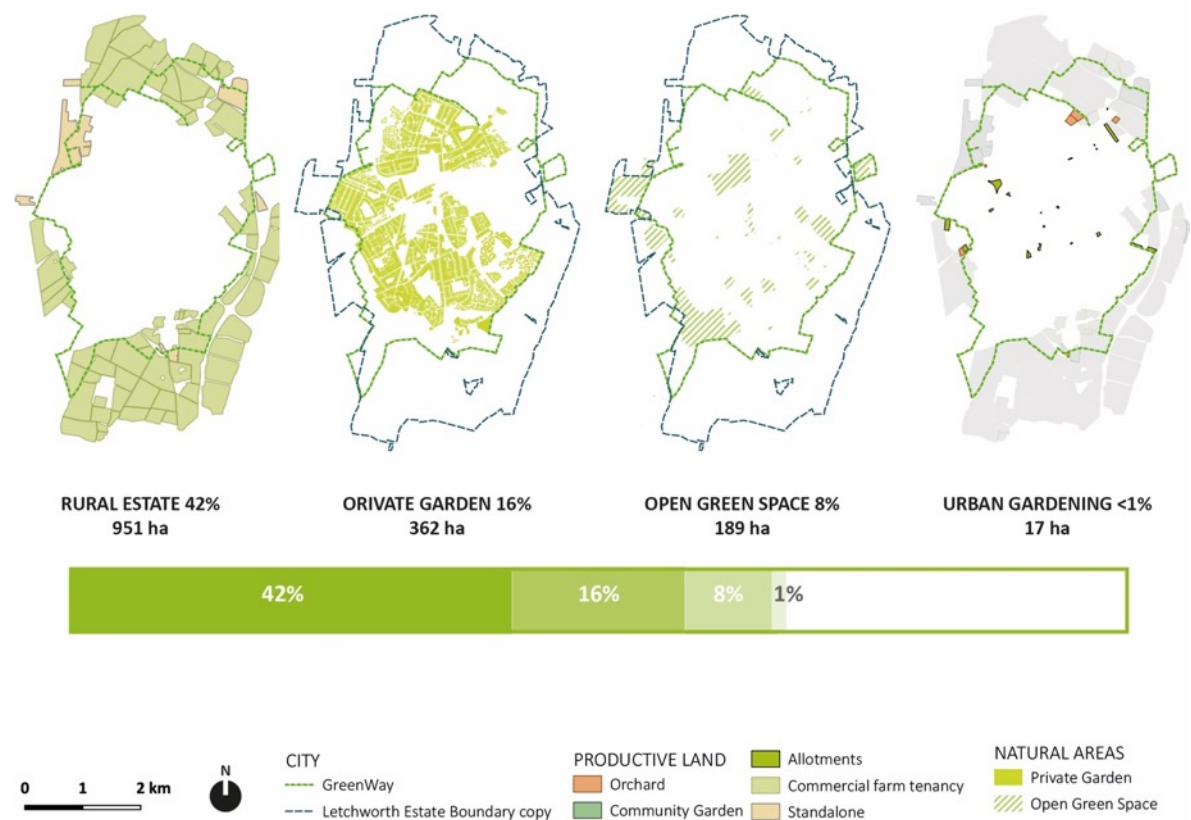


Figure 5.8: Map green spaces in Letchworth, from left to right: arable fields and pasturelands of the rural estate, private gardens, open green spaces, orchards, and allotments, Author, 2022 Contains © Crown copyright Letchworth Garden City Heritage Foundation 100050351, 2023

This reflection is directly drawn from academic works on urban gardening that examine the correlation between difficult times, such as war or economic depression, and increased use of gardens for food growing (Barthel, Parker and Ernstson, 2015; Barling, 2017; Partalidou and Anthopoulou, 2017; Burgin, 2018). In literature, gardening and food growing sometimes refer to the past or working-class activities associated with a thrifty lifestyle, inherently sustainable (Ariés, 2015; Burgin, 2018).

However, lived experience transforms perceive motivation from pragmatic and physical needs of mere economic incentives or access to healthy food to more complex social needs, such as a sense of belonging and community development (Partalidou and Anthopoulou, 2017; Scott *et al.*, 2018). These findings could be increasingly taken into account by policymakers and urban planners (Imbert, 2017; Scott *et al.*, 2018), where food needs to be embedded within the “community

system” (Burgin, 2018, p.34) like other sub-systems such as water, transport, and housing (Pothukuchi and Kaufman, 2000).

In that sense, the garden city model includes in its layout food growing for private households in the shape of large gardens, allotments, and smallholdings, as seen in Chapter 2. This layout still requires engagement from the population (Burgin, 2018), which is a crucial and challenging component, since “not everyone is an enthusiastic gardener” as Purdom noted a century ago (1913, p.105).

5.3.2 Allotments embodying a form of the garden city resilience.

Allotment price, dimensions, and maintenance policy

The management of the allotment sites in Letchworth is under the direction of two bodies: the Foundation manages eight allotment sites (LGCHF, 2023i), and the District Council has seven, as well as four more in the nearby town of Hitchin (NHDC, 2023b). In addition to these 15 allotment sites in Letchworth, a Housing Association (H.01) created five plots and an orchard from an unkept green space between houses (AL.05 in Figure 4.7). Table 5.1 indicates the management of the allotment sites, but as L.01 sums up: “It’s very complicated”:

The land that the [District Council] have, people, pay rent for; the land is owned by us (the LGCHF) but given to the [District Council] to rent out. [...] And then we (the LGCHF) have our separate allotments. (L.01)

The Foundation and the District Council have an arrangement over the allotment sites. For some of them, the District Council gives the Foundation a nominal rent that may also be called peppercorn rents (L.01, 06; O.01). O.01 explains that “*there is a mixture between sites that we have leased amongst a historical long-term agreement or that we have directly ourselves*”. As a result, “[*the District Council*] works alongside partnership, in conjunction with organisations like the Heritage Foundation. [...] A lot of the land [...], the District Council leases from the Heritage Foundation. So, the Heritage Foundation has invested interest in what we’re doing”.

Table 5.1 sums up the key policies and management from different bodies in charge of the allotment in Letchworth: maintenance, support to allotment holders, allotment fees for plots, dimensions of an allotment, and budget available for maintenance and management.

Table 5.1: Managements of the allotment sites in Letchworth based on data from interviews, Author, 2022

	lease from	number of sites	sites (map codes)	size of plots	price per annum	annual budget for maintenance	help provided to allotment holders
Heritage Foundation	Landowner	8 total scope 2.05 ha	AL.03 AL.04 AL.06 AL.07 AL.12 AL.13 AL.14 AL.16	plot sizes vary	£40 a year	unknown	"[...] prepare the ground for new tenants" (L.01)
District Council	From the Foundation	7 total scope 8.15 ha	AL.01 AL.02 AL.08 AL.09 AL.10 AL.11 AL.15	5 poles – i.e., 125 m ²	£105 a year	£10,000 a year for all the sites of the district (19 sites)	"[...] haven't got the resource to become directly involved in a day-to-day management" (O.01)
Housing Association	From the Foundation	1 Total scope 0.1 ha	AL.05	75 m ² – i.e., 12 x 6 m	free of charge	No specific amount mentioned but budget was cut in 2016	"[...] one or two (plot holders) take responsibility." (H.01)

Nonetheless, it is largely argued that the most common issue in urban gardening is keeping up with an allotment (L.01, O.01, G.03). Gardening is acknowledged as a hard and demanding activity that requires regularity in the maintenance, skills, knowledge, time, and commitment (R.03; H.01; G.02).

I'm rubbish at gardening. So even though I wish I could grow our own vegetables and all that, I don't really do it. So, really, mainly, it's ... all our food is at [SU.01]. (R.11)

I tend to fail, just when it is coming in is when we go on holiday and then you're back and it hasn't got watered ... it doesn't kind of fit with the pattern of ... everything is just getting ready and school holiday starts. (R.03)

Size of plots, proximity, good orientation, and sometimes accessibility seem to represent crucial constraints for maintenance of the growing spaces, whether in private gardens or allotments (O.01; H.01; R.02, 03; G.03). After a consultation with the residents, H.01 initiated and established an allotment in town centre [AL.05]. In interview, he notes that for the allotment to be successful proximity was key: *"not living in the area ... it was too much for them to travel. They needed to get here within the 5 min"*. Likewise, the size of the allotment is a parameter to help the maintenance from allotment tenants and smaller plots are usually easier to maintain for plot holders (L.01, R.02, G.02). At first glance, the dimensions of plots in sites managed by the Foundation are variable, as L.01 points out: *"the allotments that people rent from the district are probably like ... bigger than this and haven't been divided. Whereas ours, we've got a variety of sizes"*. The District Council offers about 5-pole allotments (126 m²), a legacy of a past standard allotment size of 10 poles:

Originally it was designed, as a piece of land that's large enough for a family of four to feed themselves, from early 1900. We found for today's purposes that is probably too big. Some people are still able to cultivate that area but that's a lot of work. So, we do offer half plots. (O.01)

In Letchworth, different organisations manage the land differently in Table 5.1. While the District Council tends to have allotments that are *"self-regulated"* (O.01), the Foundation shapes up the plot for new holders:

When anybody takes over an allotment if it's been not used, neglected, or somebody took it on five years ago, and they still pay rent on it, then we just decide that 'come on there are people on the waiting, you've got to move on or shape up!' [...] Then we'll take back. But then before the next person comes in, we'll clear it. (L.01)

Before 2020, the Foundation had a waiting list for their allotments, while the District Council had a high vacancy rate (fig. 5.8). L.01 connects the high vacancy rate of the District Council sites with the lower maintenance and support provided, which *"puts people off completely because of the amount of work they have to do at the very beginning before you even plant anything"*. By contrast, the Foundation has its *"own landscape team, who [...] clears it for the next person and no charge, you just get a lovely clean allotment ready to go. That's why it's so popular"*. Different budget cuts had indeed an impact at the District Council, with *"a small team of three people basically that*

covers the whole district, of which allotments is only a part of the areas that we manage. [...] to become more involved in the allotment would mean that something elsewhere would suffer" (O.01).

As a result, the District Council cannot sustain tailored support, and must *"draw up (our) priorities"* and the District Council wants to avoid *"spoon feeding"* by encouraging *"allotments as a culture (that) should be a lot more self-help"* (O.01). This hands-off approach is nonetheless supportive of collective initiatives and the District Council occasionally allows subdivision for community plots free of charge (G.02, 03, 06; O.01) or adjust policies to help community initiative to sell vegetables or flowers (O.01; G.06). G.06 explains how his horticultural project could take another step as *"the [District Council] gives dispensation to sell because basically, you're not allowed to sell from an allotment. [...] to help the people in long-term unemployed, a good route out of it is self-employment"*.

Another aspect of allotment management is the financial input into the urban gardening site. A shared budget of 10,000 GBP for the 11 sites in Letchworth and Hitchin *"is not enough"* (O.01) and forces the District Council to manage the sites *"from a distance"*, with a *"management at the lower end of the spectrum, minimum input"*. The Foundation, however, is *"able to cover the cost of the allotments"* thanks to the financial input of the commercial farm (L.03). Allotments are not meant to generate income (L.01, O.01) and the Foundation *"manages the allotments at a loss"*. This situation is possible thanks to land value capture and the Foundation allotment sites *"fall under a charitable sort of element"* (L.01). The prices of each management body reflect these different forms of funding, and the District Council charges 105 GBP a year, which is *"one of the most expensive in the country. [...] The council policy is that they didn't want allotment to be subsidised, so basically, income has to cover the costs"* and holders' rent must cover the budget allocated to the allotment.

The allotment AL.05 in Figure 4.7 and visual (2) in Figure 4.54 is atypical in terms of management and was created with the consultation of the neighbours and the support of the Housing Association managing the land and the buildings around the green space. The site AL.05 allotment has seven 12 by 6 meters plots for the neighbours, a plot of smaller raise-bed for the local school, an orchard, and a common smaller raise bed (fig. 4.55). The project led at AL.05 demonstrated a willingness to work with the community using allotment to abide with the garden city original idea and create a sense of place as *"it's being beneficial to those who're most local to it"* (H.01). Besides, H.01 faced central government funding cuts that impacts the daily management, yet the allotment holders *"don't pay anything. It's free of charge. Because the amount of money we could raise is so small that the administration of that money wouldn't be worth it"*.

The management body representatives have different financial means and approaches but all of them observe that allotment administration *“isn’t cost-effective. [...] We could just turn this back to the lawn and forget about it. And it would be less hassle”* (L.01). Somehow underlying reasons, dissociated from financial interest, drive these institutions to maintain allotment sites, including a *“community resilience”* through education (L.01, 03, 07). In sum, underpinned by the legacy of the World’s first garden city (H.01), Letchworth provides allotments that combine institution management and community dynamics (Meerow and Newell, 2015; Ribeiro and Pena Jardim Gonçalves, 2019).

Allotment enthusiasm over the pandemic

Before 2020, some allotment sites managed by the District Council seemed poorly occupied, by 2021 all the NHDC allotment sites were occupied. Figure 5.9 suggests a correlation between the onset of lockdown and an interest in allotments, a trend also reported in newspapers (Busby, 2020; Smithers, 2020; Chenarides *et al.*, 2021). Before this drastic change in vacancy rate, a supposition was that there could be a correlation between vacancy rate and price, dimension, and maintenance policy described above.

I’ve seen demand sort of rise and peak, and we had a big waiting list, and I would say that now the demand is reducing, and I am not quite sure why. [...] 2010 – 11 – 12. Somewhere about that. And that’s when there were a lot of things about the green gym and getting outside. And that promotion has stopped, and it’s been a bit down. (O.01)

O.01 reports that the demand for allotment ebbs and flows. In 2019, the District Council waiting list system changed to respond to the high vacancy rate to connect plots with keen gardeners:

Our waiting list is not really a waiting list ... it’s just a list of people that want ... the picky people that want a specific area [...] that some tenants want a plot, and it might be their neighbour’s plot. [...] So, they go on a waiting list waiting for that specific plot to become available. (O.01)

To address this backlog, the waiting list was scrapped to instead display on the website the plots available (NHDC, 2023b) so *“if somebody comes and contacts us, [...] they can go and have a look”* (O.01). With this waiting list system was made available end of 2019 and offered an opportunity to track allotment availability. Figure 5.9 represents the evolution of the vacancy rate of the District Council allotments from December 2019. In March 2019, AL.09 and AL.10 show respectively 16 and 24 plots available, out of 40 and 50 plots, for a 40% and 48% vacancy rate. As

the Covid outbreak happened and inspired by the national trend noticed throughout the UK (Smithers, 2020), a record of the District Council's website availability started just before the lockdown, illustrating this enthusiasm.

The lockdown that followed the COVID-19 outbreak in March 2020 meant restrictions and the lack of social interactions and outdoor activities were topical issues, and allotments and gardens were perceived as “godsend” (L.02, R.13).

In interviews, representatives of local institutions explain a change in allotment occupation (L.02, 03, 05). Figure 5.8 corroborates the change from April and December 2020, whereby virtually all plots were occupied, while on-site visits between 2018 and 2019 suggested mitigated allotment occupation (Observation November 2017, March 2018)

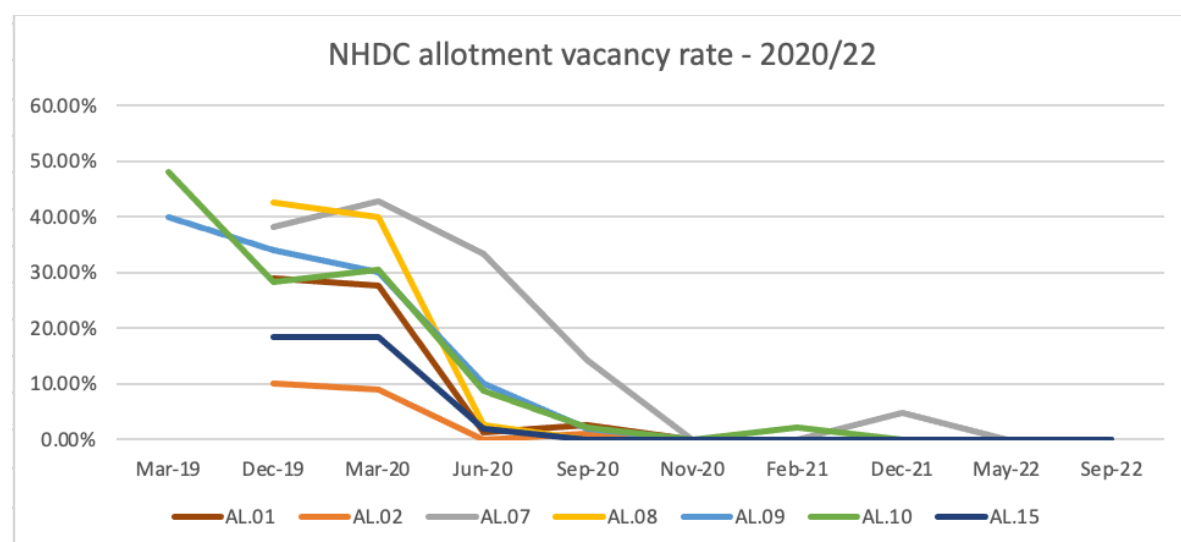


Figure 5.9: Evolution of plot vacancy for allotments managed by the District Council over the 2020 – 2022, Author, 2023

This newfound enthusiasm could potentially provide the chance to acquire an outdoor area to escape lockdown and engage in nature-related activities (G.03).

Some of them (new holders) set up their allotment very quickly and made it really attractive in a very short space of time. You know, very organised ... and barbecues have appeared. Somebody put a bungalow in theirs. It's a huge shed across the end of the allotment. They're not growing anything; they've got this wooden summer house with a veranda and a little fence. And then a lot of weeds in front of it. (G.03)

Interestingly, the allotment site [AL.09], all the allotments were snapped out quite early on. And some people go on with it and have done it. One person has built a sort of log palace, which is huge, massive. Three sorts of sheds like a big ... ridiculous, which mostly covers his allotment. So, people have done some interesting things. But some people have done more. (R.05)

While allotments typically pertain to food cultivation, the recent surge in allotment requests during the COVID-19 pandemic indicates a display of resilience and a desire for communal support amidst limited access to food and social interaction. Crises instigate a shift in attitudes and priorities. FA.01 also notices: *“because of Brexit or climate change, our visitors are changing. [...] We get a lot of people who come to the farm who look at what they see in the press around climate change biodiversity as headlines [...] [...] Two years, it’s very recent. [...] the change is very rapid”*.

As literature suggested and mentioned in Chapter 2, challenging situations can lead to new policy approaches and actions (Sage, 2003; Howe, Bohn and Viljoen, 2012; Skordili, 2013; Lang and Heasman, 2015; Barling, 2017; Caraher, 2019). The COVID-19 pandemic refocuses on the food system and pays better attention to the use of UA temporary-confined cities (Pulighe and Lupia, 2020), offering an opportunity to reconsider how food can contribute to urban resilience (Sanderson Bellamy *et al.*, 2021). Access to fresh food was difficult during COVID-19, particularly for vulnerable populations (Alim, 2020). Allotments and private gardens as part of UEIs offer opportunities for reclaiming space (Pulighe and Lupia, 2020). The increased interest in allotments may reflect a desire from the community to produce food, which can improve access to healthy food (Burgin, 2018; Kahn *et al.*, 2020; O'Hara, 2022) and support ecosystem services (Lal, 2020). However, allotments serve purposes beyond growing food (Ghose and Pettygrove, 2014) and are valuable for social purposes the social aspect of surge gardening is significant (Partalidou and Anthopoulou, 2017), even more prevalent during social isolation (Busby, 2020). Data from allotment sites in Letchworth suggest similar dynamics and are quite striking due to the amount of space available prior to the pandemic wave between 2020 and 2022.

5.4 SUMMARY

Topics explored and methods used in the chapter

In order to comprehend the economic and administrative intricacies of the garden city, which are frequently disregarded (section 2.4.2), Chapter 5 meticulously unpacks the ramifications of the land economy at the core of the garden city theory, with a particular focus on its practical manifestations in Letchworth Garden City. The subsequent analysis in this chapter explores the role of the land economy in the garden city model as a premise of the model and the role of land ownership for the community, providing a link between Howard's ideas with contemporary views on the role of land value capture, land ownership and land management in urban food planning.

The use of quantitative datasets and graphical representations, including graphs and maps, facilitates the presentation of data collected in the doctoral thesis, thereby enabling the exploration of these aspects and the acquisition of insight into local food-related operation in the contemporary context of Letchworth. Chapter 5 also relies on the contributions of interviewees to elucidate the intricacies of Letchworth's administration and land economy. The employment of Geographic Information System (GIS) and polygon-extracted area facilitates the presentation of quantitative data, encompassing area and proportion of land, alongside its geographical location. In this regard, Chapter 5 embodies the thesis's mixed methods approach, wherein layers are superimposed on maps and numerical values are amalgamated to encapsulate facts and impacts from diverse vantage points.

Key findings

The economic principles of the garden city, which include LVC, are closely aligned with its administrative and governance role and structure. The primary function of the Foundation, as the principal landowner within the municipality, is to oversee and manage a portfolio of assets on behalf of the community. However, findings indicate that the LVC scheme may be susceptible to external shocks, such as the recent pandemic caused by the 2020-2021 coronavirus pandemic, due to the challenge of economic activity slowing down. While the hospitality sector was severely impacted by the lockdown over the course of the 2019-2020 coronavirus pandemic, the agricultural sector experienced a modest return on economic activity during the same period. However, this return was relatively minor in comparison to other economic sectors. Moreover, this distinctive configuration of productive rural land, which is owned by a non-governmental large landowner, has been externalised to a larger farming company due to the lack of expertise among local institutions in managing the farm or providing arable land for several small holdings. Consequently,

the pivotal vision of Howard is operationalised in Letchworth Garden City through the implementation of a LVC scheme. However, this potent economic tenet encounters limitations in its operationalisation. These limitations impact the independence and long-term view of the rural estate and are acknowledged by the Foundation as being independent, given that the small-scale farms have proven to be challenged by the conventional market in an ambiguous way.

Secondly, the pivotal element of the garden city model in Letchworth is land ownership as a decisional tool. The Foundation owns a significant portion of the town, comprising a diverse range of activities and properties. The Foundation's property portfolio enables it to exercise control through the implementation and agreement on land stewardship, thereby affording it a degree of influence over developments on the land. The Foundation's capacity to effect change at the local level is contingent upon its source of income, which affords it independence and enables the formulation of a long-term strategy. The organisation has today adopted the LVC, as described by Howard and as discussed in Chapter 2. The ownership of the Foundation impacts on two levels. The social aspects of the garden city are intricately linked with the economic principle of LVC and the land stewardship that is a key element for urban resilience.

A further noteworthy finding is the impact of accessible green spaces on residents' willingness to embrace new behaviours and practices. In other words, the doctoral study establishes a connection between the green spaces identified in Chapter 4 and quantified in Chapter 5. The findings demonstrate the extensive presence of allotments in Letchworth, as well as the conditions of these allotments in terms of size, price, and location. While acknowledging the intricate nature of gardening activities Chapter 5 illustrates the necessity and role of green spaces during crises, not only for food production but also for social activities. In that sense, Chapter 5 also expands on the existing literature suggests that these areas act as a buffer against crises and suggest how Letchworth provide these areas.

Discussion and contribution

Chapter 5 provides a more detailed examination of the characterisation of green space, with a particular focus on the utilisation of the land. The allotment's role in buffering the town against shocks and fostering resilience during the pandemic underscores the importance of land as a vital resource. This underscores the crucial interconnection between stewardship and community (Bryden and Hart, 2000; La Rosa, Barbarossa, Privitera and Martinico, 2014; Ernwein, 2018; Santo and Moragues-Faus, 2019). Chapter 5 of this thesis makes a contribution to the understanding of non-governmental land trusts and land ownership. It puts forward the case for the garden city

model, which outlines the need for local authorities to have control over the land. It also makes a contribution to the literature on urban agriculture (UA) and the potential of UA to re-localise the foodscape and foodshed (Marsden *et al.*, 2000; Berti and Mulligan, 2016; Cerrada *et al.*, 2018), by exploring the role of land ownership.

The administrative organisation in Letchworth offers potential for a local option in terms of local procurement in charitable services and venues of the Foundation. However, a fine balance between profit and community benefit shows how the status of a charity in Letchworth that owns and manages the land is crucial and the hinge for the garden city's economic tenets implementation. Little has been found in literature about the role of the LVC in the garden city, and land ownership and its role for food system in cities and the thesis explore its implementation with a large non-governmental landowner and highlight the strengths and limitations of this administration (Sadoux, 2015, 2023). The thesis suggests that a strength lies in the independence and long term of decision and form of control of land use. The thesis also adds to the literature for integrating food into urban planning that argues that allotment and green space beyond food growing for social role (Ghose and Pettygrove, 2014; Busby, 2020) aligned with Howard's idea that the land benefit to the community (1898, p.109). The garden city model and the role of green space and linked with Chapter 4 that identified the different configurations, these findings suggest that scattered area of green pockets of green to the edible landscape and the cost of these small green productive spaces. Literature examining UA and its implementation and the difficulty for local institution, the garden city model in Howard's book can financially and socially benefit to the residents.

Chapter 5 develops the preceding Chapter 4 by integrating the land economy into the garden city model, as exemplified by Letchworth. Furthermore, it establishes a connection between the spatial aspects of the garden city and its economic dimensions. The subsequent chapter, Chapter 6, continues the examination of the administrative and social approach through the lens of the co-governance model of the garden city, as outlined in section 2.3.3. While limitations have been identified due to external factors affecting the administration, Chapter 6 examines the governance structure of the Foundation in greater depth, exploring its relationship with the local community.

CHAPTER 6: GARDEN CITY CO-GOVERNANCE

A most important question now arises regarding the extent to which municipal enterprise is to be carried, and how far it is to supersede private enterprise. We have already by implication stated that the experiment advocated does not involve, as has been the case in so many social experiments – the complete municipalisation of industry and the elimination of private enterprise.

Howard, 1898, p.63

6.1 IDENTIFYING FEATURES FOR LOCAL FOOD GOVERNANCE IN THE UK

Chapter 6 explores the governance structure and decision-making process in Letchworth, which connects with the spatial organisation and land economy aspects analysed in the preceding two chapters. It further discusses the notion of strategy from the conceptual framework in Chapter 3 and addresses co-governance practices involving non-expert actors in food decision-making, as detailed in section 2.3.3.

The first section sets the scene with a brief reminder of the unique administration embodied today by the Foundation as a charitable trust with decision-making power over the “municipally owned land” (Howard, 1898, p.65). It also examines current food partnerships in the UK to identify their key approaches and establish a framework derived from experts' input for interpreting the dataset. The second section identifies and discusses the features of local governance in Letchworth, as a self-funded charity through city-level multi-agency. The third section analyses one of the tensions identified during the discussion group (fig. 3.8) that explores limitations in the pursuit of a partnership between the local institutions and the community in Letchworth. The final section of the chapter concludes on the multilevel externalities of the food economy, an extrapolation intended to put in perspective the local economic impacts.

As outlined in Chapter 2, local and regional governance are emerging as a framework for food policies to address food security based on a place-based approach (de Boer and Smith, 2018; Coulson and Sonnino, 2019). Networks and practical strategic frameworks to empower cities and regions are developing in western countries: in Europe with the Milan Urban Food Policy Pact (MUFPP, 2023) and European funding for international network cities (European Commission, 2019), in Canada and the United States with Food Policies Councils (Blay-Palmer *et al.*, 2009; Fridman and Lenters, 2013; Soma *et al.*, 2021). In the UK, the SFP offers governance and good-practices advice to local institutions, professionals, and communities to support the implementation of a healthy and sustainable food economy locally (SFP, 2023; Sustain, 2023). Three third-sector organisations coordinate the SFP programme: Soil Association (2023), Food Matters (2023), and Sustain the Alliance for Better Food and Farming (2023). Several cities have developed their local food partnership, such as the London Food Strategy (Reynolds, 2009), Cardiff Good Food Strategy (Fairchild and Morgan, 2007), Bristol Food Policy Council (Reed and Keech, 2019), and the Brighton and Hove Food Partnership (O'Brien and Nisbett, 2019).

There is no food partnership in place in Hertfordshire or Letchworth at the time of writing up the thesis. However, the administrative and institutional organisation in Letchworth is unique due to

the Foundation as a large landowner and its capacity to deliver charitable service with social purposes for the town as seen in Chapter 5. Interviews with E.05 and E.06, who work within the SFP (2023) network in English cities provide insight into key elements of food partnerships in England. To comprehend the unique perspective offered by the administration in Letchworth, two representatives involved in similar large non-government landowners in England (E.03, 04) as well as interviews with two persons involved in urban agriculture project in a European capital (E.01, 02) underpin some commonalities between food strategy on a local level and the Letchworth economic and administrative context.

Learnings from food partnership in the UK

Interviews with two representatives of the SFP network in England, E.05 and E.06 provide insight on food governance elements in different localities in England. E.05 is a director of a food partnership, and E.06 works on the overall programme coordination. The challenges and enablers they experience provide a framework to analyse Letchworth Garden City's context to support a healthy and sustainable food economy through potential strategic tools.

The overarching aim of food partnerships in the UK is to establish an autonomous network (SFP, 2023). This implies that cross-sector collaboration is crucial for food partnerships and brings together various local stakeholders, including local authorities and their statutory functions that *"only local authorities can perform"* (E.06). In doing so, bodies of literature argue that place-based approach to food system facilitates political actions that drive land use and economic development (Moragues-Faus and Morgan, 2015). Moreover, the network of localities within a larger region can impact social phenomena associated with individual responses (Winson, 2004; Mikkelsen, 2011a, 2011b).

The food partnership that E.05 leads in South England began with a *"food policy kind of forum [...]. We sort of then evolved into having the governance of the food strategy, belonging to just the food partnership"*. The food partnership grew and was refined over time into a *"much more informal system of work because the food strategy is now well known"*, which implies a *"self-driven"*, *"self-led network"* (E.05). Facing the impossibility to *"change everything all at once"*. E.06 champions an approach that seizes opportunities: a food partnership prepares the groundwork for food initiatives and supporting the key stakeholders when an opportunity for action arises to deliver a project (E.05, 06).

There is sometimes a time to do things, and you just have your big overarching work, we've got our food strategy, all the sort of things we'd like to have to happen. And sometimes things become: "now it's the time to do it. (E.05)

It's difficult but it must be cross-sector and importantly it must work across the whole food system. It can't be issue specific, like food poverty or health or procurement, or whatever. Those two things are how we define a food partnership. (E.06)

E.05 and E.06 provide insights into the role of food partnership in England that encompasses its holistic and cross-sector approach, including laying the ground for upheaval and quick actions based on opportunities. In interviews, E.05 and E.06 mention four categories of food partnership stakeholders. First, the "*community food projects*" (foodbank, community gardens, lunch clubs) are "*usually volunteer-led, they're based in the neighbourhood*" and are supported via grants and access to training. A second category is the second sector, the business community, including independent retailers and major chains. E.05, 06, L.03, and B.05 explain that independent food retailers are more easily under the pressure of economic success and have limited time to engage in food partnerships. Large corporations are not always the best partner either due to values regulated by head-office policies often disconnected from different contexts. The third category of stakeholders is the large organisations and statutory agencies that carry out wide-ranging influence over food procurement (E.05, E.06) and can "*bring together the people who buy a lot of food*" (E.05).

If a local authority is doing a couple of millions of meals a year ... small change in buying can make a huge impact on the food system. So, there is a whole range of stuff, but it's not often joined-up. (E.05)

The fourth and perhaps most pivotal and polarising contributors are the local authorities, which can hold up the process for different administrative procedures posing a risk of focusing on a specific aspect of food issues that prevent a holistic and trans-sector endeavours (E.05, 06). It is argued that place-based food system translates political actions that develop land uses and economic drivers (Moragues-Faus and Morgan, 2015). Among the reasons to build up a food partnership, an independent network is mentioned by experts (E.05, 06), in which the statutory functions of the local authority would support the project, fulfilling "*those functions that only local authorities can perform*". This suggests how cross-sector collaboration is key to food partnerships (E.06).

Collaborative and place-based approach for urban food partnerships

Similar to literature on the urban food system governance (Pothukuchi and Kaufman, 1999, 2000; Hinrichs, 2003; Nguyen, 2018), E.05 regards food as a component of a comprehensive system that needs attention from a holistic standpoint: *“Instead of looking at food as an issue that’s part of health, of part of the environment, or part of waste, we say you look at food as a way of solving some of the big challenges, within health, social, environment”*. Therefore, when referring to *“taking a food system approach”*, E.06 assumes an all-encompassing network of stakeholders with associated conflicting interests: *“it’s not about ‘we’ve got to do food banks instead of food growing’ ... it’s like ... we need to do both. Those agendas are all valid, but they shouldn’t ... no one should overwrite the other”*. This stance is associated with the collaborative approach regarding food partnership, where looking at food in silos is not constructive to work with multi-stakeholders to tackle issues that are *“very specific, [...] very focused on, I think slightly outdated ways of thinking about food like the obesity strategies”* (E.06).

E.05 and E.06 describe two interconnected strategies for food partnerships within the SFP programme: place-based and collaborative approaches. Supporting existing literature that shows that cross-sector collaboration is crucial in establishing and maintaining local food partnerships (Olsson, 2018), representing the trans-scalar dimension of the food partnership network, outline in section 2.3 (Santo and Moragues-Faus, 2019).

First, a place-based approach implies holding some experienced knowledge of the context and in this instance, the strength of the Foundation is to be *“so focused on one place, we got the time to think about that more deeply”* (L.08). Both E.05 and E.06 claim that working locally can deliver many changes: *“it’s owned locally, [...] it’s more resilient and it is not a ‘top-down’ approach”* (E.06). The place-based approach opposes a one-size-fits-all model by acknowledging the place assets as a social process that create experienced environment for placemaking, also identified in literature (Pierce, Martin and Murphy, 2011; Arefi, 2016; Thomas, 2016): *“You also have to look at your own place, because everywhere has its own strengths and weaknesses. For example, Letchworth, [...] there is so much land! (in excitement and admiration) In [City], we don’t have land! (laughter)”* (E.05).

The Foundation links a place-based approach with its evidence-based stance and aims to create a collaborative approach with local stakeholders to generate *“a profound change”* (L.09):

Sometimes you have to almost put a spotlight on an issue for people, if you get a sense something is not being looked at. And that’s where having experts, we work with people

who've done this stuff for long time who where you have to go to ask, "What are we missing? What we're not talking about?" (L.09)

As a food partnership brings together different actors that can share common aims, a collaborative approach is needed:

If you put, for instance, somebody from procurement, somebody who run a foodbank in a room, and they talk to each other. Good things happen, we know that. Very difficult to measure, but we know that's important that's where the collaboration and the collaborative approach take place. The sort of things it can be is people just working together, sharing information, sharing resources, sharing intel, maybe joined lobbying for change, catalyst for change, maybe as a consultation body. (E.06)

Collaborative approaches require participatory aspects (Fisher, 1977), adaptative features due to the different partakers (Yahia *et al.*, 2021), and expertise transfer from practice to policies (Lu and Carter, 2022; Ye and Liu, 2023). E.06 provides a plain explanation of a collaborative approach in the SFP programme, which should ensure that *"everyone around the table knows why they there. And is bringing a collaborative approach attitude to that table and they're willing to share a work"*.

6.2 THE UNIQUE ADMINISTRATIVE SETTINGS IN LETCHWORTH

Howard's administrative vision in the Garden City model

Howard argues that a local private administration is a solution to emancipate the community from central government (1898, p.65). The administrative structure of a garden city is based on the innovative idea of a city owned by a private trust that rents and manages the land (Chapters 2). The garden city's wealth is retained exclusively for the benefit of the local community, explored in Chapter 5 (Howards, 1898, p.67). Such an administration provides the appropriate support to retailers in town (Howard, 1898, p.78), building a close relationship between the administration and the local tenants would keep the municipality from ensuring fair reinvestment of wealth (ibid, p.65).

Three departments, divided into sub-categories, constitute the central council in Howard's diagram, Figure 6.1: public control, engineering, and social purpose. The semi-municipal group represents the leasing of retail units by private groups or individuals. Figure 6.1 shows a number of food markets in the semi-municipal group, including a meat market, fruit and veg market, and a fish market. These would be today the tenants of the Foundation renting shop units for business. The pro-municipal group encourages community-led undertakings: the overarching goal of the 'pro-municipal' work is to endeavour to initiate reinvestment for the well-being and benefit of the community (1898, p.83), such as "*agricultural colleges*" or "*farms for epileptics*", which related to food growing, but also inclusion, education, alongside "*building society*" for affordable and decent housing in the garden city.

The evolution of Letchworth Garden City governance model

In 1962, the First Garden City Ltd underwent transformation from a private to a public sector organisation through the first Act of Parliament, leading to the establishment of the Letchworth Garden City Corporation. In a second Act of Parliament in 1995, the Letchworth Garden City Corporation was eventually dissolved and replaced by the Letchworth Garden City Heritage Foundation, a third-sector organisation (Lewis, 2015; LGCHF, 2022). The Foundation operates as a charitable organisation, and it maintains Howard's private company principle of a self-funded entity (Lewis, 2015). The Letchworth Garden City Foundation 1995 Act of Parliament outlines the Foundation's role and accountability with respect to this governance model in a concise manner across seven pages (Act of Parliament, 1995). The legal structure of the Foundation is modelled after that of First Garden City Ltd., which was established to construct the town in 1903.

Since 2014, the Foundation has been a registered society under the Co-operative and Community Benefit Societies Act (2004) with charitable status number 28211R (LGCHF, 2023d). Its legal definition recently changed from “*industrial providence society*” to “*community benefit society*” (L.03). This change denotes an adjustment in the priorities of the Foundation, as L.03 confirms: “*There is a subtle but quiet shift to community governance that is interesting*”, where the Foundation is “*foremost a property company historically, who then reinvest the money*”.

As a charity, the Foundation is a non-political organisation. Its main objective is to maintain the value of the place as a garden city, mainly driven by its history, in three major realms: urban management (estate, infrastructure and public space), local community support, and history and heritage transmission (LGCHF, 2023e), which means preserving the social, economic, and physical features of the first garden city (L.03, 06, 09). The Foundation is based on a two-tier structure working together with Governors and Trustees on the one hand, and an executive team on the other, “*the ones who do all the background work and present [...] the options*” (L.06). Out of the 30 governors, nine are trustees and represent the Board of Management, “*the ultimate authority*” who “*delegates, day to day authority to the CEO and the leadership team*” (L.06).

Although Howard (1898, p.70) recommended an election of the members of the Board of Management, depending on skills and expertise, today, the Board of Trustees is a combination of appointed and nominated governors (LGCHF, 2023d). The role of the governors is less definitive decision-making power (L.03, 06, 07), but most share the motivation to make a difference for the town (L.07; R.12, 13).

6.2.1 The self-funded charity governance model

The charity organisation for independence, long-term view, and leadership

In an a-political, as in a no-political-party representative institution, the structure of the Foundation and its pivotal role in strategic planning and land stewardship (Sadoux, 2023; Bunce and Aslam, 2016) is unusual in the governmental landscape. Interviews with experts in local food partnership in England (E.05, 06) suggest that electoral cycles of local authorities can interfere with ongoing food strategies (SFP, 2023), and the usual term of office of local authorities can impact an institution's objectives:

Working through the councils' systems can just slow things down and it's not always ... (brief silence) and also, they have some restrictions especially when, you know, around time of election ... (E.06)

[City] is a politically maverick place, in that every single election that I have been here it just change the colour of the lead of the administration, whilst none of them is having a majority. [...] Here we need to be very cross-party. Which is good because it also means you have to be ... You have to think very broadly about the message and how it resonates to a massive audience. (E.05)

I think also it depends massively on the administration that exists at that time because it has been certainly with our current administration, with the Councillors that have been elected they have a strong focus on community engagement, and certainly, that meant that we have been able to add additional resources to our team and have a wider reach. (O.02)

Conversely, according to the Foundation's representatives, being dissociated from political party affiliation provides several benefits (L.03, 08, 09). L.08 contends that a charity status appears impartial, but its critical importance lies in the long-term perspective it offers concerning stewardship and governance. As stated in Chapter 5, independence is achieved through economic freedom facilitated by the LVC funds.

There is no politic we're a-political so that's very positive, and also, because we're not political, we can take longer term views. We're not sort of constantly looking at political cycle as national and local government needs to inevitably. (L.03)

It enables us [the Foundation] to be independent. As you say, we're free from any kind of party politics and kind of political control and political shift in policy, really. So, I think that then enable us to take a longer-term perspective. We're not so focused in on political terms of office and delivering things in the short term and we can take a much longer-term perspective. (L.09)

This autonomy in decision-making and strategic planning is not entirely separate from governmental influence. The Board of the Foundation includes two Trustees appointed by the local District Council (L.03, 06). Furthermore, L.03 stipulates that the Foundation is committed to act in accordance with the legal requirements stipulated by the relevant local authorities. The Foundation's unique local governing body has introduced a new framework for accountability and transparency even if L.06 identifies limitations in the charity model of the Foundation due to its evolution of the status and duties, as well as the uniqueness that does not find a similar institution to compare to for good-practice standards:

It's quite difficult to manage an organisation that is quite unique because you have never else to go to for "how did they get around this?" You have a problem, and you know you've got to solve it yourself, there is nowhere else to go, because there is nobody else that has this experience. It is a unique organisation. (L.06)

Charitable services, the land value capture outputs

This opportunity to elaborate long-term strategy and independent decision-making shapes the delivery of charitable services for the benefit of the community, derived from the reinvestment of land-value capture, a topic covered in Chapter 5. The support to the community through LVC is quite broad (L.03, 07), *"trying to do those things but also looking of things like digital technology, digital exclusion, parental support, access to childcare... so this all range of things"* (L.09).

One objective of the Foundation focuses on supporting the local community with two different streams of grants: one part of the funds is allocated to help local groups achieve a particular project within the town, and the other, is allocated to specific issues identified by the Foundation (L.07, 06, 08). The charitable services are in the form of grants that serve two purposes to fulfil the overarching strategy of the Foundation, *"which are around issues that are prevalent or significant within the town. [...] We try to work with those groups to create [...] pieces of work to help alleviate or solve that particular issue"* (L.08). The Foundation's ethos is to support initiatives from residents and *"leave (local) organisations to do what they do best. [...] The Foundation provides the money. [...] Making sure that they make something that's useful and relevant"* (L.07), but also to nurture cultural support, as illustrate the educational farm open to visit (Standalone Farm, 2023) under the charitable service of the Foundation:

What 's left is the educational side, the recreation, and the leisure, and that fits much better on its own with the [Foundation]'s [...] objectives. So, we were absorbed into the charity. Everything within the [Foundation] now trades as the [Letchworth Garden City Foundation], as the cinema, the gallery, everything. (F.03)

6.2.2 Local governance in Letchworth

Evidence-based approach of the Foundation

The independence of the Foundation described in section 6.1.1 is an opportunity to define strategies for addressing specific issues in reports (L.07, 08, 09). The Foundation representatives advocate an evidence-based approach to setting out priorities (L.09). The leadership team wants to understand the specific issues of the place (L.05, 08), using “*robust data about what the types of sorts of socio-economic needs are of people who live in the town*” and the “*biggest problem in terms of seriousness or scale, and where do we want to align the organisation’s resources against those things*” (L.05) but also “*looking at how we can enhance our local economy, looking at local training*” (L.03). Using data from the Office of National Statistics (ONS), the NHS, from the Police, from the Department of Work and Pensions (L.05), the staff members also work with the help of “*the stakeholders and partners looking at national data and local data to see how the national trends, what they look like locally*” (L.05, G.09).

The evidence-based approach provides an iterative evaluation of the ongoing work the institution is undertaking and supports the overall Foundation’s remit, summarised as “*doing a problem analysis [...] trying to find out specifics that add to broad evaluation and broad monitoring*” (L.05). The Foundation is able to concentrate on a neighbourhood scale, as L.09 observes that this provides a useful focal point for a specific area. Independence is a key strength of the Foundation, enabling the optimised use of resources and ensuring that decisions are tailored to meet objectives. The understanding of the town enables the Foundation to “*look at the type of assets that we have the type of resources, the capacity that exists within the town, so sort of really bring all those factors together to then again to gain some expertise*” (L.09).

Multi-agency approach in Letchworth

E.06, working for a food partnership programme in England, highlights the difference between the different authority structures based on a district, county, and unitary authorities (see section 2.4.1 and Appendix 2.2 and 2.3): “*One advantage of districts because they don’t have to look at what the County looks at, like waste or public health or whatever, they have the freedom to focus on other things*”. E.05, also involved in a food partnership in a city in England, mentions the nature of the local authorities in England and their influence on the existing food networks. In EX.05’s case, the food partnership takes place within a unitary authority:

We are fortunate because [City] is a unitary authority. It actually doesn't have a county level structure, if that makes sense. Basically, you're operating at the unitary level, which means a number of things, such as school and planning and transport are actually the responsibility of the local authority. So that is good, it means you can ... a lot of things you want to influence you're not to try to influence on a double level, or a triple level.

Like the new food equation identified in the literature review bringing new fundamentals to the food security agenda (Morgan and Sonnino, 2010, p.210), governance focal shifted the last decade to the local dimension (Maye and Kirwan, 2013, p.2; Sonnino, 2016; Sturzaker and Nurse, 2020). The 1990s hegemony of "global cities" (Sassen, 2001) evolved into a holistic role of the urban areas to tackle ongoing environmental, social, and political challenges of the 21st century. The decentralisation reform in the UK in the 2010s aimed at a re-alignment strategy to balance the economic driving force of London onto a sub-national level (Localism Act, 2011) embodies this new paradigm (McCann, 2016; Sturzaker and Gordon, 2017; Sturzaker and Nurse, 2020, p.73). Part of these 2010s changes is the abolition of the regional division associated with the Government Office (House of Commons, 2010) and the creation of non-statutory bodies in charge of economic development in local areas in England, such as LEPs (Sturzaker and Nurse, p.80).

The new role of cities within metropolitan areas in the UK can lead to overlapping responsibilities and uneven attention across cities (Sturzaker and Nurse, 2020, p.90). Attention to localist governance tends to promote public participation in decision-making processes (Sturzaker and Gordon, 2017) and has led to competition between different representative bodies and an increased role in partnerships between different agencies (Fenwick, Miller, and McTavish, 2012). In the food literature, the city region embodies a different conceptual definition and the term is used in many articles to explore the rescaling of the food system (Nune, 2017; Blay-Palmer *et al.*, 2017; Wiskerke and Verhoeven, 2018b, Brand *et al.*, 2019; van der Gaast, van Leeuwen and Wertheim-Heck, 2020) and reconnect the multi-scalar dimension of urban and rural areas for food integration (Prové, de Krom and Dessein, 2019).

Section 2.4.1 gives an overview of the different administrative divisions in England because the structure and interdependence of government bodies are key to understanding the breadth of a local institution to make a difference on site in food terms. The Hertfordshire County Council sets the overall goals (HCC, 2023c) when the District Council transforms these aims into objectives with local actors on site (NHDC, 2023c). Even if Letchworth Garden City is "*only one small town in a big county of 1.2 million, we're not much of a priority*" (L.09), the Foundation develops its own strategic plan for the town (LGCHF, 2018, 2019), based on the County and Council priorities but also from evidence-based reports. The Foundation also works alongside partners to enhance the local economy (L.09, B.02), such as the Business Improvement District (BID, 2023) in Letchworth

and the Hertfordshire Local Enterprise Partnership (LEP, 2023) to help attract more business in town (B.02, L.09). The Foundation has a “*slightly more transactional*” and “*distant*” (L.03, 09) relationship with the County Council than with the District Council and “*works more closely with the [...] District Council*” (L.09). Common work examples with the HCC encompasses “*planning and sustainability*”, “*technical highways, and how enhanced the environment and rural positive*”, and “*early years education as family projects*” (L.03). As the landlord of Letchworth Garden City’s estate, the LGCHF must abide by the plans and policies of the Hertfordshire County Council (HCC) and the North Hertfordshire District Council (NHDC) (L.03, 09).

Local authorities “*ideally are aware of the policy levers they’ve got. And then employ them in a collaborative way, with other sectors*” (E.06). The Foundation and the District Council are the two main local institutions in Letchworth, their collaboration is paramount. However, the feedback from officers and representatives of the respective organisations regarding joined-up work is contrasted. Interviewees from the Foundation and the District Council affirm that both institutions work well together (L.06,02, 03, 09; O.01, 02, 03), after some years of “*ups and downs*” and with a recent change in a joined effort “*to build up relationship and partnership and work opportunities*” (L.03). The common work of the two institutions is on the “*strategic level*” (L.09) and concerns cross-department coordination (L.03, 09). From both sides, a dissociation appears in the discourse about common endeavours, which can translate into difficulties to a shared vision in partnership (L.08, O.03).

While L.07 blames “*simply a lack of time*”, the different cultures of the institutions are perceived as a source of mutual incomprehension (L.08; O.02, 03). A representative of the Foundation wants to use the District Council's food provision groups and meetings to generate a more evidence-based perspective (L.08). However, observations during these meetings suggest that the overarching aim of the group is to generate shared knowledge among food-related community groups and for them to coordinate between different food initiatives, also mentioned in the interviews with the District Council representatives (O.02, 03)

Democratic dilemma

As an example, political nominees from the District Council sit at the Foundation’s Board of trustees:

They’re not involved in our daily business. And I also feel that it takes away the politics because although one of the nominees never gets political, the other does at times. And it

is difficult, and you never know who you going to get. They're not nominated by us. They're nominated by the councils. (L06)

L06 also evokes the possibility of conflict of interest this unilateral collaboration can generate, impeaching a fully independent decision-making process. The two local organisations in Letchworth Garden City, the Foundation and the District Council must share accountability, yet the participation of the District Council's councillors on the Board of Trustees of the Foundation does not represent the strategic approach for the two organisations to share their responsibilities for the Letchworth area.

The Foundation's governance model suffers from a perception that it has a limited community demographics representation, with a lack of inclusion and diversity: the Board of governors is sometimes perceived as a homogeneous representation of the community (B.04; R.03; L.09; O.03). However, the Foundation strives to include the various range of communities in the board of Governors and Trustees (LGCHF, 2023d), including women, grassroots community leaders, younger generation, likely to invite bottom-up changes, coming from the community (L.05, 08, 09). The perception cannot be attributed solely to the Foundation but rather to a larger systemic societal structure: *"If you have a meeting if starts at 4 and finishes at 7 or 8. [...] it discriminates against anyone like me (who's got school children) [...]"* (Karin). The *"self-perpetuating"* (L.09) format of the Foundation democratic model in the appointment process for the Board of Governors is identified as a reason for the homogeneity in the community representation (L.07, R.03). The non-political model generates a hiatus:

The trouble with having the Foundation appointing their own governors is that it can appoint people that it to agree with [...] why don't we just have them elected? Why don't have we the entire governors, all 30 governors elected every five years? But the reason not to do that was they could wee this becoming a political thing. Do you have to question, do you want to a Labour Heritage Foundation, or you want a conservative Heritage Foundation? (L.07)

Chapter 2 also highlighted the conundrum regarding the social aspects of the implementation of the garden city model (March, 2004; Ward, 1998) for inclusive governance of the community (Eckdish Knack, 1998; Heathorn, 2000). The a-political model of charity governance, explored above, is an asset to appoint *"people to your board that have skills that you do not have already"*, but interestingly, the appointment process also does not allow for adding desirable skills to the Board: *"we don't have a mechanism to appoint (skilled people) straight away"* (L.07).

6.3 FOOD PARTNERSHIP: A HIATUS IN JOINT EFFORTS

Drawing on the analytical framework from the group discussion in Figure 3.8, this section examines one of the tensions identified, which is the co-governance tensions between the Foundation as the landowner and the local community groups and residents. As investigated in Chapter 5, the Foundation, in its landowner capacity, plays a crucial role, but there is an uncertainty regarding leadership and partnership with the local community, which can lead to a misunderstanding in the decision-making process between the community and administrative sides.

6.3.1 Understanding a charitable foundation as a local institution.

Residents' perceptions of the Foundation

For the residents interviewed, the understanding of the Foundation's role varies and can be ambiguous (Harriet, Alice) or perceived as secretive (Stephen, Karin; O.03; G.05). This perceived opacity may be attributable to three factors. Firstly, the ability to contact the relevant officer is perceived differently depending on whether the individual is an insider or an outsider to the Foundation.:

The problem that you have sometimes is just that (administrations) are so large, you have hundreds of employees. [...] And then the [Foundation], we're 70 – 60 something people. [...] but even with 60 or 70 people you hear from the public, you hear from the town, the [Foundation] is difficult to get in contact with, and they pass you from this person to that person. And nobody does this deliberately, nobody wants to be inaccessible to the public, but it's just the fact that it's an institution. (L.07)

We've tried with the [Foundation]! Let me tell you, we've tried! We have tried since May (2020), and we've got nowhere. Absolutely nowhere. [...] A. has been ringing [...] for ... I think every other day for about two months and not getting anything back. I don't know why. I'm not going down the reason why. It doesn't matter, it happens to anybody else, we talked a lot to the tenants in the [central shopping passage]. It happens to them as well. (G.04)

The second reason for a partial understanding of the Foundation's role in town could stem from the conservation area and the mixed feelings towards this Management Scheme (see section 5.2.1), seeing a bureaucratic approach to house alteration permit (L.07; R.02, 03, 05, 07, 13). In interviews,

the Foundation's representatives are aware of the community's perspective regarding this procedure:

There are challenges around perception, which I think you can address really with strong communications and engagement. I think that on a day-to-day level, there is probably a lot of people that don't ... the garden city principles don't even register potentially on their horizon. (L.05)

If not always accurately perceived, this approach of the Foundation to safeguarding is, however, for some residents understood as beneficial to the overarching aesthetic and harmony across the town (Janet, Grace) and straightforward (Rosaline, Janet), defending the Foundation's statutory custodianship duty of the garden city principles. Similarly, the distinction between charitable services and sponsorship can be confusing (L.06, 07, 09), albeit some refer to these services in interviews (Karin, Rosaline, Harriet, Sonia, Stephen, Pauline, group discussion).

The third issue in the residents' perception of the Foundation is the specific city-wide role for Letchworth, confused with the local authority: *"I think a lot of people struggle with the what difference between North Herts District Council, County Council, where the roads sort of ... who's responsible for what part of the roads, and stuff like that and where does the Heritage fit in"* (Rosaline). Gary also expresses this distortion in the seemingly overlapping remits of the Foundation and the District Council. As a result, the role of the Foundation is balancing between being a supporter to the local community-led initiatives and a proper stakeholder that implements services in town.

Shift of objectives and strategy, the Foundation as a catalyst for community actions

The Foundation's role is intertwined with the institution's historical building society aspect (Culpin, 1913; Beevers, 1988), but recent modifications to its structure and status emphasise the significance of reinvesting LVC for charitable objectives community benefit:

The best way to describe it is, I guess, is the legal definition of us now, because we're a "community benefit society". Previously we were called "industrial providence society", which makes us sound like a building society. But this sort of new terminology with the change of legislation community benefit society I think sums it up very nicely. And in line with a community trust with charitable objectives. (L.03)

I think for a variety of reasons, many of which I don't know, the communities' perceptions of Foundation is one of perhaps a rather traditional commercial property company ... and

the type of sort of social impact that we would like to have and thinking of how we'd like to use our land in terms of delivery and social impact, is something that's still very much in its infancy for us. (L.09)

This change reflects Howard's original idea of a hybrid, private administration whose main objective is to provide social services for the benefit of residents (Howard, 1898, p. 83). One of the aspiration of both the District Council and Foundation is to see a self-sustaining network of community initiatives (L.05, 08; O. 02).

What we trying to do is really nurture some community leadership. Because we think that's the kind of agency for change. You need people who are galvanisers. (L.09)

Working with partners to enable services rather than providing services ourselves. Working through the Grants committee: "We're providing the grant; you do the rest" works well. I think it places everybody's strength. Because the Foundation is not necessarily good at guessing what it is that people actually require. People on the ground are usually a lot better than that. Sometimes the most helpful thing we can do is provide the funding. (L.06)

Encouraging more power to the local community instead of delivering one-size-fits-all services demonstrates an orientation towards community support that embodies a shift from a "paternalistic as an organisation" [...] "that sometimes can create dependency" (L.06, 09). The Foundation leadership team seems aware of the power of community initiatives and redefines its role as a local institution in delivering services and "try to find in the town, in the neighbourhood, in communities, and they're there because we've met them, who want to do things and galvanise and get people mobilised. It's not always us that's expected to do everything" (L.09).

Key stakeholder or mere support to the community?

However, in a resident's view, the Foundation should clarify its role in working with the community, which is now mainly about funding local initiatives: "You can go for a grant and get some money. They're good for that. Clearly. They're giving a lot of support if they like something" (Karin). Taking ownership of the land is crucial in Karin's argument: "It has to do with who is in control, is it? It is the community who is in control of that or is it the Heritage and it's about trusting the community to take ownership". Land ownership on behalf of the community (see Chapter 5) seems to create confusion as to how to manage it on behalf of the community for residents' perspectives. Taking the example of the local orchards in the town, Karin adds:

And you just think that, because we won't think through how the community can be involved in that orchard, it brings no benefit to the town apart from the one that we're picking up ourselves. [...], I just think the Heritage are not maximising that asset to bring community benefit.

While some respondents recognise the role of the Foundation in supporting community-led initiatives, co-produced community-led projects can be challenging to implement (Pauline, Karin, Harriet). These projects appear to highlight a gap between the local administration's role as a landowner and their communications regarding potential partnerships or collaborations with the community.

A lot of the way in which we traditionally communicated with the community, or we engage with the community is either being through services and venues ... things that we are running, which tends to be a bit transactional. [...] So, we try to sort of change that way of thinking, and try to work in a more collaborative way, which is going to be not an experiment, because I hope it will be for us a profound change, that will be you know long-lasting. (L.09)

So, I would just say as a community, it frustrates me that they didn't have the capacity to say to the community 'can we find a way to carry on together? [...] But they don't trust the community. They don't trust working with the community. [...] And that's why I say about the Heritage Foundation there is all lot of words, but in reality, all these projects never go beyond the words to actually turn into something good. (Karin)

Even if some residents wish to see small-scale husbandries and alternative food production implemented in the rural estate (Grace, Karin, Gary), L.09 hopes to have more tangible signs from the community, especially for the rural estate and food production and would need a clear request from the public to reconsider the rural estate.

Small-scale organic farming is very good for biodiversity and very good for local food production. That's what I would like to see that land turned into! (Grace)

We get to the point where (inaudible) food growing take over the rural estate, that would come from people themselves. [...] It feels like sometimes you need external forces to make it change. (L.09)

As a result, L.09 considers that the LVC implementation meets limitations to fulfil community empowerment: *"I think I would summarise it as I would say an unrealised potential from a sort of community asset perspective"* (L.09).

6.3.2 Working together for food community benefit and inclusion.

Building upon the food partnership in the UK described in section 6.1, this section examines the institutional features in Letchworth that could offer support to a collaborative approach. The role of local authorities in the food economy seems currently overlooked and limited to a sub-system (public health, planning) (Pothukuchi and Kaufman, 1999) but it is argued in the literature that they could have a pivotal role in connecting the different stakeholders' expectations (DuPuis and Goodman 2005, p.368; Coulson and Sonnino, 2019, p.176; Soma *et al.*, 2021), two facts that E.05 and E.06, working within food partnerships in England mention in interview.

Interviews with representatives of the Foundation (Ls), the District Council (Os), and community groups (Gs) in Letchworth shed light on their ongoing involvement with the food economy in Letchworth that confront local issues stemming from national and international levels. The following reflections are mainly based on observations and interviews with stakeholders involved in two groups: a group set up by the District Council to bring together local community groups involved in food provision, and the creation of a community-led café rescuing food waste in Letchworth, explained below.

The first group started after an uneven food hamper distribution over Christmas provided by the County Council in December 2017 (O.02, 03; G.05; H.02; L.08). The District Council organised regular meetings with food provision groups in North Herts to streamline food provision groups in the North Hertfordshire District and to create *“the opportunity for local community groups to be informed of what each other is doing. [...] often organisations would have been working alongside each other without realising and meeting each other for the first time in the networking group”* (O.02). This issue is not specific to Letchworth and E.05 also comments on this phenomenon: *“Everyone is so busy: people don’t know other people are doing things. Then they’ll be like wow! People are doing the same thing as we are”*.

As for the food waste café in Letchworth, in July 2018 a group of a few residents started collecting food from supermarkets about to be discarded for redistribution to the community against donations once a week in a community hall. The group stresses an environmental message to address the food waste issue with the implicit intention to be more inclusive and less stigmatising for households in hardship who might need them (G.04), and eventually, the food rescue café have become a catalyser for food in Letchworth (observation 2019).

Streamlining local food-activity network: local governance bodies as catalysers

Both the Foundation and the District Council want to use their knowledge of the place to distribute funding as *“the [County Council] tends to do things kind of on mass so if it’s going to fund something it funds across the district or across the whole County”* (L.08). In this example, the knowledge of the context enables local organisations to identify gaps in food distribution to address food poverty issues (O.02, 03; L.05, 08, 09; G.04).

There are community organisations that do incredible work that we know that we could fund and utilise that money for absolutely where it needs to go and again, it’s the fact that we trust them, we have relationships with them whereby they have the local knowledge to go ahead and use the funding where it’s necessary. (O.02)

The District Council in Letchworth has a unique community engagement team involved with the local groups and residents on site (observation 2018-2019), but *“not every Council has a community engagement team because not every council has community grant [...] For instance [city A] Borough Council have a Community Development Offices, but their role varies very much to what ours does”* (O.02). O.02 continues as they see the role of the District Council as a facilitator: with the role of the community engagement team who would *“put the focus on the community organisations because they are absolutely the ones that are identifying the issues and that are doing the utmost to solve those issues”*. Local community group representatives in Letchworth appear as experts for the LGCHF and the NHDC: their first-hand knowledge and comprehensive view of the community necessities (O.02, L.05) help address problems that are part of a wider issue (G.04, 05, R.03, 07), such as food poverty issue

Some food-related community groups, with the assistance of the District Council and the Foundation, try to create a network to address food poverty. This network looks like a constellation of entities with three key roles identified in interviews (B.05; O.02, 03; L.05, 08, 09; H.02). The first group is the providers, which are foodbanks, community groups, supermarkets that collect and bring food to the community (O.02, 03; B.05; L.05; G.04). The second group is the referral agencies that identify people that could greatly benefit from external help on a case-by-case basis (G.06, 09, H.02): they are housing associations or statutory agencies and signpost food-related supports and inform providers about new customers. The third category is the local institutions on a county, district, and city level, whose roles vary depending on the organisation and places (O.02; L.09).

Data collected also suggest an informal network of local food support community groups operating without a referral system, including local churches or food rescue hubs (G.04, 05, 07; B.05; H.02).

With their first-hand knowledge, these groups can identify gaps and local needs, while reaching out to a segment of the population that is typically difficult to engage in community life (E.05, 06, G.03). G.06, a representative of a therapeutic horticultural project in Letchworth, lauds the concept of cohesion as a shared value around food: *"I don't have a type of person (to join the project). What they're all... what unites them is the fact that they are outside of society in a way or excluded from society"*.

Food poverty is a persistent aspect of the urban food agenda of local authorities (E.05, 06; O.02, 03) and comes back as a regular matter of concern in interviews. O.03 remembers: *"That was how the [group at the District Council to help coordinate food-related community provision] came about. And what we took on ... was food poverty, but also food waste ... were both very important"*. Somehow, the findings showed that food waste and food poverty were interrelated. The distribution of food waste, along with the presence of people in dire need of food, is perceived as unjust as whole. Indeed, a resident mention food-waste rescue initiatives are viewed as positive, but also *"band-aids"* (R.03) that do not address the underlying wide issues associated with conventional supermarket policies, global food trade, and recycling schemes, which ultimately impact the local community.

Community-led food project fostering inclusion.

Through their involvement, local group members address some effects of structural lack of inclusiveness and demonstrate solidarity within the community (G.06, 08; O.02). Accessing a foodbank can be complex and daunting (LG.09; O.02, H.02). As part of the referral system, food banks verify the situation of their customers, which can generate a form of stigmatisation created by the process to obtain help, involving filling out administrative documents and being referred (O.02). Furthermore, foodbanks usually allow a limited time to access foodbank as an emergency response solely (G.09).

Something that was more relatable ... something that was ... that seemed less as a process that you have to go through because sometimes legitimate food bank and organisational scheme seem quite overwhelming and daunting for those people living in food poverty. I think that creates a barrier, whereas the community cafes and things like that are more inviting because you can just go there for a cup a tea and chat but also you can rescue food. (O.02)

If you go to the [foodbank] ... it's really controlled, it's almost shameful to go there. And I wanted to create a place where people are kind to each other, and they were fair, and they

would step up. And they didn't. They're not nice to each other [...] and they're not nice to us (the volunteers). [...] you, know ... the customers that we have that create the most ... hum ... who are the ones with the hardest lives, so they are always fighting for something. (G.04)

On the contrary, community-led and grassroots community movements are spontaneous and merely requires for customers to pop by a venue, bypassing the principle of referral.

A person arrived at the food rescue café. She seemed intimidated and asked if she could take some food, explaining she didn't have a referral or money. I explained straight away that there was no need for a referral as it was just about saving food that would go to waste. It seemed that she was still intimidated as the café can be daunting. Soon, a regular customer joined the conversation, seeing the person is new, took her under her wing and walks around while explaining and showing her how the café works. (Participation: March 2019)

The data suggests that community-led groups can sometimes offer a more personal and less bureaucratic approach to avoiding stigmatisation linked with food poverty (R.03, 10, 15, 14). The role of these community-led organisations is crucial for two reasons, the messages about food they defend through their values and the tailored responses they can provide due to their knowledge of the place.

Additionally, the local food rescue café is acknowledged as a successful initiative in the town among the residents, but associated with people in need, which does not align with the group's central argument (G.04, 05). The group's primary concern is to avoid the connection of food waste to populations experiencing food hardship, but rather to address the stigmatisation that is associated with it. This approach emphasises global and interconnected issues and holistic approaches to food waste on the environment.

The food waste stuff is just brilliant cause is a trendy topic, it's an environmental topic, it gets all sorts of people involved and really, it's about ... The other thing is ... if you focus on food waste rather on food poverty, it's inclusive. It's not just about poor people and the haves and have not. (G.04)

Environmental concerns may impact food practices and decisions (G.04; R.01; R.04). At the rescue food café in Letchworth, G.04 refers to customers “*who've got not necessarily low income they're middle-income families but they're environmentalists, they like to rescue food. They don't need it they like to rescue it*”. R.01, a customer of the food rescue café expresses her motivation: “*is mainly food waste*”. She also appreciates that “*the kids can run around*” and “*you get to chat to people*”.

Furthermore, community-led food rescue cafes have a warm atmosphere that encourages people to join and stay (G.04, 05, R.01, 02, observation 2019-2020).

A resident who set up a food rescue stall associated with their church during the COVID-19 pandemic, characterises the tailored response shaped by local groups through their relationships with the close community: *“We had a lot of random stuff just appearing, which is fine, because all the beans and things like that, we had four people we were supporting that were vegan or vegetarian, so that was fantastic”* (G.05). In several instances, interview suggests that this knowledge of the site and close relationships with the community build a trust relationship over time by regularity and presence on site (B.05; G.04, 05).

6.4 BEYOND THE LOCAL FOOD GOVERNANCE

So far, this chapter examines the local institutional governance arrangements for food and issues before moving on to the place-based aspects of food in Letchworth. However, today's food system is under global trends influence. This last section of Chapter 6 first questions the shortcomings of the tools available for the local institutions in regard to local food systems. It then unpacks the global upheaval that the COVID-19 outbreak observed during the doctoral project to reflect on the unforeseen outcomes in the community.

6.4.1 Disconnection between food and local institutions

F.02 a farmer in North Herts, shares a crucial insight about their relationship as farmers with the District Council:

It doesn't make any difference until we want to build a ... start a farm shop or process food ourselves, then we need to have the environmental health officers in, or the planning department, or ... but otherwise, as a farm we don't have any involvement with the local authority. It would make more sense ... it ought to be, it ought to be (thinking) ... dealt with the local level. It's a more interest for local people how we farm than someone in Brussels, or London. Regulations imposed by the Defra, and we have inspection for local government to make sure we're complying with all the rules and regulations. But it's a ... yeah. It would make more sense. The trouble that is the local people they have too much on their plate and there is not enough time. (F.02)

The premise that during most of the second half of the 20th, food has belonged to rural planning (Steel, 2008; Viljoen and Wiskerke, 2012; Krebs, 2013) explains the attempt to reconnect urban and food realms in terms of landscape and decision-making (Parham, 2019; Vonthron, Perrin and Soulard, 2020; Ye and Liu, 2020). Nasr and Komisar (2016) emphasise the disconnection of city planners towards the food systems, chiefly food production, slowly regained by increased knowledge, planning and design, yet within a larger concern for sustainability. Besides, an additional hurdle stems from a corporate concentration of conventional industry in peri-urban areas (Fridman and Lenters, 2013). In interviews, viewpoints seem to suggest that food policies are understood as evolving on a broad scale and would target the national level (F.01, 02; E.06) or, if on a local level, missing key stakeholders of the food system, mostly producers:

At the minute, the agriculture bill is going out of parliament. There hasn't been agriculture bill since 1950. It's the first one in 70 years. So, we have worked really hard to talk to policy makers and politicians about ... plaid the case for organic production, added value, sustainable nature, is that profitable. (F.01)

A food strategy for a place that come from a local authority, it's just got a list of local authority things in it. It doesn't mention farmers, or charities, or anything like that. And that can be quite difficult for local authority. (E.06)

E.06 argues that integrating food into the urban agenda in England, regardless of their types (fig. 2.4): *“one of the journeys the local authorities need to go on is to realise that whatever the strategic aims are around food, they are better delivered with the co-operation and support of other sectors outside them”*. Likewise, for E.05, local authorities are pivotal and sometimes embody *“brilliant [...] lead”*, but at the same time, *“the nature of local authority structure and policies can make them quite slow to act”*.

These perspectives on the involvement of local government in food align with notable literature on food governance from the past two decades. This literature highlights the challenges of achieving a cohesive approach that incorporates the views of various local stakeholders, as well as the limitations posed by the current administrative framework that tends to address food issues in a piecemeal manner across different scales (Pothukuchi and Kaufman, 1999, 2000; Barling, Lang and Caraher, 2002; Moragues-Faus and Morgan, 2015; Sonnino, 2019). It is thus argued that a “joined-up” approach to food policy (Barling, Lang and Caraher, 2002, p.3) is challenging. This situation can be accentuated by the “variable geometry” (Barling *et al.*, 2002, p.2), of the UK sub-national governance and their diverse responsibilities regarding policies on a regional scope (section 2.4.1). E.05 and E.06 also describe local authorities as a fragmented system regarding food that causes difficulties in providing the “cross-sector” approach that *“must work across the whole food system”*. Even though local food partnerships and emerging urban food policies provide leverage for local institutions (E.06), interviews suggest a gap in the role of the local institutions in the food agenda (E.05; F.01, 02) including in Letchworth (O.02, 03; L.02, 08, 09).

On the ground, a collaborative approach is mentioned as a condition for success but meets limitations for implementation: local authorities are pivotal in holding some control on key food aspects: *“a lot that can be done locally, whether it's kind of a good food movement, food citizenship approach, or changing the school meals' procurement or changing planning law that is better suited for sustainable food”* (E.06). E.05's opinion aligned with this view: *“I found working locally a very positive thing to do. I think we get a lot done”*. To illustrate their scope of decision, some councils provided free school meals over the Autumn term of 2020 in response to the Central Government

that voted against it (Butler, Adams and Walker, 2020). In Letchworth, L.07 seems to agree that local councils can be critical but shares a more pessimistic view regarding localised food production: “*I don’t think they (the Councils) understand what it is all about*”. Despite the presence of active local networking food groups in Letchworth (section 6.3), the research findings indicate that discussing the food economy as a comprehensive system is challenging particularly in a cross-institutional capacity (L.07, 08; O.02, 03).

Two limits of organisational structure: the silo and red tape effects

While the garden city model should be an accessible administration (Howard, 1898, p.77), today, some interviewees noticed hurdles to the collaborative approach, reporting work “*in silos*” that is difficult to overcome (G.01, 04; O.03; L.05).

We try very hard to be inclusive, but we all are working in silos. [...] [environment champion group] and some other organisations that we work alongside are fixed in their ways ... And I am not excluding myself from that either ... that we’re fixed in our ways, we’ve got our goals, we don’t necessarily work that well together.” (G.04)

We have some links with the [Council] and people have been reaching out to their MP and reaching out the BID, the Heritage, and all of this stuff, but I really feel that [climate champion group] is its own little bubble [...]. (G.01)

It’s a waste of energy to have someone over in the east, someone over in the west, trying to do the same thing, coming up with the same idea and yet not talking to each other. It’s just crazy! It’s very frustrating sometimes (laughs). Particularly when we work with statutory agencies [...], they’re very siloed. (O.03)

Literature on organisational silos and their impact on governance provide different definitions and study paradigms (Albrecht, 2001; de Wall *et al.*, 2019), but Bento, Tagliabue, and Lorenzo (2020) synthesise the term silos as challenges to cooperation in achieving organisational goals, which is relevant as a part of the analytical framework in this thesis. This includes the barrier between departments within an organisation (Albrecht, 2001) to move towards an integrated approach (Oliver, Vesty and Brooks, 2016) with the ability to report and translate a vision into action, especially with the holistic aspect of climate change and sustainability. Similar phenomena have been observed among departments that lack communication within large organisations (E.05), also evidenced in the reports of the Foundation and the District Council representatives (O, 02, 03; L.02, 08). Moreover, representatives of local groups in Letchworth share in interviews the red tape effect

(G.04, 08) to reach out and work with local institutions sometimes, which can represent an obstacle instead of enhancing opportunities:

It is the bureaucracy involves with it has to go through. You have to tell both parties and make sure that both parties are happy, and one will be upset about something else, compared to the other ... so. If they could start working together, I think we could see come good opportunities coming out of it. (G.08)

I rang the [Heritage Foundation] for I think every other day for about two months and not getting anything back [...] They're bouncing us like tennis balls between Property and Community, Property and Community [...] what we think is happening is that the property team are not talking to the Community team, nor understanding each other's works, basically. (G.04)

Hence findings align with literature that identifies departments in local authorities with overlapping responsibilities for food that do not traditionally work closely together (Pothukuchi and Kaufman, 2000; Halliday, 2015). Fenwick, Miller and McTavish (2012, p.418) explain that the bureaucratic obstacles to multi-agency collaboration - rather than leading to the desired "*growth of autonomous networks and governance arrangements*" - stem from a deficient link in the establishment of new networks and partnerships, which does not fully substitute the government's administrative framework.

Multi-level political spheres of influence

It is posited that the limits of the governance tools for local institutions and authorities lie in the knowledge of food (E.06). When asked about the role of local authorities in food partnerships. E.06 argues:

First of all, a lot of the power around food lies locally, some of it lies with the local authority. The local authority, the things that they can do and that no one else can do. Public health, planning, lot of procurement, all those things. But there is quite a lot that they can't do. They're not very good at community-engagement. They're not very good at working with business, I think personally. They're not that great about delivering work that is very specific to certain communities. (E.06)

Nonetheless, the statutory function of a local authority in a food partnership makes its role a tactical one, as argued by some: "*You kind of need someone to be coordinating that*" (E.06). although not an local authorities, he Foundation's understanding of the location and use of evidence-based data

allows them to stay ahead of the curve, enabling productive conversations with the County (L.08). The Foundation is taking a leading role in this process by examining citywide data and comparing it to national indicators (L.08). The statistical figures from a county-level dataset highlight discrepancies, while other factors, including limited accessibility, distance, and scarcity in certain parts of Letchworth, present opportunity to provide a better suited place-based response:

The good thing about collecting the food stats meant that [...] we could use the food data to outline local levels of deprivation through [database] to put forward our case both by the material and everything that would fit with what was being recognised as a national kind of issue. (L.05)

More broadly, E.05 perceives barriers on a local level that are “*only possible by national-level change*” while E.06 stresses that “*the nearest thing we’ve got to a national food policy, is the national food strategy, but nobody knows how much of that will be actually enacted*” (Butriss, 2019; Dimpleby, 2020; 2021; Defra, 2022). A year after this interview, the government published a national food strategy, in June 2022 (Defra, 2022). An exploration of the institutional organisation in Letchworth underlines the multi-scale governance: L.09 interprets the role of the Foundation as a charitable city-level institution helping “*[the County Council] to see how Letchworth is different to other towns in the district*”, where the Foundation’s work as a chain to pass on the knowledge to the central decision (see also section 6.2.3). In addition, the private sector appears to be an overlooked partner for the place-based food approach (RUAF, 2020; Scattergood, 2012; Coulson and Sonnino, 2019, p.176). The Foundation addresses this by working with businesses and economic partners, which is discussed in Chapter 5 (L.03, 09; B.04).

6.4.2 Global upheavals and impacts observed in Letchworth.

The COVID-19 lockdown occurred during the data collection (see section 2.4.1 and 3.2). Various impacts of the pandemic emerge from the research, covering issues related to food supply, food poverty and emergency response, all of which were frequently mentioned in the interviews (B.05; E.05, 06; H.02; G.04, 05, 08, 09; L.05, 08, 09). The COVID-19 pandemic highlighted the food vulnerability of a section of the population in relation to food access factors as defined in section 2.3.3. According to G.09, who volunteers at a foodbank in Letchworth, customers increased sharply between March and May 2020: “*We distributed almost double amount of food in 2020 than those corresponding three months 2019. Something like 90% increase in demand*”. Local disruptions to the operation of foodbanks were caused by an increased number of customers, but also shortages

of food in supermarkets, and shortages of volunteers due to reliance on isolating older volunteers (E.05; G.09; L.08).

The pandemic also shed light on social links through food and an aspect of the convivial role of food in the town. The data documents that social life suffered shops closure and physical distance required by the pandemic (E.05, Adrian) and led to a visible slowdown in social and commercial activities, as Adrian's picture illustrates (fig. 6.2):

This picture is just a snapshot of the high street. And there is no one there... I mean it's just 9.30 on a Sunday in a 35,000-resident population town and it's dead. It's just a snapshot of Covid, of Covid life.



Figure 6.2: Adrian's picture, one of the two high streets high street during the second lockdown (March 2021), sent to the Author, 2021.

The term 'conviviality', as defined in Chapter 2, provides a useful lens through which to examine the data that reflects a transition from social and economic activities that shape an environment (Parham, 2008, p. 15) in order. This transition is also a response to the challenges generated by technocratic and industrial processes (Illich, 1973, p. 12) in the pursuit of an ideal community (Peattie, 2019; Paquot, 2019). This echoes with the local response to the pandemic. The lockdown regulations motivated a swift and spontaneous reaction from community organisations (B.05; L.08, 09; O.02; G.04, 05, 08) and an emergency response coordinated by the Foundation (Ginty, 2020) (L.06, 05, 08, 09; G.04, 05; B.03, 04, 05).

All the stuff we did in the community response, which was in a way taking the community leadership role, understanding what the needs were, basically, mobilising ... getting evidence together, obviously anecdotal, talking to people finding things out. Coordination and partnership were amazing and impressive. (L.09)

The dataset shows that the pandemic triggers an informal network to address food vulnerability linked with the lockdown (G.04, 05; O.02, 03). From March 2020, G.04 witnessed that food-related groups targeting food provision: “have been talking to each other over the lockdown, as an informal relationship, of actually who works with who better, who knows who the longest”. The pandemic triggers an increasing number of people in financial struggle and at the same time an emulation of pop-up food rescue stalls appearing across the different neighbourhoods in Letchworth (L.05, G.04, 05, 08; E.05, 06), partly because “people not being able to afford food, is quite a motivating factor for doing it”. At the Foundation, L.09 has seen this as the development of “some fantastic relationships, which I think will be ongoing, the things we need to continue to do, because of course where we are now the precipice of a recession, where poverty and food poverty and so on is only going to grow, unfortunately”.

On the residents' side Gary started rescuing food for his neighbourhood. Pictures of his food waste collection in Figure 6.3 suggest random items collected in diverse boxes and spontaneous initiatives (G.04, 05, 08). The façade of the supermarket does not indicate the location, highlighting the placelessness character of the supermarket (Relph, 2000; Freestone and Liu, 2016) and suggesting that this issue likely occurs anywhere. G.04, involved in the food rescue café from the start, highlights the importance of the volunteers and their knowledge of the place. G.04 thinks that individual interactions are the hinge of the food collections in Letchworth and its surroundings:

Behind the scenes we have a lot of troubles with [supermarket E] and [supermarket D]. Not much in Letchworth because in the early days we had a very strong relationship with them. And that's very key, a very strong relationship. When I look for volunteers for food

places, it's not just because you've got a car, love. You need to go in and chat, schmooze, make connections so they remember you. (G.04)



Figure 6.3: Gary's food collection at Aldi. Photographs sent to the Author, 2021.

These accounts reflect on community-led initiatives and innovations that generate and instil a lasting change (Oliver, Vesty and Brooks, 2016; Farrier, Dooris and Morley, 2019). Addressing global issues on a town scale generates new local networks. As an example, the food rescue café collected a significant amount of bread weekly that could not be saved (Observation 2019, Emma, Rosaline). This bread was then repurposed by a local independent brewery in Letchworth to make beer (Observation 2019). In addition, a soup kitchen was coordinated with the help of restaurants and pubs in the town centre (B.03; G.04; Participation January 2020).

A large proportion of the qualitative dataset informs on the pandemic impact on the socio-economic food life. The COVID-19 relatively “*short-term crisis*” (E.06), uneven distribution, and food shortage shed light on the food supply issue and the fragility of the food system (B.05; G.04, 05; E.06), also highlighted in section 2.4.1.

This question of longer, we need to shorten our supply chain, for climate reason. [...] What infrastructure do we need? What technology do we need? What do we need to start to do that? And actually, what the Brexit spotlight is doing, is giving us quite a good platform to talk about that, because we're worried about short-term things, this is a bit a platform for a longer term. (E.05)

The lockdown has kind of crystalised the idea we must develop the local food network much more. [...] because it's a very fragile food system we have. In fact, our food system is terrifyingly fragile, I think. (F.02)

Signed in January 2021, the Brexit withdrawal agreement loomed during most of the data collection, but its exact consequences on the food supply chain seemed unclear and difficult to predict and thus prepare (E.05; L.03). Climate change impacts on the food system and economy are also less discussed in interviews apart in few instances (G.07, E.05, R.11). As the worldwide pandemic changed the perception of food safety (see 7.1.2), COVID-19 raises uneasiness about going shopping, referring to “*cleanliness*” (Janet, Grace, Harriet, Pauline). Sonia regrets that the outdoor shopping place was temporarily closed. For instance, these concerns about hygiene and safety suggest a shift that conflicts with environmental and plastic-free concerns as expressed in interviews and group discussions, as E.05 noticed during interview in October 2020:

We've gone backwards, because of every single thing being wrapped in plastic. We're back to have, you know the sense of rather than reusing things and trying to actually be less package, there is this safety thing that interplay.

All of these observations during the lockdown and the community response, which was intertwined between local institutions, community groups and resident initiatives, reflect the literature exploring the creation of self-sustaining networks, but are also at the heart of placemaking in a self-organised and self-reliant community (Blake, 2019; Kaiser, 2019). The doctoral case study illustrates Blake's (2019) point about the decrease in public funding or brutal change, that triggers community impetus, with finding in this Chapter that shows that self-reliance from community groups is the overarching objective of the Foundation and District Council by facilitating networking and provision of grants and funding.

The COVID-19 outbreak in Letchworth challenges definitions of food security and draws attention to the socio-cultural factors that influence food accessibility (Cerrada *et al.*, 2018, p.13; Blay-Palmer and Donald, 2006; Jarosz, 2008; Lang and Barling, 2009; Lang, 2010). Focusing on the food practices of residents in Letchworth, the following Chapter 7 develops three tensions identified in the group discussion (Figure 3.8). These tensions include the conflict between food values and daily routines, the challenge of accessing local food, and the difficulty of incorporating healthy and sustainable food into social habits due to visibility and knowledge.

6.5 SUMMARY

Topics explored and methods used in the chapter

Chapter 6 of the doctoral study explores the themes highlighted in section 2.3, focusing on the local governance of Letchworth Garden City through potential place-based approaches to the urban food economy. The chapter explores multi-agency food governance and the inclusion of new stakeholders in urban food systems. Taking a spatial approach that connects a place-based food system to a foodshed (section 2.3.1), this chapter integrates the literature explored in Chapter 2, with a particular focus on the themes identified in the garden city literature and its overarching economic and political model that underpins the garden city in section 2.2.3. The chapter examines the social drivers for the community at the heart of the Garden City model, embodied by a local government that publicly owns the land for the benefit of residents, as outlined in section 2.2.2.

To explore these themes further in the thesis, Chapter 6 examines the structure of the Foundation in terms of its governance structure and self-funded charitable status, which provides a background to understanding the role of different stakeholders in food planning. This background provides an analytical framework for the thesis by drawing parallels with the place-based approach of food partnerships in different areas of the UK. The majority of the dataset used in this chapter comes from interviews with institutional representatives as well as residents and members of community groups in order to gain a comprehensive understanding of the organisation around food in the city. Primary data collected through interviews and visual elicitation is presented, demonstrating the crucial role of community groups in placemaking through food by addressing local issues. The data available for the Heritage Foundation publication was another secondary source to navigate the primary data collected.

Key findings

The experience of the UK food partnerships, as outlined in section 6.1, provides a valuable framework for understanding the characteristics of local food strategies being implemented in different places across the UK, and offers valuable insights into the findings on the enabling aspects of a local, healthy and sustainable food economy for the case study. Firstly, food partnership experts in the UK mentioned in interviews that a collaborative approach tends to create an equitable urban food system where complementary stakeholders facilitate a holistic understanding of food strategy. However, within this collaborative approach, experts also highlighted the ambiguous role of local authorities, which is crucial in implementing and facilitating food strategies. Looking back at the Letchworth case study, section 6.3 highlights the gaps in the collaborative efforts between the

Foundation and the different stakeholders, including the local authority. As a result, the Foundation faces limitations inherent in its own governance structure. This role is not fully realised by the Letchworth governance structure, which does not promote a holistic approach to food due to limited expertise within the local planning body.

Despite evidence of collaboration between the Foundation and the District Council in engaging with local residents and food-related community groups (section 6.3.2), there are discrepancies between the expectations of the community, residents and the Foundation. This leads to a different understanding of the role of public land. The rural estate in Letchworth provides an opportunity to implement experimental small-scale food production UA because of the public ownership of the land in Letchworth. However, the unique administrative framework of the Foundation needs more expertise and knowledge to prioritise food production.

As demonstrated in Section 6.4, global trends underscore the significance of the broader context that exerts influence on the local scale. In such instances, the overarching structure of the local institution and its designated purview frequently become divorced from food, a phenomenon that is also evident in Letchworth, along with their extensive ramifications on the food economy at the local level. This provides insight into the local dimension of food systems. This builds upon the observations made in Chapter 5 regarding small-scale farming operations and inputs, and Chapter 6 highlights the lack of connection between local authorities and the food system as a whole. This is due to the presence of common obstacles identified in the literature existing also in non-garden city contexts, namely the compartmentalisation and red tape effects of local institutions, as well as food-related policies that are typically implemented at a larger scale, either nationally or at the regional level. Nevertheless, the implementation of independent and place-based programme, such as Sustainable Food Places (SFP), has been demonstrated to assist in overcoming these limitations.

Finally, and similarly to Chapter 5, the spontaneous responses to the pandemic have been recorded and presented in Chapter 6 to highlight an informal network of stakeholders who responded to the crisis. The specific garden city context is examined again to show how Letchworth exemplifies a particular administrative context. Much like the availability of allotments, the presence of the Foundation provides a backdrop that, despite its limitations, facilitates a rapid response.

Discussion and contribution

Overall, Chapter 6 identifies similar themes of discussion in the cross-sectoral, multi-agency trans-scalar dimension of localised food governance to address food inequalities in the local food distribution (Olsson, 2018; Moragues-Faus, Sonnino and Marsden, 2017; Moragues-Faus and

Sonnino, 2019; Santo, Moragues-Faus, 2019; Sonnino, 2019; Sellberg *et al.*, 2020). Based on the definition of governance for the thesis as articulated in sections 2.3.3 and 3.1.1, Chapter 6 focuses on a co-governance framework that includes non-experts and non-specialists in the decision-making process (Hinrichs, 2010; Sonnino, Marsden and Moragues-Faus, 2016; Chiffoleau *et al.*, 2019; Neve *et al.*, 2021). The second aspect that Chapter 6 delves into is a desired place-based approach to food, which confirms and supports the findings in the literature and defends an interpretation of place that aims to unleash the specific potential of each place (Coulson and Sonnino, 2019; Soma *et al.*, 2020).

Chapter 6 builds on the literature explored in Section 2.3.1 of Chapter 2, providing insights into the role of multi-agency food governance, the involvement of new stakeholders in food system and place-based approaches to food. It also explores the concept of “new food governance” (Marsden, 2000, p. 22) and the “new food equation” (Sonnino, 2016). In addition, Chapter 6 explains the importance of a place-based approach, exemplified by the evidence-based approach in section 6.2.2. This approach involves working with local organisations on the ground, including local groups and local authorities. The structure of the Foundation demonstrates a fluidity in decision-making processes and in tailoring services to the local community, as well as in long-term decision-making, however, there are limitations to its effectiveness, mainly related to the perception of their role by residents and local community-led organisations. Despite being a relatively small organisation with a limited territorial scope, the Foundation demonstrates a commendable level of expertise, although it is evident that there are some gaps in knowledge, particularly in the area of agriculture.

The development of different dynamics in section 6.4 identifies the external determinism influencing the local scale for food planning, including the administrative structure and the global phenomenon embodied during the study, as highlighted in chapter 6. This is added to the findings of Chapter 5. Macro-structural determinism, as observed in section 2.3.1 and identified in section 5.2.1 and further explored in chapter 7, section 7.3.2, serves to blur the definition of local food. The thesis uses the conceptual framework of the Strategy Conceptual Framework to elucidate the strategies developed to address this issue. The garden city distinctive governance demonstrates its ability to deliver a place-based response. The thesis makes a significant contribution to the governance model for food by deconstructing the implementation of garden city governance and its contribution to this model, achieved through a careful examination of LVC. The ongoing food activities in Letchworth provide an insight into the emergence of an informal relationship between the Foundation, the local authorities, the community and the residents. The Letchworth Garden City case study examines its governance structure and highlights its position as a landowner facing common constraints to the multi-agency approach to food.

CHAPTER 7: FOOD AND SOCIO-SPATIAL EXPERIENCE

The very question at issue is as to what those things are which the community can do better than the individual; and when we seek for an answer to this question, we find two directly conflicting views – this of the socialist, who says: Every phase of wealth-production and distribution can be best performed by the community; and the individualist, who contends these things are best left to the individual. But probably the true answer is to be found at neither extreme, is only to be gained by experiment, and will differ in different communities at different periods.

Howard, 1898, p.64

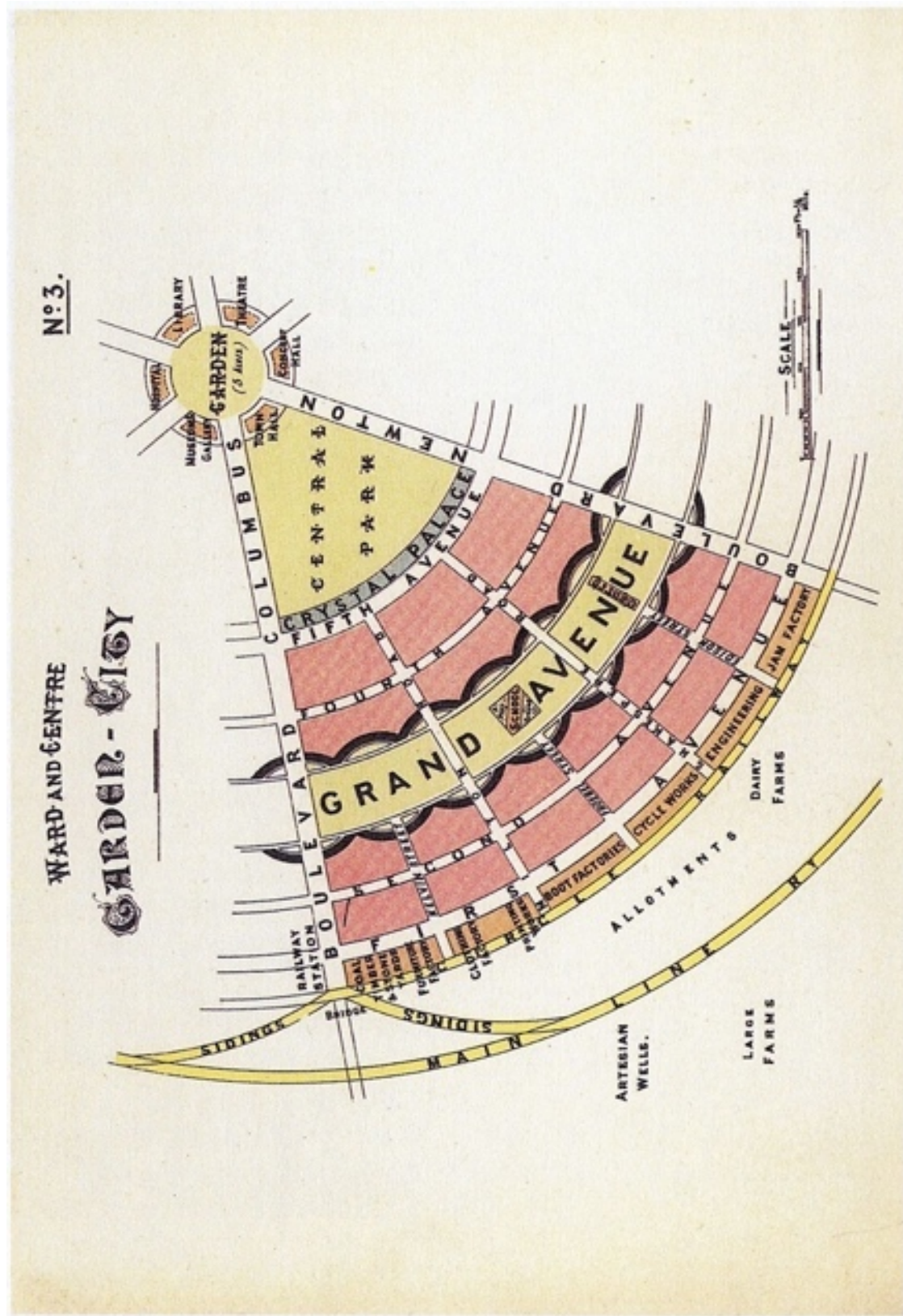


Figure 7.1: Diagram No3 - Ward and town centre, Howard, 1898

7.1 GARDEN CITY AND NEW COMMUNITES

Chapter 7 is dedicated to the socio-spatial experience of food in Letchworth and its environs. This chapter looks at the tactics as outlined in Chapter 3: it focuses on the food practices of the participants in Letchworth. The structure of Chapter 7 delves into three tensions of the five identified in the discussion group (fig. 3.8) to understand the influence of Letchworth as a garden city on residents' everyday food choices through practices. The three tensions depict enablers and barriers of different dimensions of food in town: food access, scope of local food, and food knowledge and visibility.

Howard's community vision in the Garden City model

Food in the garden city is sustained by the layout of the town, the economic model to make the garden city self-sustaining and the administrative organisation (Howard, 1898). A fourth component is a committed community: Howard praises the welfare of fulfilled and enlightened townspeople (1898, p.64, p.83). Because the residents understand the idea of a community-owned town, the engagement of communities is paramount in the success of the garden city model:

Tenants, too, will, it is obvious, be far more ready to offer adequate “rate-rents” if they are given distinctly to understand to what purpose those “rate-rents” are to be devoted, and after those things are done, and done well, little difficult will be placed in the way of further appropriate extensions of the field of municipal enterprise. (Howard, 1898, p.64)

Ensuring that the garden city thrives requires not only local government support but also the willingness of residents to contribute to it. Hence, the purpose of this chapter is to explore how residents experience the town's food environment and administration.

The contribution of 15 residents (fig.7.2) adds a layer to understand the other datasets through interviews and photographs representing food experiences in Letchworth. The dataset provides an overview that helps identify challenges, enablers and barriers the residents can face to obtain food in their daily life and if “buying healthy food is an easy choice” (SFP, 2023). Recognising the impact of the physical environment on practices involves acknowledging that urban morphology affects social practices (Guise, 2015), for instance, through food supply (Cummins, 2001; Mikkelsen 2001a), pedestrian-friendly areas (Southworth, 2005; Speck, 2012), convivial spatiality, and place-making (Amin and Graham, 1997; Bell, 2007). In addition to urban planning elements, the social drivers and practices shape the socio-spatial experiences of food in urban areas.



Figure 7.2: Participants' residence locations – name are pseudonyms. Amelie Andre 2022.
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While considering conclusions regarding food harmful to health and the environment (Winson, 2004; Lang, Barling and Caraher, 2009), the case study focuses on accessibility and choice, financial or practical, to avoid such food. Indeed, as seen in Chapter 3, the exploration of food access is not limited to a financial aspect “but should be analysed as embedded in the complex dynamics of multiple social practices” (Brons and Oosterveer, 2017, p.1). Related to the concept of tactic (De Certeau 1984), the literature highlights the domestic context directly associated with food, grocery shopping and meal preparation, or lack of it (Lang, Barling and Caraher, 2009, p.242), but also bundles of practice, as seen in Chapter 2, that associate everyday tasks together to make efficient use of time, such as school run or commute to work (Nicolini, 2012; Pink, 2012; Brons and Oosterveer, 2017; Castelo, Schäfer and Silva, 2021).

7.2 FOOD CONVENIENCE: FOOD ETHOS IN DAILY LIFE

The third tension drawn from the group discussion (fig.3.8) is between ethos and convenience, capturing a definition of food accessibility and its suitability on a daily basis. This section unpacks understanding of “good food” as a generic term outlined in the discussion group and interviews, referring to the social construct identified in Chapter 2, which entails aspects of healthy and sustainable food. A second segment established some food procurement from residents to inform the socio-spatial practices and convenience.

7.2.1 “Good food” and procurement

The notion of good food in the collected data sits between different criteria, including plastic-free, non-proceed, and animal welfare. These considerations are discussed and compared to the available outlets offering such criteria in Letchworth and its vicinity.

Food choice: a combination of criteria

A correlation between good food and good health arises in the participants’ contribution to the study. Criteria for desirable good food are combination of fresh, seasonal, local, plastic-free, and without pesticides (Appendix 7.1: Table of criteria of good food among residents who participated in the study). Good food is a combination of “*value and price and quality*” (Karin), “*tasty*” (Alice, Adrian) “*plain and simple*” food that “*looks like what it is*” (Grace), not overpriced (Harriet, Karin, Alice, Emma), with traceable origin and preferably local (Gary, Emma). On this point, the definition of local food can vary and is discussed further in section 7.3. Organic is not an ultimate criterion (Sophie, Janet, Rosaline, Stephen, Alice) and applies to specific products such as meat (Alice, Sophie, Grace) and some vegetables (Sonia). Quality for meat includes animal welfare and free-range and seem to be an underlying traceability condition (Harriet) (Janet, Harriet, Karin, Stephen, Emily).

Stephen is the only one who addresses genetically modified (GM) food and off-ground cultivation. He would not mind buying hydroponic vegetables that grew under artificial lighting because of the progress made in the last three decades in terms of food safety and food security, replaced in the global north by a concern for traceability. This comment echoes the concerns for food safety after the scale of the food-borne public health scandals in industrial agro-food production in the 1990s

(Garnett, 1996; Winter, 2003, p.30; Land, Dibb and Reddy, 2011, p.17). These events ensued awareness and “*quality turn*” that draw away consumers from industrialised food production to include the process of food as central quality criteria (Goodman 2004, p.4).

Ready-made meals and processed foods are unpopular with the respondents: all declare cooking “*from scratch*” or using “*raw ingredients*” whenever possible (Emily, Sophie, Patrick, Stephen, Pauline), also a part of a thrifty lifestyle (Grace). An additional recurring concern is the plastic wrapping of food in supermarkets. Most residents interviewed look for alternatives (Rosaline, Adrian, Emma, Gary, Alice, Sophie, Karin, Harriet, Patrick), to the point that retailers' plastic policies can influence food outlet choices (Emma, Alice). Moreover, plastic has shown links to pre-packaged supermarket items that may not satisfy all household needs in terms of quantity (B.01, Emma, Harriet, Emily). Nonetheless, residents express a pragmatic stance regarding the readiness of off-season fruit and vegetables made available by supermarkets (Roseline, Pauline, Alice) or the different criteria and preferences within a household that imply choosing one factor over another (Emma). As Grace sums up, “*it's a combination ... and availability as well*”.

Price is the prevailing determinant in food choice (Adrian, Sophie, Grace, Karin, Emma, Roseline, Alice, Janet) and is further developed separately in section 7.2.2. Independent local businesses are generally perceived as more expensive, whether respondents are customers of these stores or not (Pauline, Sophie, Alice, Harriet, Grace, Emma, Emily, Janet).

Some people come in and say “prices are an issue... You know... It's not as cheap as Sainsbury's. And then we say, “Well we can't change that because we are one little shop with no buying power that obviously Sainsbury's has. (B.01)

It can be a challenge to try to offer the quality of products that you want to put out. [...]. You do often have things, like people walk pass and say “Oh, I'm not paying that much a cake, or I'm not paying this for that” and you definitely know that there are people in Letchworth that ... aren't as financially wealthy, I supposed, than some other, I'd say that would be the main barrier to business. (B.03)

As a result, participants recognise an effort or additional money into certain items or outlets that defend specific values and give up on other. Sophie explains: “*There are things that I hardly get, for instance, asparagus, because of the cost of it and there are five of us in the family but otherwise, fruit and veg are relatively cheap*”. Like Karin, Rosaline goes to different supermarkets depending on: “*where the vouchers come from. [...] but we hadn't the money to go and do a decent-size shop (note: and benefit from the vouchers)*”. This attention on the subsequent budget for weekly shopping echoes E.05 observation: “*Lots of people do not have a lot of money at all. And it's quite*

hard to get people to do things differently sometimes when actually their priority is 'can I feed my child at all?'"

This material indicates that good food is associated with a breadth of related sustainability and health criteria and suggests that the food process is equally important as the final product. It supports studies on AFNs that demonstrate the role of and re-localisation and reconnection of food producers in consumers' perspectives as part of traceability (Sage, 2003; Giampietri, Finco and Del Giudice, 2016; Koutsou and Sergaki, 2019). Besides, some residents grow their food and associate it with health and well-being, a discourses underpinned by literature (Burgin, 2018; Turner, Henryks and Pearson, 2011), but home-grown food rarely connected as an actual reliable provision, except for two residents, Rosaline and Grace.

Some food procurement routine

With a few exceptions (Karin, Sophie, Rosaline), the interviews from residents suggest that the most common shopping patterns are weekly trips to supermarkets, with a few top-ups during the week. Top-ups are the result of two different causes: popping by smaller food shops for forgotten items (Sonia, Sophie, Karin, Alice) and planned additional trips for specific products: local food stall in the town centre (Emma, Harriet, Sophie, Dawn, Stephen), international food stores (Harriet, Grace, Alice), Waitrose (Janet, Stephen, Alice), bakery (Adrian), organic supermarket (Sonia), special delivery (Alice).

Routines also apply to favourite supermarkets, built out of habits (Adrian, Pauline, Emma), to a form of loyalty through a soft spot (Janet, Stephen, Sophie, Grace, Stephen). Other reasons for shopping in specific outlets include habits (Pauline, Adrian), atmosphere, warmth and friendliness (Rosaline, Alice), which is not the only a feature of smaller stores: *"In the industrial area ... quite often we meet people in there that work there and that we know. [...] There's one or two who'd give us a hug. It's quite unusual. We've been going there for ... since 1998"* (Rosaline).

The frequency of the weekly food shop implies a large volume and influences transportation modes, and most participants drive to supermarkets (Emma, Gary, Adrian, Pauline, Stephen), except participants living within a walkable distance of the supermarket in the town centre who can walk or cycle (Karin, Sophie). Emma realises she uses her car to shop at the large supermarket in the town centre but reaches the fruit and veg stall by walk and thus makes two different trips. If she explains this as a previous habit, it seems that outlets associated with sustainable food encourage a sustainable way of procurement as a whole process:

Car would be connected with supermarket ... yeah ... If I was going to town for other things, and I don't need a car I might popped to the veg and fruit stall. But (thinking) ... If I was going to the fruit and veg stall, I would probably ... walk. Yeah. I don't know why. I think it is because I use to walk where I used to live, it was only 20-minutte walk back then.
(Emma)

These comments also suggest a virtuous association between sustainable and healthy practices and refer to the literature exploring the lived context and associated eating habits (Swinburn, Egger and Raza, 1999; Cummins, 2002; Winson, 2004; Lake and Townshend, 2006; Mikkelsen, 2011a, 2011b) to the extent that the built environment influences the mode of transportation and purchasing habits. For instance, some road infrastructure in Letchworth prevents residents from cycling for big shopping trips (Sonia, Emma). Newly arrived in the town centre of Letchworth, Adrian is now a “3-minute walk” to local independent bakeries.

I am still not used to quotidian ... daily sort of buying bread, popping to the shop. [...] I thought ... start changing to try to have a bit more of a ... I don't know. A bit more of a city-lining and even perhaps 'francophonic' Sunday morning. (Adrian)

My main shopping is at the supermarket, by car. What I would like to do is cycle to the supermarket, but I've got two small children, so I'd need a trailer, which I have now. But I haven't quite figured it out, and it's winter (laughs). And cycling to supermarket would be really hard because there is hardly any cycle path. And the nearest supermarket is in the industrial estate. (Emma)

Furthermore, network, bundle, or nexuses of practice that interfere with and influence each other are notions identified in the literature review (Nicolini, 2012; Brons and Oosterveer, 2017; Castelo, Schäfer and Silva, 2021) that residents' top-up opportunities demonstrate: Harriet pops by the farm shop outside the town “occasionally [...] if we happen to be passing” or by the veg and fruit stall in town centre after her weekly sport, while Sophie associates extra shopping with another non-food-related family trip:

If my daughter goes to swimming and there is an [supermarket - SU.24] next to it, I might go there and get a few continental stuffs. But it would be more of an extra. [...] Those kinds of out-of-town shops are not in my everyday life... Definitely not.

Network of practice fit in the findings from Lang and Caraher (1998) in the Health and Lifestyle Survey. They observe two paradigms for improving health. One approach explains effects through individual actions, while the other is through the social structure, at the heart of the micro-scale

exploration of food habits. Correlated actions and routines revolving around food are critical to understanding food experience and behaviours, as the findings in Letchworth corroborate.

7.2.2 “I like the idea of a Farmers’ Market”: fitting sustainability in everyday life.

Following these previous observations, this section highlights the link, or in some cases the gap, between good food and procurement patterns, building on the food access literature (Lang and Caraher, 1998; Seyfang, 2006, 2008; Watts, Little and Ilbery, 2018). Residents' food shopping practices suggest the degree of inconvenience they can accept to fit their ideal food shopping into their daily lives (Caspi *et al.*, 2012). This tension relates to the notion of acceptability as defined in Chapter 2, which summarises efforts and attitudes towards the food environment and whether it meets expectations for food procurement.

The quote in the section’s title *“I like the idea of trying to get the seasonal thing”* (Janet) shows the gap between the imaginaries associated with Farmers' Markets and the actual food routine. Janet tries to support local producers and assumes they are local because they have a stall in the Farmers' Market: *“I get my stuff at the Farmers’ Market because it’s nice to support them. But I don’t know the farmers where they come from. [...] if it’s literally one of the fields around here or somewhere in Hertfordshire”*. Harriet’s disappointment regarding the monthly Farmers’ Market suggests this idea of an actual convenient food procurement: *“I know the Farmers’ Market in Letchworth ... I think is not something we found ... it just seems it is a lot of food stalls really, and not much proper food”*.

These quotes chime with the inconsistency of supposed transparency identified in local food and AFNs literature but underscore how Farmers’ Markets have become guardians and channel ethical, local, and sustainable discourses to support local producers (Kirwan, 2004, 2006). As Holloway and Kneafsey (2000, p.296) assert, the frequency of Farmers’ Market can mean impromptu visits, which on the whole challenges its use as an embedded habits to generate viable change in food practices.

I’d be honest, I forget that’s there half the time. [...] It’s only once a month, it’s not really very often that people remember from one month to the next. I kind of know when it is, but I don’t know if anyone else actually uses it. I don’t think it’s particularly well promoted. I think they could promote that more. (Sonia)

Compared to the daily greengrocer's stall in the town centre, the monthly Farmers' Market in Letchworth, held every third Saturday of the month, is not frequent enough with the recurring stalls from one month to another to become a routine (Janet, Sonia, Harriet). The market appears more as a treat or a nice improvised weekend outing.

Convenience and readiness

Convenience is an underlying issue when discussing food shopping, sometimes described as a chore (Alice, Sophie). Time saving and efficiency weigh in the different everyday tasks that create convenience and can contribute to sustainable practices on an individual basis (Rosaline, Emma). For instance, Rosaline identifies a constraint to including recycling in her routine: *“Unless it’s a part of our routine, we struggle”*. These reflections resonate with one of the conceptual notions identified in the literature review: the relevance of everyday life as a vector for change (Shove, Pantzar and Watson, 2012; Pink, 2012, Dagevos and Veen, 2010).

Convenience for residents also encompasses family-friendly shopping (Emma, Karin) and the opening time of stores (Pauline, Stephen, Gary). Compared to superstores, smaller independent businesses and food-community groups, such as the food rescue cafe, may have limited opening hours. Alice regrets she cannot find a greengrocer with a reliable local source that is *“open at an inconvenient time. They open at 9 am and they close at 4.30, you know. I work during these hours”*. Emma goes to the food rescue café during her maternity leave: *“I won’t be able to go there when I go back to work, because it’s on Wednesday”*. Sonia, who is free-lance, acknowledges her flexibility: *“I can do these little bits during the school day if [...] not seeing a client”*. Reflecting on this different dimension of accessibility and convenience, B.01, an independent business owner in Letchworth, challenges the culture of immediacy that the long-hour stores induce on practices and concedes relying on committed customers:

I mean the whole learning to wait or ... the convenience kind of thing is reflected in places like ours than in places like Sainsbury’s and Tesco’s. [...] It’s a reflection on society’s demand for convenience that, you know, at 10 O’clock on a Sunday night, now I want to make pancakes or some flour, you know ... [...] Having said that, we are trying to offer other services, for example, this morning the lady in my village messaged me and asked if I could fill a container for her, which I got in a bag. I will fill them, up for her and I will drop them off because she’s now working full-time, and she can’t do it.

These adaptations encourage creative ways of overcoming the continuous accessibility standard by reinventing a sustainability model that is also compatible with modern working life (L.06 Grace, Dawn, Sonia, Alice).

Sustainable food expectation in daily life, adjusting practices and disappointment.

Despite supermarkets being the most common food outlet options, respondents challenge their overall sustainability standards compared to desired criteria for food choice, whether food wrapped in plastic, limited organic offer, food miles, and transportation to reach food outlets (see 7.2.1). Emily describes her grocery journey in a supermarket as such:

When I'm in the supermarket and buying fruit and veg, I try and buy British and loose, or if I can't get it loose then I try and buy British to reduce the carbon footprint. Inevitably there are foods that are in plastic bags and come from miles away, [...]. I struggle to understand why supermarkets don't provide more fruit and vegetables out of plastic bags.

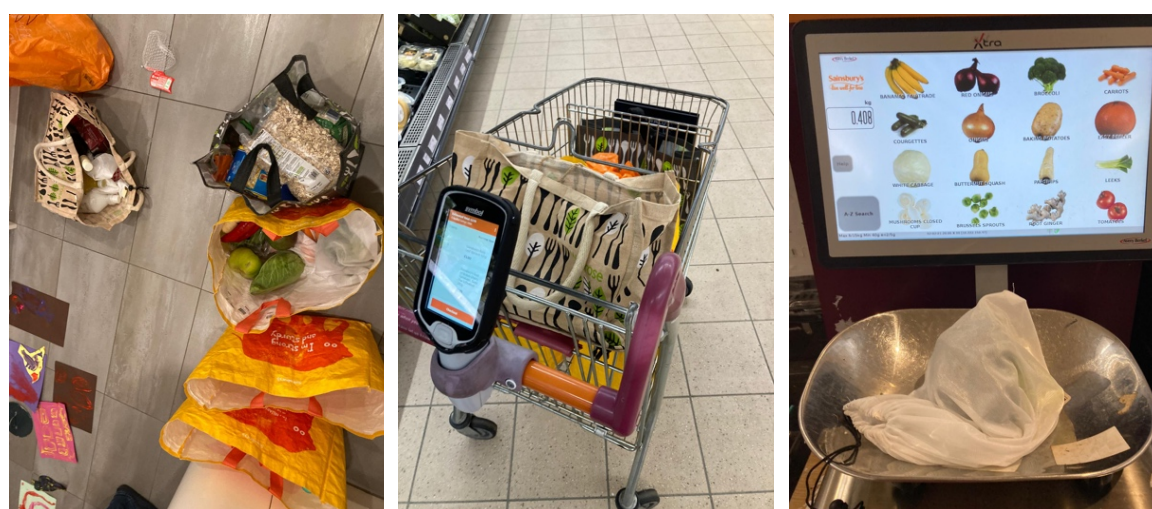


Figure 7.3: Emily's food shopping, sent by Emily to the Author, 2021.

Emily responds to what she finds unsustainable in supermarkets by using accessories and adapting her choices according to the food options. The pictures of her shopping bags highlight her concerns regarding packaging (fig. 7.3). She collects loose food items in reusable bags. Her bags show loose vegetables and a large plastic bag of cereals with the minimum packaging possible. She uses self-scanning devices, suggesting enjoying the perk of grocery shopping in supermarkets. Emily's contribution illustrates how she stays true to her values and aspirations with adjustments within the mainstream food offer.

On the contrary, Sophie orders milk deliveries from a local farm (based in Hitchin, about 4 miles away) to support local businesses, explaining that she is willing to pay a little more. However, her additional motivation when she started milk delivery was to reduce plastic and *"switch to glass bottles"*. Instead, the company uses *"plastic bottles, [...], the two-litre ones"* similar to those in supermarkets. Interestingly, the visual element she sent (fig. 7.4) is not her doorstep but a picture from the internet database that seems to represent what she expects from milk delivery.



Figure 7.4: Sophie's milk delivery, picture downloaded from the Internet, sent by Sophie to the Author, 2021.

Participants using local small businesses (i.e., stores that are not supermarkets, preferably independent with a unique offer, such as plastic-free items, vegan options, unwrapped fruit and veg, family-owned coffee shops) want to support them (Sonia, Gary, Pauline, Rosaline, Sophie, Adrian), even if this means *"a special trip"* or *"more pricey"* Sophie, who does not like shopping, refers to the veggie stall in town:

it's not because it's on my way, I try to go there to support local businesses, it's not because it's practical. [Supermarket SU.01] would be closer. [...] Actually, sometimes it's less practical, but ... I'm still trying to get it from a smaller shop than the supermarket.

Even if B.01, independent business owner in town appreciates that *"the local people to Letchworth are supportive"*, expectations of food and its accessibility in daily routines may clash with acceptability and convenience. Emily and Sophie's examples relate to Seyfang's (2006, 2008)

interpretation that supermarkets offering products with elements of sustainability (such as wonky veg, plastic-free staples and organic produce), so that customers can tailor their shopping using the convenience and accessibility inherent in supermarkets (such as car park, opening hours), threaten AFN channels and the social and community benefits associated with them.

7.3 FOOD SCOPE: ACCESS, SCALES OF LOCAL, AND VARIABLE FOODSHEDS

The fourth tension (fig.3.8) in the socio-spatial experience of food in Letchworth concerns the expected geographical reach of a healthy and sustainable food economy. In this section, two aspects of food accessibility are distinguished. First, one form of accessibility lies in the location of food outlets, either in terms of proximity or mere availability (7.3.1). A second dimension explores the limits of AFNs in relation to environmental, social, health and economic dimensions (Feenstra, 2002; Lang, Barling and Caraher, 2009; Kneafsey *et al.*, 2013) and the possibility of conventional food systems to absorb different food economies (7.3.2). In other words, this section explores the notion of foodshed that qualifies as local food and how residents perceive it in their daily lives, as defined in Chapter 2.

7.3.1 Reaching food outlet options.

Building on the exploration of spatial settings in Chapter 4, this section explores a dimension of the trans-scalar approach to include a qualitative understanding of foodscape and the influence of specific environments on food practices (Wiskerke and Verhoeven, 2018a, p. 30; Vonthron, Perrin and Soulard, 2020, p. 10, p. 15). This observation introduces residents' aspirations for local food, which are limited by conflicting economic dynamics at the macro level. In addition, the prevalence of food deliveries and the change of habit in the dataset, due to the adaptation of the participants to COVID-19, sheds light on the different aspects of convenience to access local food production.

Food deliveries: readiness, digitalisation, sense of place, and dissociation

The regulations in place during the COVID-19 pandemic reduce the in-person shopping frequency of most interviewees (Sophie, Karin, Patrick, Emily) and induce some changes to delivery (Gary, Janet) or click and collect (Stephen, Sonia) (Butler, 2020a, 2020b). Ironically, the rush for food delivery during the lockdown prompted regular users of food delivery prior to COVID-19 “to leave those slots to people who really need to be delivered at home” (Alice, Sonia). Local businesses also adapted (B.01, 02, 03, 05), becoming a hub for other local businesses and as food box dispatch (B.03), opening a direct phone to fight digital exclusion when making an order (B.05).

Reflections on delivery in interviews indicate palpable tension in the sense of place, convenience, and delivery. Emma reports a form of opacity with deliveries, which meet none of her standards of ethos, sustainability, or local expectations:

I found out that the food doesn't come from the [Supermarket A] in town, it comes from Enfield (note: North London), and the driver ... I talked with the driver like at 10 at night, and he still has more drops to do, one in Brixton (note: South London) and one back in London. And I just thought that can't be sustainable. That is crazy for someone to be driving all of these miles. [...] So, then, I only do [Supermarket A] every now ... I do [Supermarket A] delivery for heavy stuff.

Staying within the local area appears to be a criterion for sustainable food practices (see section 7.2.1), and local fruit and vegetable stalls in the city seem to support local food production or avoid food miles:

I asked them (the greengrocer stall in Letchworth town centre) "Where does this come from" and it comes from an area that I know because I used to live nearby. It comes from a farm ... (looking for the name of the farm) ... it's in Bedfordshire anyway, near Henlow ... between Henlow and Langford. I really liked that, so I know it's not travelled too far.
(Grace)

These accounts are connected to literature discussing the perception of sustainable food and citizenship as motivating factors to support Local Food Systems (LFS) (Seyfang, 2006b, 2008; Watts, Little and Ilbery, 2018). Furthermore, they highlight the importance of re-localising the foodshed for consumers. Fonte and Queti (2018, p.20) identify three relevant areas for reconnection: between urban and rural areas, farmers and consumers, and agriculture and nature. This outlook insists on limitations of an idealised LFS (Sage, 2006, p.54; Brinkley *et al.*, 2013, p.249) and echoes Jarosz's (2008) finding that the dispersal of competencies among small, independent enterprises, such as direct marketing or delivery, results in an allocation of resources that is not streamlined, thus causing duplication of energy usage and costs in comparison to larger cooperatives.

Closeness of food, mean of transportation and walkable distances.

Proximity is a facet of convenience: the large supermarket in the town centre (see fig. 4.54) makes a difference for participants living within a walkable distance (Sophie, Karin, Janet, Gary) and

despite the large car park available its implantation in the town centre seems to encourage neighbour residents to reach the supermarket without a car:

I end up picking things two or three times a week because actually I am five minutes to [SU.01] and that makes you incredibly lazy about thinking about things. (Karin)

It's really quick. [...] I do go by foot. I've got my little trolley, my backpack. I mean, I come back like a donkey (laughs) but it's fine. (Sophie)

On the whole [SU.01] is sort of a small enough scale that is perfectly manageable. You can manage, like an ordinary market shop. (Harriet)

Having set there a huge food shop so right in the town centre ... but I don't know ... At least we can walk to it, we don't have to drive to it. so ... yeah pros and cons. (Gary)

Food mapping in Chapter 4 presents the urban morphological features of the town centre (fig. 4.54), with streets designed for pedestrians. Sonia and Emma, who live southwest of the city report easy walking or cycling to the city centre, while the southeast of the city is isolated from the rest of the town (see section 4.3.2). In contrast to the industrial area, which is dangerous without a car, the walkability of the location of a car-based supermarket in the town centre means that large supermarkets do not necessarily correspond to a weekly shopping trip, if accessible by walk.

[My husband] tends to do our day-to-day shopping carrying back every bag back. It is a bit of a struggle. He would use the car, not just because he doesn't want to walk, but because he doesn't want to carry heavy bags back. (Harriet)

Some respondents (Alice, Karin, Sophie) also expressed a desire for local producers selling their produce directly in Letchworth, with a clear identification of the food origin. Farm shops on the outskirts of Letchworth are seen as a relevant example and Alice, Patrick, and Harriet mention the direct sales from a farm in the close vicinity of Letchworth, "*that is next door to us*". Karin encapsulates the plain and wholesome food as described in section 7.2.1:

I would love to buy a sack of potatoes in Letchworth. In Kent, if you want a sack of potatoes, you pop to a farm shop and you buy a sack of potatoes. And here I can't find anyone who can sell me a sack of potatoes. [...] But there is no connexion between what is grown and what you can purchase. From what I can tell. (Karin)

I would be really keen for example to go to a local store for fresh veg and fruits and things like that. I would like to do that locally; to contact the farm locally and they can deliver

something to me and I'm sure it's ... even if it's not organic. [...], but locally I couldn't find a farm that was reassuring me that. (Alice)

Through the expectation of good food, residents may embrace the simplistic representation of “more local” (Winter, 2003, p.25) but importantly associate local with plain and simple food for good value, a set of adjectives used to describe good food, which also underpin a straightforward connection between the producer and the community, one of the core principle in AFN literature (Ilbery and Kneafsey, 2000; Sage, 2003; Seyfang, 2008; Renting *et al.*, 2013, p.400; Blay-Palmer, Sonnino and Custot, 2016).

7.3.2 The confusing local food

Practices associated with AFNs lead to new markets for local economies rooted in social interactions and environmental defence (Seyfang, 2006, p.3; Goodman, DuPuis and Goodman, 2012; Berti and Mulligan, 2016, p.3; De Pascale *et al.*, 2017, p.1717). Renting *et al.* (2003, p.393) expand AFNs' contribution to the urban economy, including the general transition in rural economies as “new forms of dynamics in agricultural commodity market”, whose outcomes are potential “building blocks for food policies”. As a result, marketplaces represent a social construct opposed to the neoclassical economics disconnected from the social world (De Schutter, 2019; Renting *et al.*, 2003), in response to the placeless modern food system (Holloway and Kneafsey, 2000).

Reflecting on this literature, interviews and group discussion outcomes in Letchworth provide a nuance about expectations about the notion of local food with different representations that vary from city-level to national level, from district-wide to regional area.

The flexible dimension of local and short

Local foodsheds and their economic and community benefits in the dataset seem to change from one participant to another: the dataset suggests that residents sometimes perceive local food interchangeably with SFSC, as defined in Chapter 2, attached mostly to social values of food.

In the literature, alternative retail outlets include food hubs, local food networks, farmers' markets, Community Supported Agriculture (CSA), box schemes and food cooperatives (Blay-Palmer *et al.*,

2013; Anderson *et al.*, 2014; Le Velly and Dufeu, 2016; Vitterso *et al.*, 2019). They have in common that they are physical or virtual demonstrations of the reconnection between producers and consumers (Sage, 2003; Kirwan, 2004; Jarosz, 2008; Mastronardi *et al.*, 2015; Charatsari *et al.*, 2018). This expectation seems to be the underlying motivation for participants who champion local and direct sales in Letchworth (Gary, Grace, Sophie, Alice). However, local food includes produce from national to district- or county-wide (Sonia, Rosaline, Emily, Pauline) and even city-wide level (Karin, Gary, Karin).

Buying local food involves British produce “*things that have not travelled miles, and miles, and miles*” (Pauline). Emily would like to see food produced locally in Hertfordshire: for her, the UK label does not indicate much about quality, freshness, or environmental engagement. When asked how she connects the rural estate with food, Sonia explains: “*The only way I can really see how the greenbelt can have an impact is ... I did have an organic veg box delivery from [Farm in Ardeley Hertfordshire, about 9 miles away from Letchworth], which was very nice*”. The rural estate in Letchworth produces food that seems distant from the town:

Is it used just to be sold back locally or it goes somewhere else? I have no idea. That would be interesting to find out. What happens to all the produce grown around? (Sophie)

I don't know if that's local farmers who are in the fields right by Letchworth or whether they're elsewhere. And the fruit and vegetable stall, in the hideous 1970s shopping centre, I don't know if that's local or not either, really. It's hard to know but it's there and you can get it. (Janet)

You know, when you see it as well when you read about Letchworth and the idea of the greenbelt as well. What it was used for. That kind of reminds you of the importance to have local products. Maybe not for everything, but as much as possible. And that a town like Letchworth should be able to grow a lot of its own food. (Sophie)

Three residents consider local allotments, conjoined green spaces close to housings (characterised in Table 4.1), and the rural estate in Letchworth as an opportunity for developing a grower market (Gary, Karin) or for the reimplantation of smallholdings (Grace). The appeal from these participants to see market gardens with direct sales in the town via existing shops embodies their aspiration to see co-operatives or food hubs are in line with the garden city movement (Howards, 1898; Adams, 1905; Purdom, 1913; Culpin, 1915), and with the SFSC literature (Schmutz *et al.*, 2018) arguing transparency of food production F.01, farmer, notes:

When people buy our meat [...] the most important to them is that we're local. It's not that it's organics, because they can see it, they can eat organic [...] the locality of where it's produced is their biggest buying factor. When you go to Tesco you need a stamp. (F.01)

An additional discontinuity in the notion of local food is the influence of scarce food offers that induce a “*special trip*”, as seen in section 7.2.1. When B.01 started their business in Letchworth in 2018, their offer stood out from the competition, with the nearest similar offer being 24 miles away. Their customers came from “*Hertford, Harpenden, Morden, Royston, Baldock..., Yes, quite a wide area. But they are special people*”. This suggests that even though a small independent business may appear to have a limited influence in the local area, the offer generates a larger influence than expected for this size of business.

Distinct values and permeability of the different food streams

Some participants oppose large retailers with small independent businesses and community groups that they consider more ethical (Sophie, Harriet).

Their raison d'être is so different. You've got money on one end ... And you've got, people's [...] who have values on the other end in small shops, and the people. You can have that money and those values ... it's rare, but you can. I think it's too far apart. (Pauline)

Too much charity food giving relies on big wealthy corporate organisations. [...] I find it a bit paternalistic [...]. They make a little bit of a difference by giving away things they don't want. They could make a huge difference by planning differently some of their profit back in. (Richard)

Local food rescue initiatives are seen as counter-power against large food retailers while simultaneously addressing the food waste issue (Karin, Richard, Pauline). Although their different agendas are perceived as a limitation for their cooperation, the food rescue café in town, suggests that the project exemplify how place-based groups and national companies interact without sharing similar goals and objectives (Sacha)

Enterprises that share value and engage in standards create a circle of belief along the supply chain. Talking about their strategy, B.01 explain their decision to work with a particular wholesaler:

When we first started, a couple of wholesalers [...] sent a lot of stuff in really not really good packaging and when we contacted them, they were just not really interested ... but when we contacted [brand] about some of that plastic packaging, they were on it.

Independent businesses in Letchworth, B.01 and B.03, who own plastic-free and vegan food businesses, source their goods from a co-operative wholesaler with national distribution whose headquarters and warehouses are in Northern England and London. Reflecting on their business relationship with this wholesaler, they notice that *“Inadvertently, some things are organic. We weren’t into opening an organic shop. It just happened. [...] but we don’t advertise the fact that most of the things here are organic. Just in case people come in and ask us”*. Sophie explains having discovered that the flour is sold loose in B.01 but also is *“from the local mill in Stotfold. [...] This is the only place you can get local flour”*.

Values revolving around food are often concomitant with an overarching approach towards sustainability. For instance, B.03 organised a hub to dispatch different local shop food supplies during the COVID-19 confinement in 2020 and *“wanted to support local suppliers and local producers”*. Likewise, customers' choices may be influenced by both the quality of food and the values embraced by these businesses (B.01, 03). B.03 contends that the company's achievement is also attributed to its customers, even if prices are not competitive: *“I think what generally helped us as well is that vegans seem to like to support vegan businesses. They’re quite loyal, and when they saw what we were doing”*. Emma exemplifies shared values between customers and businesses by abstaining from shopping at a particular supermarket due to its tax evasion and subpar staff management. Behind the different values promoted by retailers on food as produce, are also social dimensions embodied in the well-being of employees and are part of the sustainability framework, as argued in the AFN literature (Raynolds, 2002; Morgan, 2010; Fabbrizzi, Menghini, and Marinelli, 2014; Michel-Villarreal *et al.*, 2019).

7.4 FOOD KNOWLEDGE: VISIBILITY & EDUCATION, PLACEMAKING THROUGH FOOD

The fifth and last tension (fig.3.8) in the socio-spatial experience of food in Letchworth relates to the visibility and knowledge of the local food economy, arguing that knowledge and awareness influence everyday food practices to unlock creativity and resources for resilient food cities. Therefore, this section explores the visibility of food in Letchworth for the residents as a means to enhance awareness towards local food. The first segment reports different perceptions of Letchworth Garden City as a town and its foodscape, notion explored in Chapter 2. The second segment examines the notion of visibility and knowledge of food venues in town or food location prominence in town amongst the participants.



Figure 7.5: Visual elicitation during the group discussion, picture presented by the Author to the participants, April 2021 © Garden City Collection, Letchworth Garden City Heritage Foundation.

During the discussion, visual archives illustrate the principles implemented in the early Letchworth Garden City and initiate discussion on its perception (fig. 7.5). Three pictures show different representations of involvement in food from the community: a cooperative for local producers, a gardening class in primary school, and a restaurant promoting vegetarianism as a way of life, "The Simple Life". This visual elicitation, which looks back at the town's history to draw connections with present-day food practices, highlights the similarities and adaptations of the garden city model in current times.

The social aspect of the garden city supports its physical, economic and administrative principles (Howard, 1898). While Chapter 4 explores the physical legacy of Letchworth's urban design and morphology, this section uses the term legacy to reflect on the town's history and the remaining evidence of the influence of the garden city model in Letchworth in food terms. Building on the emphasis in Chapter 2 on the spatial influence of the garden city model in creating self-sustaining communities (Eckdish Knack, 1998; Heathorn, 2000), this section presents elements of residents' understanding of the history of the town and its significance for access to the food economy. This section also considers the value of Letchworth's built form and landscape features as a heritage asset that inspires contemporary placemaking.

7.4.1 Bringing food to the fore in Letchworth.

Visibility of food growing: the example of the community garden in town centre

Visibility of the green space and food growing is connected with the activities in town that promote local food, whether initiated by the Foundation and the District Council (O.02, 03) or coming from the residents (G.03, 04, 05, 06, 07, 08). E.06 reflects on the role of the community in underpinning food campaigns and projects initiated by institutions:

We don't know really what that is, but it's about communities in some way coming together to change the local food system and then leading it. That worked quite well. Our campaigns work really well for this. [...] We can work with schools, we work with communities, we work with food growers, and so our next campaign is about climate, it will be interesting, "Climate Food". That works really well. (E.06)



Figure 7.6a: Community Garden in the town centre, beetroots planted in the raise-beds by the volunteers. Photograph by the Author, 2022



Figure 7.6b: Community Garden in the town centre, volunteering session and signs in the raise beds about the crop and harvesting methods. Photograph by the Author, 2022

An example of these combined efforts in Letchworth is the community garden, featured in the three-dimensional model (1) in Figure 4.54: initiated by the Foundation as a vehicle of knowledge and education for growing food and public harvesting (L.01, 03, 04, 09). Considered as concealed or hidden (L.01, 09), the community garden is nonetheless localised in a high-profile location in the town centre, which induces the Foundation to keep it tidy and organised (L.01, 03).

I think that the (community garden in town centre) does provide an important purpose. It's always a bit hidden and it's a bit of a secret, really. And I am not sure a lot of people who would just walk by, I'm not sure they necessary thinking that's something they could get involved in. It feels almost slightly private. (L.09)

The location of the community garden in the town centre (fig 4.54) seems relevant to its goal of demonstrating and inviting residents to engage as shown in Figure 7.6. It is situated on a pedestrian path, facing a lawn where some stalls and events happen. Participation in the volunteer group to help maintain the community garden suggests that interest may be lower than it could be (L.04), perhaps associated with a limited advertisement regarding the purpose of this garden:

A crowd walked past while we were getting rid of weeds from the raised bed. They made a joke, asking if we could provide the same maintenance to their garden too. Later, we chatted over coffee and were surprised that people don't know about the hard work community garden volunteers put in. (Participation, March 2019)

During the fortnightly gardening sessions, the volunteers often discuss how to raise awareness and attract more people to the project. Possible solutions discussed include promoting the role of the garden and associating it with local events to embed it in residents' familiar surroundings. The attractiveness of local community groups in everyday life can be hampered by a lack of awareness and visibility among residents.

The Foundation has demonstrated a commitment to prioritising food and community engagement not only with this community garden, but also free gardening masterclass on a fortnightly basis (participation, February 2018 to February 2019). The community garden was designed as a display for knowledge sharing in mind (L.01, 03, 04). The following section will examine food displays in Letchworth and the role of food champions within the area.

Advocating through food, values, belief, and fulfilment

For Grace, in addition to the potential of the landscape in Letchworth Garden City, the “*can-do attitude*” from the community is a catalyser and connected with the “*original sort of ethos and the fact that it originally attracted so-called eccentrics*”. E.06 also praises the potent role of the community in addressing and creating food initiatives organised by local institutions, based on his experience in food partnerships in England.

Participants communicate satisfaction as a motive to sustain endeavours aimed at protecting ethical values associated with food (B.05, Muriel, Sacha, Richard, Grace, Gary), encouraged by the positive outcomes and effects at a local level. The data shows that food growing is considered to have high social, environmental and health values (L.01, 04; H.01; Rosaline, Dawn, Gary, Grace, Harriet), similar to the literature on food growing associated with “right food” (DuPuis and Goodman, 2005, p.362) or “healthy food” (Burgin, 2018, p.33).

A common thread in business owners and community group representatives’ narratives is the path chosen to defend sustainable and healthy food and increase its visibility through a message: healthy lifestyle (B.01, 03, G.07), animal welfare (B.01, 03), inclusion (G.04, 05, 06, B.05), knowledge (G.02, 03), climate change (G.01, 04, 07, 08), food poverty (G.04, 05, 06, 09).

The discourse about food is key to including and creating a common endeavour. Thus, engaging with the residents means using relevant arguments to address the big picture and make food and initiatives visible and at the centre.

A man enquired about the purpose of the food rescue café where he was about to join his wife already inside, worried about the potential moral issue of taking food that could benefit people in hardship. I told him about the environmental and inclusive message of the café. Not looking so at ease, he then entered and joined his family (Participation 20 November 2019).

Concern for the environment is a widespread phenomenon that influences individuals' values and beliefs surrounding food (G.02). This is also observed by F.01, the farmer of a large estate.

The distinctive thing about connecting with people through food is that when I first came to the farm three years ago, we did a survey about what people wanted to know. [...] And they said, “Well, the meerkats”. And it showed me that people won’t be connecting with the farm, they thought it was a zoo. And now, with the climate change, [...] our visitors are more willing to know and they’re asking us” What do you feed your pig?” (F.01)

7.4.2 Place making through food.

Display and demonstration

Primary data indicates that educating and sharing knowledge about food involves displaying and demonstrating food products. Participants engaged in gardening activities speak about display as an excellent way to showcase food growing and trigger interest with multiple purposes: connecting with people to transmit a message, providing an educational focus, sharing knowledge, championing food as a part of an overarching sustainability (fig. 7.7; 7.8; 7.9 and 7.10).

The idea is to be visible to fulfil the community engagement element. [...] It's a way in for conversation. And what I found also it's a way in for climate conversations. So, I've been up to talk to people about the climate and ecological emergency bill that I try to champion.
(Grace)

Demonstrations should work as an incentive (F.01), and therefore, edible gardens must be pretty and appealing (G.07; L.01; E.04). During the Food and Drink Festival 2018, the Foundation set up an edible wall at their stall (fig. 7.9). Local community group encourages residents to bring their apples to press them during festivals in town, selling glasses for takeaway (fig. 7.10).

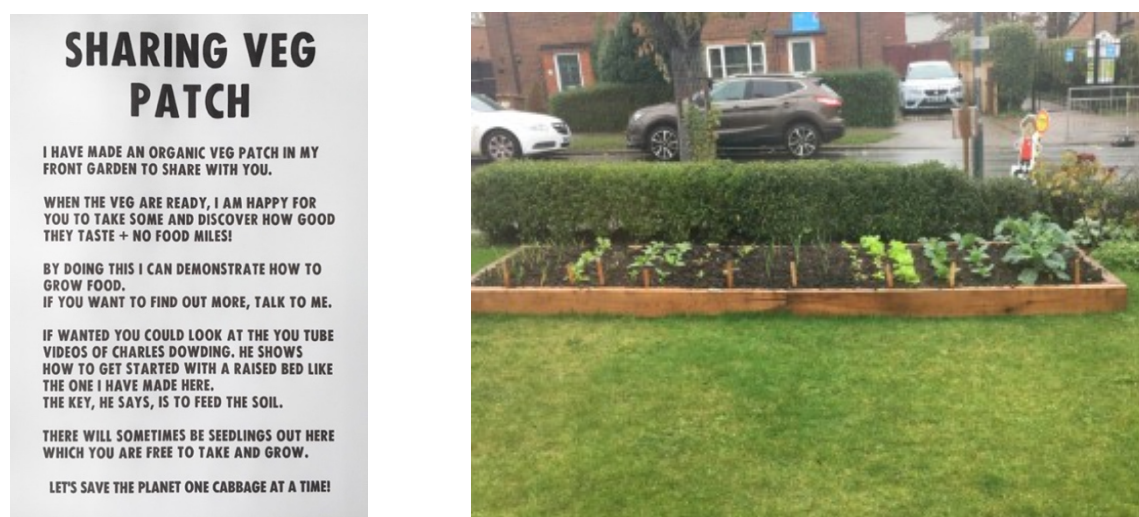


Figure 7.7: Food growing project in front garden, a local initiative. Photographs sent by a participant to the Author, 2021.



Figure 7.8: Market stall to swap organic grown food. Photographs Amelie Andre, 2019.



Figure 7.9: (From left to right) Edible wall at the Food & Drink Festival stall of the LGCHF/ Poster advertising the Food & Drink Festival in town, May 2018, Author, 2018.



Figure 7.10: Apple pressing stall during an event in Letchworth, October 2019. Author, 2019.

In Letchworth, front gardens are sometimes used as a display for food growing and food sharing (fig. 7.7) or food rescue stalls, as mentioned in sections 6.4.2, available for residents walking by (fig. 7.11).

“It’s the first walk I ever did when I moved to Letchworth. I wanted to get out of the high street and see a bit of the streets and suburbia around the city and first, I think the first street down there was this ‘Please rescue the food’ and I just love the idea the word rescue. It’s going to appeal to kids [...]. So, I immediately thought ‘ok, there are these options’ that sort of food recycling and sharing and swapping.” (Adrian)

These food rescue stalls, documented in Figure 7.11 during fieldtrip and residents’ photographs, are also posted on social media pages on Figure 7.12 to signpost collection points. These extensions of the private realm are an indication of a sense of place and the convivial food spaces in town, a perception of community empowerment through the spatial features of the town.

...to build a local community. Because in [northeast neighbourhood 01] and [northeast neighbourhood 02] there is no café, there is no pub, no ... sort of logical community meeting place and that was the idea of the café. In lockdown, it has turned into a food rescue stall with no café, or anything attached to and then post-lockdown, I think all that will just carry on as a café, and probably a stall. (Gary)



Figure 7.11: Food rescue crates placed in the front of the entrance gardens, Letchworth, Adrian’s contribution. Photographs shared by a participant, 2021.



Figure 7.12: Social media page advertising locations of food stalls in Letchworth, but also Baldock and Hitchin, Screenshots Amelie Andre, 2022.

At some tables in Figure 7.12, there is no sign inviting to rescue the food, suggesting these stalls are known events in town. These stalls demonstrate how the extension of private spaces, such as front gardens, can disperse a sense of community and a welcoming atmosphere, acting as visible contributions to a dedicated community, documented through online pages of the food rescue café (fig. 7.12). The hashtag Letchworth Garden City illustrates how this initiative originated in the town and has spread to neighbouring towns.

Land ownership and community empowerment

The definition of placemaking recognises the role of government in charge of the people's needs, but also the unique set of circumstances of a place, which represent opportunities, that arise from outside the community and assets that exist within a community (Arefi, 2014, p.6).

The vacancy rate of the allotment in Chapter 5 indicates a need for land availability in times of hardship. L.01 and E.05 identify land availability as a real asset for food partnership and place-based food solutions if connected with a recognised body to take over the land and develop it with food retrofitting. Interviewee mentioned the conjoined green space identified in Chapter 4 either unoccupied, either in used without clear authorisation or identification of the land ownership (Karin, Sophie, Harriet). Nonetheless, land ownership can encourage community empowerment to transform green infrastructure into growing purposes. What is characterised as semi- and shared commons as described in Chapter 4, have *“huge potential for food growing, but also it has huge potential for raising biodiversity and we need both of those things. The grass is easy to manage but is useless for biodiversity”* (Grace). Both participants see in the green patches behind houses an opportunity for smallholding. (Harriet, Karin, Sophie, Gary, L..09).

There is quite a lot of open land in terms of formal common but in areas small plots that could be better utilised. Not only for food growing. (L.09)

On the street where we are, it used to be communal garden all on our street, because it used to be teacher who lived on our street. [...] it used to be the orchards, so we have a lot of fruit trees in our gardens. (Sophie)

More broadly, L.09 stresses the importance of these green spaces as a dormant asset, while Karin and Gary have also noticed this potential and explain that they are keen to see these areas utilised for edible purposes. However, the connection is limited and for instance, it can be difficult to clarify the status and owner of the patch of green patch behind houses.

I was kind of intrigued where the spines can become more productive for the people that live around them, and them become a community space, without losing, I suppose, the spiny kind of feel about them [...]. But they are ... they are not maintaining by anyone. (Karin)

Well, we have attached to our garden, which we own, a piece of inherited land, which I think was one of those shared allotment-y bits for a number of houses [...]. But actually, we've got it four our sole use now. (Harriet)

Karin refers to a part of the town characterised as conjoined green space, a term coined to characterise green spaces either adjacent to or enclosed by houses (Table 4.1). These enquiries about land access and right-of-way (UK Government, 2023) are also tied with the visibility of food potential, suggesting an obstacle connecting food and landscape (Harriet, Gary, Rosaline, Emma) and green spaces (Karin, Gary, Grace).

Although challenged by a possible “Not in My Backyard” (NIMBY) effect brought up by Karin, where residents oppose changes in their vicinity while finding these acceptable elsewhere (Humber and Soomet, 2006), land availability shows a potential for food retrofitting, where the Foundation's role offers the opportunity to experiment (E.01, 02). Gary also sees the capacities:

I think it definitely helps that the [Foundation] owns the whole of ... to my knowledge the whole of the green spaces in Letchworth, so that gives them the flexibility to do what they like with their land. I know they need money out of it as well. But for the market garden we're talking about a very small proportion of that land, you can never find fields that are fields of fruits of veg, so it a very small proportion and I think you can make a big impact on Letchworth. If shop like [plastic-free shop - SS.01] and [organic shop – SS.05] are ... I don't know whether they thrive but they're definitely doing all right, you know ... that to me says that there is an interest in local sustainable food. Yeah, I think there is a market for it. But it's not something that the [Heritage] has ever ... I don't know, looked at doing. I don't know if it's cost less with all these lands leased out and there not a lot of opportunity. But if the opportunity did ever come up, it would be great to pursue.

Stephen, on the other hand, disagrees with the conflicting scale of food inputs (discussed in 5.2) and shares his assumption about the influences that lead the Foundation to have one commercial tenancy rather than several smaller or more community-owned farms, as explored in 6.5.2 and 7.3.1:

As you know the Heritage Foundation owns a lot of land around the town, which is currently farm by the [farmers'] and they farm it commercially, their produce, their crops are sold nationally across the country, I think it's very difficult for the local farmers to specialise in local food production. It would be quite uneconomic for them in many senses.

While Stephen expresses doubt about the possibility of feeding everyone with organic food from local fields - a quantitative approach to the food self-sufficiency of the garden city in literature (Keeffe, Hall and Jenkins, 2016) and refers to the current portion of international food imports in the UK (Maye and Kirwan, 2013), Karin, Grace, and Gary insist on the potential of the town layout to set up small holdings or market gardens, particularly among conjoined green spaces (Table 4.1).

7.5 SUMMARY

Topics explored and methods used in the chapter

Chapter 7 examines food practices intending to understand the capacity of communities to procure food, building on the exploration of the socio-spatial experience of food in Letchworth. The seventh chapter of this study uses these key concepts of food accessibility and food practice acceptability to explore the relationship between the built environment and food practices, as outlined in the literature review (see section 2.3.3 for a detailed discussion of these concepts). As outlined in section 2.3, the food system under investigation in this thesis is considered to encompass a wide range of stakeholders, resulting in a complex and multifaceted concept (see section 2.3). This is a core premise of the thesis, and consequently, as the food systems approach includes new actors, it considers food practices as a vehicle for transformation. Chapter 7 therefore explores the concluding aspect of the thesis, applying the conceptual notion of tactics and their correlation to place (De Certeau, 1984) to highlight the role of everyday practices in generating ongoing change (Shove and Walker, 2010; Shove, Pantzar, and Watson, 2012).

The case study thus explores how the garden city context can induce specific practices. The data presented and analysed in Chapter 7 identifies food practices in Letchworth at a micro level, drawing on the socio-spatial conceptual framework of the study and the previous chapters which explore the impact of spatial, economic and administrative organisation on food practices in Letchworth Garden City. The data collection for Chapter 7 is primarily based on the responses of the 15 residents who participated in the doctoral research, recruited through a variety of media (see section 3.2.2).

This chapter uses a range of participant data, mainly from residents, to understand their daily food procurement and the factors that influence their food choices. The dataset examined in this chapter includes interview responses and visual input. The use of individual interviews, guided by a semi-structured questionnaire, ensures that individual preferences are captured, while also allowing for comparison and generalisation of food values, achieved by following the same questionnaire for each participant. The final step of data collection, a group discussion with residents, generated three tensions around food in Letchworth (Figure 3.8), which were used as a framework for analysis in Chapter 7, identifying food accessibility, understanding of sustainable food practices and knowledge of food in the town as a component of visibility, tensions also identified in the literature review.

Key findings

The results present a summary of the food procurement practices of 15 residents, highlighting a combination of values that describe each individual's expectations of good food. The analysis reveals a common factor of a right value for food (see section 7.2.1) and suggests that daily food choices are the result of a combination of expectation and convenience. A preliminary analysis of the results reveals a fundamental tension between the subjective experience and the objective assessment of values, competences and material infrastructure for food.

The data set derived from the maps and interviews suggests that food outlets are present in Letchworth. However, the opening hours, frequency, location and price of these outlets may present a challenge for residents in terms of integrating them into their daily routines and associating them with other daily tasks. Nevertheless, the majority of residents interpret this as an endorsement of local food outlets, leading them to prioritise supporting these businesses, even if it means adjusting their routines to access them.

The second area of tension is a sense of the local, which contrasts with respondents' expectations of the foodshed for food procurement. Chapter 7 explores the concept of food proximity, questioning the impact of distance on accessibility and the role of transport in this context. The results show that the road system is limited outside the town centre, suggesting that residents living close to the town centre are more likely to use alternative modes of transport, such as cycling or walking, to shop. The results also illustrate the conflicts between sustainability and the local approach, exemplified by the conundrum between local production and local consumption, as highlighted in Chapter 5, Section 5.2, and challenged by the overall global phenomenon, as discussed in Chapter 6, Section 6.4.

The third tension examines the visibility of food in the town by outlining the key elements that demonstrate the prevalence of food in the economic, spatial and administrative spheres, as well as the organisational structure that supports food in Letchworth (Jones, 2023). Chapter 7 builds on the previous chapters, which highlight existing food initiatives that are undermined by a lack of awareness (Smith *et al.*, 2021). The findings show that despite the prevalence of on-the-ground initiatives, improving the food economy depends on promoting awareness and knowledge. The role of the Foundation in this regard is to facilitate this improvement.

Discussion and contribution

Overall, the findings outlined in section 3.1.2 reflect the three key elements of the conceptual framework: firstly, the meaning that residents attach to food choices; secondly, their competencies, knowledge and skills in relation to the city and food; and thirdly, the opportunities created by the environment. The latter depends on spatial structure, regulation, norms and practices. However, the Letchworth Garden City case study reinforces the broader mechanism around the use of walking or cycling for shopping, which is linked to infrastructure and proximity as factors influencing food accessibility (Walker *et al.*, 2010; Lang, 2012; Kaiser, 2017). The criteria highlighted by residents are consistent with the economic, physical and socio-cultural enablers or barriers identified in section 2.3.3 (Blay-Palmer and Donald, 2006; Jarosz, 2008; Seyfang, 2008, p.199; Cerrada *et al.*, 2018, p.13).

The findings in Chapter 7 also suggest the relevance of the literature on networks or bundles of practices (Caspi *et al.*, 2012; Castelo, Schäfer, and Silva, 2021) and the role they play in changing and implementing practices that include sustainable food sourcing. Furthermore, the social dimension of supporting local food is in line with the existing literature on the social construction of good food, which also includes non-food components for sustainability (Fairchild and Morgan, 2007; Fabbrizzi, Menghini, and Marinelli, 2014; Samina *et al.*, 2017) to the understanding of 'good food' through its accessibility, challenging the proximity of food and walkable distance (Lang, 2010, p.94; Caspi *et al.*, 2012, p.1711) compared to a less tangible local foodshed (Kloppenburg, Hendrickson and Stevenson, 1996; Brinkley, 2013, p.246), its flexibility, visibility and understanding (Feagan, 2007; Lu and Carter, 2022). Patterns of food provision are contrasted with the ease of use of food outlets and expectations of good food, highlighting the tensions of food ethos and its integration into everyday life (Barling, Lang, and Caraher, 2002, p.16; Todorovic *et al.*, 2018, p.2). In this sense, sections 7.2 and 7.4 demonstrate that the Letchworth Garden City case study adds to the literature on the accessibility and acceptability of spatial and non-spatial elements in cities (Pilař *et al.*, 2019; Bösehans and Walker, 2022). This consideration of knowledge is also relevant in relation to the constructivist paradigm and the relativism of knowledge (Hershberg, 2014, p. 2; Braun and Clarke, 2022, p. 175).

In terms of the second tension, the understanding of local, this concept is explored in the literature review (section 2.3.1) and is defined by the accessibility of food and the scale of its distribution. Residents' understanding of local food confirms the idea that local and short food supply chains as the ultimate framework for access to healthy and sustainable food are not as straightforward as they seem (Born and Purcell, 2003; Winson, 2003) and highlights the influence of the environment on food practices (Winson, 2003; Mikkelsen, 2011a, Lake and Townshend, 2006). Another point to make based on the second tension is that the residents' perspectives support section 5.2.1, which

highlights the conundrum of small-scale food businesses in the new economic market and social local, which is also supported by previous research (Jarosz, 2008; Brinkley, 2018).

The four chapters of findings have now been completed. The final chapter 8 will synthesise the four areas of study discussed in the previous chapters and draw on the existing literature to address the three research questions. Finally, as all research is subject to limitations, Chapter 8 will highlight these, thereby informing the scope of the doctoral research and suggesting areas for further exploration and future study.

CHAPTER 8: DISCUSSION & CONCLUSIONS

8.1 CONNECTING THE FINDINGS FOR DISCUSSION, OVERVIEW OF THE CHAPTER

Chapter 8 brings together the findings to address the research questions identified in Chapter 2. This final chapter concludes the thesis by providing reflections on its academic contribution and the policy implications of the doctoral study, and steers to new research avenues.

The opening section is based on an overview of the results compared to the original literature review material, summarised in Appendix 8.1. This summary is the initial step towards addressing the three research questions derived from the literature review in Chapter 2:

- Could the governance structure of the garden city be suitable to support a strategy for resilient food cities?
- Do the spatial characteristics of the garden city influence food-related networks and practices?
- How might the garden city model contribute to a food economy that has positive impacts on environmental management, climate mitigation and public health benefits?

Expanding upon the references that acknowledge the role of the garden city model in urban food planning outlined in Chapter 2, this chapter delves into food within the garden city as a component of urban food studies. Therefore, Chapter 8 explores the correlated factors encompassing governance, urban planning, and socio-spatial experiences found in Chapter 4 to 7 to answer research questions.

8.2 ADDRESSING THE RESEARCH QUESTIONS

The three research questions aim to cover the holistic approach to food in the garden city model, focussing on spatial, economic, administrative and social aspects of the garden city model.

The findings of the thesis demonstrate the continuation of the legacy of the world's first garden city, established in 1903 while highlighting the strengths and limitations of the site, which are analysed within the academic theoretical framework. The close implementation and maintenance of Howard's garden city vision by the Foundation makes an excellent case study for exploring its food principles. Chapter 4 describes the spatial layout of the city and the development of its built and green spaces. The chapter highlights different spatial configurations suitable for food production and a socially empowered food landscape. Chapter 5 explores the economic principle of Land Value Capture LVC in Letchworth, highlighting the continuity of publicly owned land in Letchworth and its management for the benefit of the community. The economic implementation of LVC in Letchworth is associated with land ownership and land stewardship and provides a structure for biodiversity and land use conservation. Land stewardship has an impact on farming activities but potentially on the management of the landscape and land availability. Chapter 6 emphasises the role of the Foundation and its commitment to serving the community. Its configuration is similar to the original garden city principles of a local expert committee and highlights current efforts to engage with the community involved in food. Finally, Chapter 7 moves to the microscale, assessing the socio-spatial experience of food in Letchworth and its impact on the foodscape.

This main section draws on the food security paradigm based on food distribution and access identified in section 2.3 (Moragues-Faus, Sonnino and Marsden, 2017; Morgan, 2015; Lang and Barling, 2012). This change of outlook toward food involves new fundamentals critical to present-day impediments linked with the conventional food system (Maye and Kirwan, 2013, p.2) and the need to include new stakeholders in a collaborative and place-based approach (Kirwan and Maye, 2013; Maye and Kirwan, 2013; Sonnino, Marsden and Moragues-Faus, 2016; Cerrada-Serra *et al.*, 2018; Sonnino, 2019).

8.2.1 An instrumental governance for a collaborative approach to food system

The first question investigates how the governance structure in Letchworth Garden City embodies the garden city principles for food:

- Could the governance structure of the garden city be suitable to support a strategy for resilient food cities?

Addressing the first research question means an examination of the role of the different stakeholders who take part in the local food economy in the findings: their collaboration, their respective roles in creating a sense of place, building on the concept of “local option”, a fundamental aspect derived from Howard (1898, p.73).

The challenge of engaging with stakeholders new to the food economy

The garden city model relies on the combination of stakeholders’ initiatives to sustain the town economically and socially (Howard, 1898, p.17). Community land ownership makes Letchworth Garden City an especially pertinent case study as its key premise emphasises engaging the local community for the success of the garden city.

The charitable status of the Foundation represents a double-edged sword in terms of outlining its role in the community. This dual aspect appears in the change of objective, the good-practice framework, or the governance representation that the Foundation officers mention (L.03, L.06, L.09) in section 6.3.1. An unequivocal role is, however, to manage the land on behalf of the community. The findings point out the divergent perspectives and expectations of the terms of engagement between the Foundation and the community. As a prevalent stakeholder in Letchworth, the unique institutional organisation of the Foundation offers the flexibility to be a mere support for place-based initiatives or a potential partner for formal collaborations with the community (section 6.4). Regardless of its level of commitment, the Foundation could use its knowledge of the place to potentially facilitate the implementation of food strategies and acquire expertise to support and involve more stakeholders in the local food economy (section 6.2.2)

Combined, Chapters 6 and 7 provide relevant accounts of the expectations of different stakeholders in food activities at the city level. The findings, particularly in section 6.4, illustrate the ambiguous relationship between communities and institutions in creating partnerships for food in Letchworth. towards the emergence of prospective new economic markets that could potentially support the local food economy. This understanding is evidenced by their recognition of the potential value of

SFSC-like food producers. This idea is, however, challenging to implement, both in regard to the logistic and executive aspects of small-scale direct selling in Letchworth (section 5.1.2 and 5.2.1), an issue also demonstrated in literature (Jarosz, 2008; Marsden *et al.*, 2000; Niemi and Pekkanen, 2016; Renting *et al.*, 2020).

Experts interviewed emphasise the crucial role of local authorities in developing a food strategy (section 6.1), which can, nevertheless, be limited due to a lack of expertise or isolated departments, phenomena explored in the literature (Albrecht, 2001; de Wall *et al.*, 2019). These conclusions are also observed in Letchworth and represent a challenge to achieving co-governance despite endeavours to promote cooperation between residents and across institutions (Bento, Tagliabue, and Lorenzo, 2020; Oliver, Vesty, and Brooks, 2016). The distention between food-related system and the local agenda is a consequence of the limitation of expertise and overlapping remits for local authorities, evidenced by literature on urban food planning over the last two decades (Pothukuchi and Kaufman, 1999, 2000; Carsjens, 2015; Battersby, 2017; Parham, 2020).

Even if much of the land is publicly owned in Letchworth, the process of land value capture presents shortcomings in several accounts in terms of food integration into strategic planning: first, the agricultural dimension of food is not an area of local authority expertise; second, the findings stress the importance of community involvement to bolster the local food system and economy, reinforcing observations made in the literature that places them as drivers for change (Ghose and Pettygrove, 2014; Vara-Sánchez *et al.*, 2021; Lu and Carter, 2022). The ideal self-organisation and self-sustaining networks of the community groups expected from the local institutions (O.02, L.06, 08) are thus ambiguous and reflect on the literature on placemaking based on a self-organised and reliant community (Blake, 2019; Kaiser, 2019).

The absence of some stakeholders from the dataset indicates difficulties in involving essential stakeholders in a place-based approach, including rural estate tenants and supermarket managers (see also section 8.4.1). This limitation implies that certain stakeholders do not intend to engage at a local level (Barling, Lang and Caraher, 2002), which stresses the constraints of accommodating new stakeholders with divergent agendas. This observation challenges the notion of food-related realms merging and contributes to the existing literature on the hybrid nature of Alternative Food Network (AFN) (Winter, 2003; Sonnino and Marsden, 2006; Chiffolleau *et al.*, 2019; Kneafsey *et al.*, 2013).

Local option in Letchworth: food opportunities and limitations

Through land value capture, the Foundation ensures autonomy and the ability to create tailored responses to issues appearing on a city level. Besides, the town today's layout today includes various areas suitable for food that embrace different categories of stakeholders, from food producers and food retailers to residents involved in urban gardening. This layout reflects most of the original features outlined in the early plans (sections 4.1. and 4.2). Preserving the initial blueprint and maintaining the garden city concept by way of the enactment of the Foundation and its varied portfolio is crucial for drawing in different stakeholders as a basis to reinterpret food as a local option as described by Howard (1898, p.64, p.73). This opportunity for a modernised local option stems from the status of the Foundation as landowner and its associated economic power that can provide support to local businesses development and create a vector for food partnership and a backbone for harnessing the local food economy.

As Howard depicted, today the Foundation fulfils a local role by fostering the growth of local enterprises (sections 5.1 and 6.2), which present an avenue for economic experimentation and the opportunity for entrepreneurship (section 5.2.2). Associated with other regional-level partners (section 6.2.2), the economic principle of the Foundation supports commercial endeavours, such as autonomous retailers attracted by the history of the town and the low retail unit rent, an idea defended by Howard (1898, p.43). The findings imply that the combination of affordable rental rates and local support solutions offers an avenue to counter competitiveness and logistic costs in SFSCs (Betsy, Blay-Palmer, 2006; Jarosz, 2008; Todorovic *et al*, 2018).

Letchworth offers a relevant garden city set of parameters to facilitate local food access and production, yet the findings show limitations due to global dynamics (section 6.4). To illustrate this gap between local authorities and food, the “missed opportunity” (L.09, see 5.2.3) of the rural estate to contribute directly to the local food economy suggests mostly a difficulty in managing different tenants in favour of one farming company. The opportunities that Letchworth offers demonstrate the key principles at work to potentially unleash a local food economy, particularly when looking at the rural estate and Urban Agriculture (UA) more generally: the combination of the urban layout and the independence of the local institution that is the Foundation provide an opportunity for communities to retrofit food in the various green spaces characterised in section 4.3.

The incorporation of townspeople within the food system is congruent with the local option that functions within the framework of the garden city model (section 2.2.1). Sections 7.2 and 7.3 give an account of healthy and sustainable food criteria among 15 residents. All of them prioritise a fair value being given to food, referring to fair prices (Howard, 1898). Findings have shown limitations and disappointments in accessing food that enables sustainable practices. A modernised dimension

to the local option at a city level can be influenced by ease of access or availability (Walker *et al.*, 2010; Caspi *et al.*, 2012; Todorovic *et al.*, 2018) as some residents expressed their commitment to support local businesses within budget and convenience conditions.

8.2.2 Expectations and realities of the food principle in Letchworth

A citation from Guise (2015, p.19) underpins the second research question: “urban morphology, once viewed as a purely artistic field without any influence on human behaviour, can now provide practical solutions through its spatial aspects”. The second research question addresses the physical layout of Letchworth to explore the garden city food principle and its interplay with the socio-spatial experience of the place:

- Do the spatial characteristics of the garden city influence food-related networks and practices?

This section gathers findings pertaining to spatial features in Letchworth in Chapter 4 as a basis to cross-examine them with additional factors of economic and social aspects to provide an overall picture of the holistic characteristics of this garden city.

A layout that serves a resilient food city

The findings contribute to the exploration of the interplay between urban morphology, food economies, and their implications for health and sustainability. These also highlights the economy, governance and community as critical aspects of sustainability.

Firstly, the findings emphasise the persistence of two main areas in Letchworth: the agricultural and the town estates. The distinctiveness of Letchworth lies in the continuation of Unwin and Parker's original masterplan (Unwin, 1915; Purdom, 1917), which safeguards both the agricultural and urban estates since the Foundation of Letchworth (Fishman, 1977). The doctoral study explores the development of built green areas to identify a change in land function (fig. 4.14) to exemplify this continuity of agricultural use with the current map of green and productive land in Figure 4.7. The gradual disappearance of the farms in Figure 4.14 documents the gradual discontinuation of the agricultural belt to support smallholdings (Adams, 1905; Livesey, 2019, p. 106). The green

structure nonetheless remains a significant component of Letchworth Garden City, consisting of varying sizes and characteristics suitable for diverse land uses and food purposes.

These accounts mean, in light of the literature, that similar issues remain from the early 20th century with regard to land access (Fainstein, 2011; La Rosa, 2014) and the role of UA in addressing food security (Garnett, 1996; Pothukuchi et al., 2007; Badami *et al.*, 2015; Opitz *et al.*, 2016) and building community (Koopmans *et al.*, 2017; Lal, 2020). Following this notion associated with UA, section 5.4 highlights the role of land available for UA to maximise potential and adapt to build urban ecological resilience while also providing opportunities for community empowerment (McIntyre, Knowles-Yáñez and Hope, 2008; Beilin and Wilkinson, 2015; Sellberg *et al.*, 2020). The evolution of allotment higher take-up of allotments during the COVID-19 pandemic, supported by urban resilience literature and the role of food (Howe, Bohn and Viljoen, 2012; Skordili, 2013; Lang and Heasman, 2015; Barling, 2017; Caraher, 2019) show how allotments and private gardens, as part of urban agriculture, have the potential to reclaim space for resilience (Pulighe and Lupia, 2020).

The Letchworth case-study also demonstrates the importance of land stewardship with land available for UA (section 4.1, 4.4, and 5.4) that is not susceptible to change with long-term tenure (Fainstein, 2011; Badami *et al.*, 2015; Koopmans *et al.*, 2017) because protected by the institutional framework of the Foundation. The present doctoral study lends further credence to the argument that local land stewardship confers a dual benefit, encompassing the conservation of biodiversity and the mitigation of land pressure (Kirschenmann, 2008, p.116; Brinkley, 2013, p.249; Blay-Palmer *et al.*, 2013; La Rosa *et al.*, 2014; Torres, Nadot and Prévot, 2017; Artmann *et al.*, 2021) also argued as a viable route for a world facing an escalating demand for natural resources (Thomas, 2016).

Findings regarding the spatial layout of Letchworth and its agriculture estate also underlines literature about sustainable landscape with edible purposes (Viljoen, Bohn and Howe, 2005; Duany *et al.*, 2011; Russo *et al.*, 2017; Bohn and Chu, 2021). Equally relevant to current literature, the garden city model contributes to the local economy through LVC. The provision of charitable services demonstrates the Foundation's dedication to creating a multifunctional green space for the local community, interweaving education and recreation, with the Foundation operating a segment of the site with educational farm activities alongside commercial tenure for agricultural activities. In addition, the Greenway, featured in Figure 4.7, is a pedestrian and cycling loop across the rural estate, which associates farming, education and recreational health activities as delineated in diagram No.2, which supports the health part of social sustainability (Lang, Barling and Caraher, 2009).

A second wide aspect of the spatiality of the garden city focuses on the town estate and its built environment. Findings may suggest a shortcoming in Letchworth as an embodiment of the garden city model in terms of access to amenities within accessible distance (Howard, 1898 p.32; Creese, 1966; Miller, 1989; Vernet and Coste, 2017, Livesey, 2019), arguing that each ward, as represented in Figure 7.1, should be functioning as a town in itself. The role of the spatial layout in Letchworth is also essential for the visibility given to food that creates a sense of place, as explored in section 7.4. Although the prevalent role of local food in Letchworth may be perceived as a challenge in some interviews in some instances in section 4.4 and 7.4, overall data suggests the garden city urban configuration in Letchworth and characterised in section 4.3 to place food as a central vehicle for inclusion and priorities (section 6.3).

Acceptability and convenience: accessing healthy and sustainable food economy.

Based on the spatial analysis, Chapter 7 examined obstacles that prevent access to healthy and sustainable food options. The findings in section 7.2 corroborate the existing literature on socially constructed food values (Marsden *et al.*, 2000; Kirwan, 2006; Kirwan and Maye, 2013; Berti and Mulligan, 2016; Chiffolleau *et al.*, 2019; De Schutter, 2017, 2019). Emphasising the impact of civic engagement in supporting the local food economy (Marsden, Banks and Bristow, 2000), the residents are nonetheless pragmatic regarding food accessibility and availability, embodied in the food acceptability as defined in section 2.3.3 (Caspi *et al.* 2012, p.1172).

The doctoral case study indicates an effort to support the local food economy from the residents consulted. Section 7.3 highlights the interplay between spatiality and acceptability represented by the car-based model supermarket in the town centre. Five residents report walking or cycling to the car-based supermarket located in the town (section 7.2), whereas the road infrastructure leading to the industrial estate makes it impracticable for bikes or pedestrians, as stated by Sonia and Emma and characterised in the three-dimensional model in section 4.3. Hence, a possible conclusion is that the convenience of this specific supermarket in the town centre is not primarily due to its car-based model but to its strategic location in a friendly walkable environment while offering the typical flexible opening hours and adjustments possible to meet food choice criteria (section 7.3) also identified in Seyfang's (2006, 2008) work. In summary, it can be posited that the car-based features of supermarkets may act as an incentive for individuals to drive to the supermarket, as well as the non-suitability of certain areas may act as a deterrent to walking or cycling.

Findings corroborate two aspects of the AFN literature: first, the idea that environment, spatiality and acceptability combined can shape food practices, and second, that little businesses are a large

part of sustainability as a part of the territorialisation market and re-connection between producers and consumers and is a motivation for consumers to support these (Ilbery and Kneafsey, 2000; Sage, 2003; Seyfang, 2008; Renting *et al.*, 2013, p.400; Blay-Palmer, Sonnino and Custot, 2016). However, local food procurement may result in unintended consequences, as evidenced by Sophie's experience with her milk delivery service (see section 7.2.2). Initially, she had anticipated utilising reusable glass bottles, but ultimately received the same plastic bottles she wanted avoid from supermarkets. This experience underscores the challenges associated with sustainable food procurement, in this case the difficulty in meeting criteria such as locality and plastic-free packaging, and the subsequent impact on consumer preferences, which, in this instance, favoured locally sourced milk over reusable containers. In addition, local milk delivery embeds the food miles of truck delivery rather than, in Sophie's case, walking to the supermarket, highlighting that her main incentive is to support local milk producers.

A second aspect is the theory on the physical arrangement of food outlets is related to the influence of the environment on behaviour (Vonthron, Perrin and Soulard, 2020). The findings are in line with the reflection on the notion of bundles of practices (Nicolini, 2012; Brons and Oosterveer, 2017; Castelo, Schäfer and Silva, 2021) and the inclusion of practices in everyday life as a criterion for change and permanence to become a new habit (Shove, Pantzar and Watson, 2012; Shove and Walker, 2010).

This account of the spatiality of the foodscape in the infrastructure serves the visionary hope of Howard (1898, p.143) describing “[...] new means of distribution [that] are bringing the producer and the consumer into closer relations, and thus (by reducing railway rates and charges, and the number of profits) are at once raising prices to the producer and diminishing them to the consumer [...]”. This quote introduces the third and last research question, which expands on the contribution of the doctoral case study of Letchworth as a prototype of a garden city model to sustainability and health as a whole.

8.2.3 Grasping the garden city food principles for health and sustainability

Spatiality and co-governance, or the interaction between the physical environment and human decision-making processes, were the two essences of the doctoral thesis used to triangulate the understanding of the holistic stance of the garden city in regard to the food economy. Hence, the third research question is the most all-embracing of the three and aims to extract the core of the doctoral contribution.

- How might the garden city model contribute to a food economy that has positive impacts on environmental management, climate mitigation and public health benefit?

The findings, based on the relationship between garden city principles, sustainability, and health through the lens of food, informs on the significance of a collaborative approach for building resilience to the changes necessary to ensure ongoing food sustainability, and social inclusion.

Re-localisation of food and place-based governance

The findings highlight in two instances a conflicting and confusing concept of local food for producers and consumers. Section 7.2 reports on the eagerness of some participants to bring the food economy to a local level, but with various scopes in terms of food traceability and integration into daily activities. Section 5.2 reflects on the missed opportunity of the rural estate to have different small agricultural holdings, corroborating literature on AFN in food marketplaces (Jarosz, 2008). Farmers in interviews give accounts of non-conventional and small-scale food output that sits between needing the modernised food system market and being not fully suited for that market to be functioning, while there is not a locally adapted market to secure a steady income stream. These two observations explain why even if land ownership could help land access to small-scale farms and encourage more connection between the rural and town estates, the macro-scale economy is likely to impede their implementation. These two outcomes meet in highlighting the difficulty of small-scale production and are often associated with AFN, which illustrates there is a grey zone in implementing and supporting a re-localisation of food. In current AFN literature, the notion of re-localisation of food and place-based governance is challenged by some aspects of intertwined AFN and conventional food systems (Winter, 2003; Sonnino and Marsden, 2006; Chiffoleau *et al.*, 2019; Kneafsey *et al.*, 2013). Hence, the findings add to the complexity of intertwined alternative and conventional food economies to explore the place-based food economy, governance, and practices.

From 7.2, section 7.3 explores further the tension between some residents' expectation and understanding of local food associated with procurement, whether in relation to the produce or the outlet from which that food is procured. The results suggest that the notion of local is associated with values aimed at grounding food in place, which resonates with some dimensions of embeddedness, a recurrent theoretical framework that has evolved in academic papers to unravel social components in the re-connection of food systems to places (Hinrichs, 2000, p.296; Sage, 2003, p.47; Winter, 2003, p.24; Sonnino and Marsden, 2006, p.182; Kirwan, 2004, p.397, 2006, p.301; Chiffoleau *et al.*, 2019), p.183. On the governance side, both categories of participants from residents and institutional organisations voice their awareness of the potentiality to re-localise food,

which resonates with the food retrofitting concept found in the literature (Parham, 1992, 2005, 2016) akin to the literature on edible landscape (Viljoen, Bohn and Howe, 2005; Russo *et al.*, 2017; Bohn and Chu, 2021). Experts E.05 and E.06 share insight on the role of a food agenda with different items to address when it's the right moment.

Section 6.3 sheds light on the joint effort of community groups and local institutions to bolster a self-sustaining network of food initiatives, showing a willingness to work together. These formal and informal networks as described in section 6.3 resemble an attempt at a collaborative approach explored in section 6.1 and illustrate how place-based governance influences the re-localisation of food-related initiative as a part of the local food economy.

Findings suggest a gap in terms of the decision-making process related to food for local authorities inhibiting them from a holistic approach to food governance, despite attempts to increase independence in decision-making power on a sub-national level in the UK (Sturzaker and Nurse, 2020) with the Localism Act (2011, no page), which aims at offering “new freedoms and flexibility for local government” and “new rights and power for communities and individuals”. Supported by the experience of experts in food partnerships in England through E05 and E06's inputs, findings suggest that this limitation can be structural and linked with their statutory remit and siloed expertise applied to a focused aspect of food, observed in sections 5.2.3 and 6.4.1. These apply to some extent to the Foundation, whose unique charitable status allows an independent and long-term view as well as an adaptation of their capacity, as mentioned in section 6.2.

Among the tools at the Foundation's disposal as a landowner, the findings reflect the disconnect between environmental protection and economic capability identified in the literature:

Varying circumstances will influence both whether and how individuals, groups, or multi-stakeholder partnerships and networks mobilize to carry out stewardship actions. Thus, it can be helpful to understand the characteristics of (e.g., levels of resource dependence, socioeconomic status, race, gender, etc.) and institutional, economic and social barriers facing different actors or groups and how these relate to stewardship motivations, capacity and actions (Bennett *et al.*, 2018)

The Foundation's role and leadership in environmental management highlight its distinctive position of landowner governed by charitable objects using LVC, as highlighted in sections 5.1 and 5.4. However, its capacity for economic management related to farming activities is limited.

A previous failed attempt by the Foundation to manage rural estates for economic performance discussed in section 5.1.2 was explained as a trigger to lease most of the arable land in Letchworth's agricultural edge. Local institutions and local authorities frequently encounter considerable

challenges in acquiring proficiency in agrarian methods, which hinders their ability to make relevant decisions regarding the land use for agricultural purposes. However, the land stewardship approach has been proven to facilitate the overcoming of such obstacles, with land ownership by the Foundation representing a commendable outcome. Consequently, the decision-land stewardship framework, which aims to manage green spaces, can be regarded as a modified framework tailored to the existing competencies of local institutions. This outcome is a testament to the foundation's land ownership strategy.

However, economic issues related to Local Food Systems (LFSs) are intertwined in the “macro-structural determinism” of the conventional food system (Marsden, 2000, p.22) suggesting that re-localising food at the city level requires operating a change through practices, relationships, networks, and skills for collaborative work and abilities of individuals (Hinrichs, 2003; Rogerson *et al.*, 2011). These dimensions are not directly related to the physical urban elements nor food and include education and knowledge, which play a role in understanding sustainability (Böschans and Walker, 2022) to generate resilience and place-making.

Resilient food city: missed opportunities, available option

A last consideration for the research question is whether the model is appropriate for enhancing knowledge regarding a posited resilient food cities framework. The findings indicate the existence of several accounts of food-based resilience in Letchworth.

First, Letchworth Garden City offers an opportunity in land use through LVC, as explored in sections 4.1 and 5.1. While Foundation representatives and residents describe the rural estate as a missed opportunity for the local food economy, two interviews with farmers provide insight into the conflicting scales within different food supply systems and highlight the disconnect between food policy and local authorities (section 5.2). The result of this situation is the seeming disconnection and invisibility of food production in the rural estate of Letchworth Garden City in favour of leisure (sections 4.4 and 7.4).

The data shows in Figure 5.2b that, on average, agricultural activities, which represent roughly 74% of the land held by the Foundation (or 42% of the total scope of the town), generate 5% of the yearly income stream, around £400,000. Compared to the remaining 95% of income derived from 25% of the portfolio that includes industrial activities, offices, residential, retail and leisure, the rural estate tends to be the least profitable proportionally to its area. However, Figure 5.5 suggests that during COVID-19, agriculture/farming activities remain stable, showing a form of strength in the economic model based on large farms providing a steady stream of income that might dissuade

the local institution from dividing the tenancy because of the “complications that go with it, and the scale of it is large”, as L.09 mentions in section 5.1.2.

Therefore, a second focus is to link the garden city model with resilience by exploring the LVC implementation. Catney and Henneberry (2019) observe a weakness in rationale of the LVC in the UK: while LVC focuses mostly on macro-issues, it overlooks small scale, and "little attention has been paid to political-economic factors that shape human behaviours" (Winson, 2004, p.300). It is therefore suggested that land use adaptation can induce resilience through co-governance to connect farming activities to the place. The case study demonstrates that land stewardship and the LVC could still partially compensate for the missed opportunity identified in section 5.1 to induce agricultural methods that respect biodiversity but also preserve arable land that could be accessible for alternative farming methods.

Supported by a National Scheme (Natural England, 2023), which provides a framework, the Foundation, by supporting land management that encourages wildlife and biodiversity, mitigates the less sustainable aspects of farming methods. Rural land, protected since the establishment of Letchworth Garden City masterplan (section 4.1 and 5.2) shows a preparedness that reflects flexibility, which echoes E.05's comment on the opportunity of food partnerships to identify a series of matters to address when the conditions are favourable (section 6.1). As the maps of food spaces in Letchworth illustrate (section 4.1 and 4.2), the urban layout provides the physical support necessary for food retrofitting as a town layout in addition to many opportunities for green infrastructure. Support from local institutions raises the question of developing sustainable food projects or partnerships between administration, business, and community that can adapt to time and place conditions (BHFP, 2020; RUAF, 2019; SFP, 2023).

Third, the common denominator of urban resilience is stated as the social and ecological realms (McIntyre, Knowles-Yáñez and Hope, 2008; Beilin and Wilkinson, 2015; Sellberg *et al.*, 2020). The role of practices explored in Chapter 7, and the perception of the town in section 4.4 inform opportunities to change, which are embedded in the conceptual framework of everyday life in section 2.3.3 and 3.1 (Shove, Pantzar and Walker, 2012, Pink, 2012). This is also mentioned by Beilin and Wilkinson when discussing resilience (2015, p. 1214):

Urban resilience begins with the ordinary business of telling stories, creating networks, and revisiting initiatives – and these reinforce the everyday and ordinary capacities of people. It is a work of imagination and storytelling and a process that engages cross-scale, relational and emergent activities.

The resilience of the garden city model is thus linked to the doctoral ethnographic work demonstrating that everyday life and individual practices promote sustainable change. The socio-spatial experience of the foodscape in Letchworth is a critical lens to examine the interconnection between social and economic aspects of attitudes towards food (section 2.3.3). The doctoral research suggests that the garden city model and its spatial, governance, and social settings encompass strategic parameters to trigger change. This makes the garden city a versatile and adaptative model for adjusting its local food economy.

8.3 THESIS CONTRIBUTION

The doctoral thesis makes a dual contribution in terms of academic input and policy implications. Firstly, the theoretical findings in urban food planning propose an updated model insofar that combines the four determinant aspects the garden city identified as a framework for the doctoral study. Secondly, the research indicates policy implications on two levels. As part of the garden city, the study provides recommendation for the governance bodies in Letchworth to improve community engagement and land use. The findings' generalisation showcases useful lessons that local authorities without the garden city administrative influences can potentially learn.

8.3.1 Contribution to academic knowledge

Chapter 2 provides an overview of the current knowledge and identifies the potential for a stronger link between the literature on urban food and the garden city concept and this dissertation makes an original contribution to knowledge through the three research questions, as detailed in section 8.2. Additionally, it enhances the methodological approaches and explores the interaction between models of the garden city and urban food planning.

Methodological contributions

The doctoral research adheres to the premises that social science is a structural determinant of policy (Lang, 2010b; Maye and Kirwan, 2011; Sonnino, 2019; Kirwan and Maye, 2013), moving away from a productivist and quantitative approach to food as some scholars have used to assess the garden city capacity for food (Keeffe, Hall and Jenkins, 2016; Yuan *et al.*, 2014). An aspect of the doctoral study is that original knowledge drawn from social science contributes to food studies to uncover an interplay between the spatial and the socio-spatial experience approach to foodscape. Based on the argument that the environment influences practices, as developed in Chapter 2, the decision to methodologically explore the town using a directionless travel technique (Paquot, 2010, p.52) is an initial exploratory stage. The drifting approach, as explained in 3.2.2 embraces a Situationist conceptual idea of psychogeography, which challenges the two-dimensional view of a map with a sensorial response to the environment (Debord, 1958; Schrijver, 2011). Using these techniques over other analytical processes acknowledges the researcher's experience of the place, which is in line with the critical constructivism theoretical framework that associates social

phenomena with physical phenomena (Hammersley and Atkinson, 1995, p. 6) and relativism of knowledge (Braun and Clarke, 2022, p.175).

The thesis's primary academic contribution lies in its emphasis on a distinctive approach to methodology, characterised by an innovative self-made approach to research problem identification that converges on various disciplines relevant to food studies, as emphasised in the academic article. This approach to different methods is, however, the continuity of the author's background in finding ways. The thesis does not adhere to a conventional textbook approach; rather, it is a meticulously designed set of methods tailored to address the specific aspects of the research problem.

The thesis explores the combination of traditional geographical and ethnographic research tools. The analysis of the implementation of garden city principles in practice, using a case study that explores the spatial, economic, political and practical dimensions, provides a comprehensive account of the strengths and limitations of the garden city model in relation to food as embodied in Letchworth Garden City. The case study approach is on a place-based basis, using a variety of stakeholders' views to shape a comprehensive account of the town. The exploration of food realities and the complementary perspectives of the doctoral project in terms of foodscape, including historical, geographical, and social dimensions (Margolis and Pauwels, 2011; Pauwels, 2011), is innovative as a result of the appropriation of different disciplines that use conceptual notions and visual tools from human geography (Hitchings and Latham, 2019) and ethnography (Pink, 2003, 2009; Röpke, 2009; Dagevos and Venn, 2020). The use of mixed methods in the visual dimension of the investigation implies that each element of the analysis and visual representation informs and offers a complete perspective of the distinct narratives or depicts an impartial account of the viability of a location-based strategy in Letchworth. The use of remote ethnography (see section 3.2) (Postill, 2017) as a tailored tool to reflect on the exceptional situation during the data collection period (Yavo-Ayalon et al., 2022) has advantages in terms of time and cost efficiency (Podjed, and Muršič, 2021). The absence of the researcher even provides a unique framework that allows for a self-reflective journey for participants (Podjed, and Muršič, 2021; Watson and Lupton, 2022). Therefore, the doctoral thesis is a useful addition to studies where face-to-face communication is impossible, also contributing to the accessibility of data in research.

The garden city model's contribution to the urban food agenda

Drawing on the literature review that indicates that social science provides valuable entry points for food policy and spatiality in contemporary food planning, the doctoral study contributes to the field of urban food research.

A distinctive aspect of this thesis is its depth and scope, supported by primary data that contributes to its original conclusions. Several studies scrutinise the garden city model and comment on its sustainability (Vernet and Coste, 2017; Rudlin, 2015; Parham, 2016) and whether it is a solution for food supply (Keeffe, Hall and Jenkins, 2016). However, the literature review demonstrates perspectives on how the garden city model seems to show limitations of an understanding of the food principle. The sustainable dimension in urban planning focuses on the components covered by garden city infrastructure and reflects current issues such as pollution, health, environment, housing shortage, well-being and community (Hall and Ward, 1998; Parsons and Schuyler, 2002, p.5). A form of universal version of the twentieth-century garden city has remained undetermined and adapted through time and latitude (Hardy 2005, p.43) and by embracing additional factors that play out in the food economy, this thesis highlights the importance of taking ownership of the community food benefit at the heart of the garden city model.

In addition to contributing to the understanding of garden cities, the thesis relies on current urban governance knowledge. While the literature underscores the fragmented approach to food planning and policy policies (Barling et.al., 2002; Barling 2007; Fridman and Lenters, 2013; Sonnino, Tegoni and De Cunto, 2019), the findings indicate that departments of agencies and organisations, and various food stakeholders may not always coordinate but propose that a food economy focus could promote placemaking and the human elements that foster a sense of place, encompassing garden city heritage.

In the sustainable food planning literature, the design and morphological approach is considered in conjunction with the health approach to urban food issues (Parham, 1992; Morgan, 2015, p. 1381; Viljoen and Bohn, 2005). Following the fundamental components of the model, divided into four chapters (spatial, economic, administrative, and social), the study combines these into a holistic approach to the model of the urban food system. The thesis offers valuable insights into the involvement of local administrations in the garden city, highlighting the often-overlooked importance of the LVC and public land ownership. Furthermore, it presents original findings on sustainable urban food planning and governance frameworks, underscoring the responsibility of cities to address food security and environmental management (Sonnino, 2013, 2019) pointing to the role of cities as landowners and land stewardship to foster local food economy that benefit the community.

8.3.2 Policy implication

Regarding policy implications, this work expands on the comprehension of present food partnerships in the UK. Local councils can play a helpful role, but it was argued that food governance required the collaboration of multiple agencies (Barling, Lang and Caraher, 2002; Sonnino, 2013; Halliday, 2015; Parsons, 2018). Letchworth highlights the power and limitations of local administrative organisation concerning strategy, tactics, and place as defined in Chapter 3.

The rise of the urban food subject in global north gathers various approaches:

These urban food strategies signal a new era in local food politics in the UK: where community groups and NGOs were once content to advocate for ‘alternative food systems’ from the margins of the political system, they are now actively collaborating with the local state to design and deliver strategies that address the shortcomings of the conventional food system whilst advocating for more sustainable food systems. (Morgan, 2015, p.1389).

This PhD project therefore has sought to gather the perspectives of different stakeholders throughout the thesis. One of the aims of the research was to conduct research with applied outcomes for implications, primarily for local intuitions in Letchworth, and potentially as wider implications for urban food planning.

Suggestions specific to the Foundation and local authorities operating in Letchworth

The role of the garden city principle in informing contemporary urban considerations and challenges is highly relevant. For instance, the Town and Country Planning Association (TCPA) has recently published a series of guides that draw on the garden city legacy and are aimed at practitioners and institutions (TCPA, 2020). The tenth guide in this series explores the place of food in the garden city and its holistic approach by considering policy context, community engagement, urban design, finance, local economies, and land stewardship (TCPA, 2019). As well as a wider framework the doctoral research is relevant to local institutions in Letchworth for specific findings presented to governors at the end of the first year of the programme, in March 2018. The Foundation requested a presentation of the key findings to the Board of Governors as part of the HKEP (see Appendix 1.1). The key findings highlighted several opportunities: the richness of the layout for food retrofitting, the history of the town that could reveal its food heritage, the high vacancy rate of allotment plots, and unkempt green patches between houses. The report praised the Foundation's role as a unique independent organisation in protecting the ethos and layout of the world's first

garden city for local people. However, it also identified areas for improvement and opportunities such as the introduction of small-scale agriculture on vacant land.

Further investigation during the PhD confirmed segmented expertise and knowledge of agricultural techniques compared to environmental management. As seen in Chapter 2, food policy is a rural rather than an urban issue (Blay-Palmer, 2009, p. 410) (De Schutter, 2019, p.23). The pivotal position of the LGCHF in relation to land ownership, protection and stewardship is central to land access (Chapter 5), central in rural -urban consideration (Osborn, 1969, p.68). The garden city economic principle has been demonstrated to be correlated with other dimensions of land management, with land stewardship providing a framework for biodiversity protection.

First, an opportunity arises for a modernised local option in the existing network of charitable services that offer food on their premises to potentially organise food procurement from local retailers or community gardens (Carlsson and Williams, 2008). This approach would also have the advantage to bring these activities to the fore.

Land protection should be continued to offer opportunities for urban food resilience as seen in section 5.4 but could be developed further with the cooperation between the Foundation as an institution and the residents. Interestingly, the findings suggest that some form of co-production seems to be an expectation of both the institutions and the local community to strengthen the relationship between the two (section 6.4). Since the COVID-19 pandemic, the Foundation has opted for a community-led strategy, although the community may need to have a clearer idea of the Foundation's remit. Sometimes conflated with the role of the District Council, Chapters 6 and 7 suggest some confusion about the role of the Foundation, its portfolio and the LVC scheme.

Integrating food into the overall governance system is challenging and considering different realities is one of the limitations observed in the findings: some local authority and Foundation representatives (L.09, 07, O.02, 03) and residents regret the limited representation of residents on the Foundation governance board (Chapter 6), which does not capture the complexity of food access. The findings of this study corroborate the use of food mapping for three purposes (Sweeney *et al.*, 2015): descriptive, analytical and communicative. Food mapping synthesises ideas through as a strategic tool for agencies, as a process that encompasses the graphical representation of ideas, and the utilisation of communication tools to facilitate inclusion in the discussion of the role of food in the garden city model. Finally, the Foundation Status is distinctive and can be used to develop further local food policies; its long-term perspective and adaptability in the context are two critical dimensions. The findings demonstrate the potential food procurement through the Foundation for its venues (section 5.2.2). The Foundation's charitable services have the potential to emphasise both

visibility and outcomes, while also establishing a connection between its various charitable initiatives through food.

Learning from the garden city model for food governance

In framing food security policy in the UK and the interdependence of agencies, the official UK approach to food security relegates local food systems to a secondary role (Kirwan and Maye, 2013, p.98). This situation can be attributed to the "variable geometry" of the UK's sub-national governance structure and its diverse policy responsibilities at the regional level (Barling *et al.*, 2002, p.2). Subsequently, local food systems have been reconsidered within the national food security approach (Kirwan and Maye, 2013, p.92), which argues for "new economics" for local economies, rooted in social interactions and environmental beliefs (Seyfang, 2006, p.3; Berti and Mulligan, 2016, p. 3; De Pascale *et al.*, 2017, p. 171; Goodman, DuPuis, and Goodman, 2012; Renting *et al.*, 2003) that could be a canvas for tangible urban food agendas (Sonnino, 2019).

With the leaving of the European single market area, Brexit negotiations generated unclear resolutions on international political relationships, trade deal rules, and their consequence on daily life. The EU shaped most UK policies, not only with the Common Agricultural Policy (CAP) but regulations on food security and trade deals within the single market (Barling, Lang and Caraher, 2002; Lang, Barling, and Caraher, 2009). At the time of writing the thesis, the UK Government anticipated the Brexit as a favourable opportunity to redefine its trade space (Lang, 2020; (Barling, 2017; Parsons and Barling, 2020) in a manner that would alleviate concerns regarding the potential loss of labour and international market competitiveness.

In light of this international context that considers the complex sustainability that integrates food economies, Morgan (2015) notes that the diversity and number of stakeholders who share interests in both food systems and urban planning multiplies the complexity of urban food planning. The establishment of a network of local partners, in conjunction with long-term commitments to local food, such as the collaboration with local businesses and the creation of dedicated departments to support food-related initiatives, facilitates fluidity and coordination between different agencies and stakeholders. Ensuring effective communication and coordination in terms of timing can also present significant challenges. Therefore, the study provides another account of the role of community-led groups is pivotal in achieving comprehensive town knowledge.

While the recommendations relate to the Foundation as a landowner, most local authorities have different land ownership situations and urban governance. A starting point could be to perform an evaluation of land possession and usage. Community institutions have the potential to contribute to

the acquisition of community land, the establishment of community land trusts, the identification of bespoke methods for securing agricultural land through collaborative efforts, and the provision of temporary land tenure that facilitates the testing of small-scale procedures. The literature review and presentation of results demonstrate the significant relevance of autonomy and administrative hierarchy framework to regional food economies (Davoudi and Sturzaker, 2017). The regional dimension is indicative of the proximity of food production and the extent of a city or region's sustenance system (van der Gaast, van Leeuwen and Wertheim-Heck, 2020). However, as demonstrated in Chapter 2, the local food economy is embedded within a larger administrative and political framework.

Addressing climate change and making up for the funding cuts from Brexit (BBC, 2023; The Northern Powerhouse Partnership, 2023) present crucial targets for local institutions in the UK to play an important role in supporting a food economy that promotes equity and supports local communities. Although local food has been shown to be fragile (Sonnino, 2013) and the thesis acknowledges the local trap theorised by Born and Purcell (2006), a place-based approach may be the appropriate framework to challenge a hegemonic international modern food market and explore the food system paradigm, which emphasises food distribution rather than quantity, the premises of the thesis, explained in section 2.3. As the present thesis approaches its conclusion, it is important to consider the limitations of the research design and the findings that have been obtained. The subsequent section will address the methodology and the limitations of the findings in terms of interpretation and generalisation. This will be done in order to support a reflective approach to the PhD and to identify potential avenues for future research.

8.4 REFLECTING ON THE WORK

The concluding segment of this chapter provides an opportunity to impart reflections observed during the course of the PhD study. The methodology had to be revised due to limited data access resulting from the COVID-19 outbreak. Despite feeling physically disconnected from the case study location, the journey provided an opportunity for contemplation of the dataset and its discoveries. Recognising the limitations of the dissertation strengthens the overall interpretation of the dataset and documents the learning experience of the doctoral journey. This can be achieved through reflecting on the academic project, findings, expectations, and good practice. Besides, acknowledging the limitations permits new questions to be posed by the thesis.

8.4.1 Methodology framework: learning curve

This section examines the methodology as a process, taking into account the ethnographic approach to the case study that aims to investigate the validity of the thesis. The reflection focuses on the unforeseen inputs that participation brings in the data collection and process. The second aspect expands on the study's robustness and its qualitative approach. Additionally, the doctoral journey and the learning curve it involves is another aspect worth reflecting on to conclude the thesis.

The unexpected inputs from the participants

Chapter 3 explains the different ways in which residents could participate. Some residents were keen to participate using any method, while others preferred one medium. Out of 15 residents, four contributed to the study using more than one medium. Three residents who initially joined an in-person interview were afterwards keen to share images of their food environment, reversing an initial protocol that assumed an interview would be organised to discuss shared images beforehand. Moreover, the variety of visual supports sent by the participants enriched the findings: while personal pictures would make up the majority of the visuals sent (documenting strolls in town, shopping, food rescuing, apple picking, and accessing raise-beds for food growing), one occurrence of images downloaded from the Internet was an unforeseen approach that at the same time conveyed the universality of some food practices the resident wanted to capture: berry picking, milk delivery, market vegetable stall tending. Another dimension was captured participants' responses during the interviews: in many instances, straightforward, effusive, or talkative contributions revealed new

topics. All these accounts provided evidence of the development of an iterative process of qualitative research.

This was a non-linear process that illustrates the unexpected contributions inherent to participatory methods, as Vigurs and Kara (2017, p.523) report on productive disruption from participants in their research involving photo-elicitation project, both “challenging and fruitful in practice” to the point that primary data from qualitative methods reveal unexpected themes that can refine the research questions (Omwuegbuzie and Leech, 2006; Clarke and Braun, 2017). Likewise, there are different approaches to visual elicitation, but discussing pictures supports a communicative and participatory method that builds trust between interviewee and interviewer, enhancing engagement to elaborate on findings with unpredictable inputs (Lapenta, 2011, p.210). Visual methods can create communication and participatory methods beyond the academic sphere (Watson and Till, 2010; Fullana, Pallisera and Vilà, 2014), rebalance the role of the participant and the interviewers (McDowell, 2010). It enhances a feeling of collaboration between the interviewee and interviewer, producing sometimes unexpected knowledge through their interaction (Harper, 2002; Lapenta, 2011; Pink, 2011a).

Making use of qualitative research time

With the ambition to conduct both “conversational interview”, which prioritises the social aspect (Mann, 2016, p.100), and an “ethnographic interview”, which refers to observation (ibid p.101), SSIs’ framework is relevant for this doctoral research where the attitude of the interviewer is important to obtain reliable data (Friesen, 2001, p.124). Irrespectively of the circumstances, interviews require the formulation of questions that seek to avoid both bias and reflexivity, a term used to denote preconceived expectations regarding the responses of interviewees (Brewer, 2000; Yin, 2009, p. 102, 193, p. 51). Such expectations can be both conscious and unconscious, and this can have a significant impact on the validity of interview data. Language is important in interviews (Mann, 2016, p.4; McDowell, 2010, p.164) to ensure that the question flows so that undue obstacles do not prevent participants from giving a clear and informed response. Semi Structured Interviews (SSIs) allow for a conversational and versatile format to encourage responses when needed (Mann, 2016, p. 92) or to adapt the order of questions when a topic comes up in the interviewee to maintain a smooth sequence of questions.

Transcription is a creative process that prepares data management (Oliver, Serovich and Mason, 2005; Vaismoradi *et al.*, 2016; Shelton and Flint 2019). The long exercise of transcription is a specific time for reflection in the doctoral programme to reflect on the overall data set about the

consistency of the methodology and the appropriate analysis strategy to undertake. Transcriptions take a considerable time to process, depending on the length and the quality of the recording. This time can be used as an active reflection on the future steps of the research, gathering an overarching sense of what the data suggests or if some aspects surprisingly do not appear. Punctuation and the 'naturalisation' of the interview background (Azevedo *et al.*, 2017), slang, mispronunciations, grammatical errors and non-verbal sounds such as laughter indicate a state of mind, an atmosphere during the interview and convey the naturalness of the discussion (McLellan, MacQueen and Neidig, 2003, p.65). Disfluencies such as 'umm' and 'humming' were kept to a minimum in favour of indications of silence and apparent hesitation in order to avoid an excessive impression of uncertainty, which comes across differently in the written material and the audio recording (Collins, Leonard-Clarke and O'Mahonet, 2019).

Reproducibility and validity

In order to examine the reproducibility and validity of the doctoral study, this section devises on difference between replicability and reproducibility (Yin, 2009; Braun and Clarke, 2022). Replicability is predicated on the assumption of the collection of an exact data set, while reproducibility ensures the same conclusion upon analysis. (Yin, 2009, p.17). Given the nature of the mixed methods employed in this study, its reproducibility is assured by re-analysing the existing data using the same research methods to yield the same results, thereby demonstrating the study's validity. The collection of the same primary quantitative data is imperative. In the case of qualitative data, this is virtually impossible; however, the use of thematic analysis (TA) ensures the reproducibility of the findings, resulting in consistent outcomes upon reanalysing the dataset (Yin, 2009).

To ensure reproducibility, it is essential that the analysis identifies categories that lead to identical interpretations. In terms of generalisability, the qualitative dataset of the doctoral study provides accurate and detailed analyse and interpretations of the quantitative data that can be widely applied. Contextual research is considered to offer extensive insights into a topic but is argued as not easily generalisable (Woodside, 2010, p. 31). The work undertaken for this thesis has been in tension between several disciplines to connect and untangle social, political, spatial, and economic phenomena, as seen in section 8.3.1. This innovative approach was an attempt to capture all the different realities of the food economy and its depth in one case study, linking of data sources was seen as creating new knowledge, which is a form of methodological freedom in the appropriation of different disciplines. A case study highlights the fundamental factors in the decision-making

process (Yin, 2009, p. 17), but an overreliance on a single case study may compromise generalisations and replicability (ibid, p.15).

8.4.2 Limitations and grounds for future research

The segmented respondents' profile

As noted by Hinrichs (2010, p.30), the insights of “non-expert” stakeholders are integral to interdisciplinary research in the realm of food studies, fostering a diverse range of perspectives. While the request to find participants was widely disseminated, the residents taking part shared common concerns, including food, the environment, wellbeing connected with food. All participants possessed a certain level of education and knowledge about the town for the purpose of taking part, which demonstrates their engagement within the community and highlights the political nature of the ethnographic approach undertaken in the doctoral study (Watson and Till, 2010, p.131; Schembri and Boyle, 2013, p.1253). Of the 15 residents who took part in the survey, 12 were women. A few were retired, stay-at-home mothers, working remotely, or on maternity leave. This observation implies the historical gender divides in society, which are also discussed in Chapter 2. The research data's homogeneity does not distort the research conclusions, given that the interviews were not meant to offer a full representation of the town's demographic profile. Instead, this group of residents serves as an indication of the viability of sustainable practices for those who are interested in food, environmental, and health-related issues pertaining to food.

In addition to the 50 participants in the study, a further 40 requests were sent to farmers, local businesses, garden city experts, public officials, and local councillors of the NHDC. As Watson and Till (2010, p.131) note, refusals came in a variety of forms during the interview request process. It is interesting to explore the nature of these refusals. Explicit refusals were given by only two contacted individuals, while the majority of invitations were unanswered. Several nearby supermarkets direct customers to a standard national phone line or online form for general enquiries, which was not suitable for the aim of this study. Due to temporary UH ethics regulations in place during the pandemic, it was not feasible to personally meet a supermarket manager in the industrial estate. Nevertheless, an individual from a local supermarket actively involved in supporting the Letchworth community kindly provided responses to the research inquiries.

Despite several attempts, a meeting with the agricultural company leasing the rural estate fields in Letchworth was not arranged. Even with support from the Foundation, capacity to reaching this

key stakeholder proved insufficient. Although if this represents a limit for the case study, failing to engage with some key stakeholders makes local engagement difficult to understand. This lack of engagement highlights how spatial detachment translates to social detachment, and how larger unlocalised retail outlets perceive their services.

Post-scriptum and follow up on dataset

In the Summer 2023, by the time the dissertation was finalised, and while the data collection was officially completed, some changes in Letchworth's food landscape were noted. In the autumn of 2022, two independent food businesses that were associated with sustainable practices in interviews with residents and mentioned in the food mapping had to close. One of these businesses announced this decision on its website, stating that it was “*no longer sustainable due to lack of customers and rising costs of produce and fuel*”. Shutting down their town centre outlet, they eventually offered delivery.

These small businesses, among others, were used as a crucial alternative when supermarkets reached capacity to supply food during the pandemic, as mentioned in section 7.1. These closures, a few months after the official end of the lockdown, raise the question of habits and practices. Some interviewees indicated that despite the benefits of using small businesses for deliveries during the pandemic, they reverted to their pre-pandemic habits (see Chapter 7). Although this is unlikely to be specific to Letchworth, the issue of small business survival highlights their vulnerability yet their resilience to shocks. The reasons why these businesses temporarily failed to maintain household habits is an overarching question linked to practices that could be explored in academic research. Changes in Letchworth since the end of the data collection period were observed remotely, with the Foundation appointing new governors with wider representation for inclusion of different stakeholders.

The thesis could also benefit from exploring further findings in greater detail. For instance, the allotment enthusiasm in Chapter 5 could not be explained by residents' feedback alone (Chapter 7). To monitor the situation, the District Council website was updated to reflect allotment vacancies. Notably, the impact of Brexit and climate change is absent from the dataset of interviewees and their practices, whilst Covid-19's influence on food procurement and supply was visible during the doctoral research period. The rationales behind this, along with the real effects on the food economy, would lead to new areas of inquiry.

New research avenues

Throughout the chapters, the thesis explained how the garden city model contributes to the food economy using a comprehensive approach, covering spatial, economic, governance, and individual practices. However, addressing the limitations mentioned earlier could provide additional insights into the findings. Involving some of the missing stakeholders would add further understanding of the activities in the rural estate and could enhance the findings on land management and farming practices. Doing so would deepen the understanding of how land management affects agriculture, including assessing the overall impact of farming on the environment. Likewise, the data collection does not include traders from the Farmers' Market, supermarket managers, all missing key stakeholders of the local food economy, Furthermore, conducting follow-up site visits to explore this enthusiasm and to gain a deeper understanding of the motivations of the new allotment holders could provide a more comprehensive interpretation of the quantitative dataset presented in section 5.3.

The completion of the thesis was underway in 2023 when the world was confronted with an unprecedented series of climate phenomena. Climate change was not a prevalent data in interviews yet is the default setting for future research. Nonetheless, the thesis provides a framework to highlight the local governance organisation, and the spatiality of the garden city as implemented in Letchworth, which proves to be an inspiration to create a resilient backdrop. In light of the indisputable fact that climate change and global warming represent an overwhelmingly natural response to complex, worldwide phenomena, it is imperative that local institutions seek to implement place-based solutions to mitigate locally occurring climate change. This thesis, whilst examining a unique governance model in Letchworth, has the potential to instigate change at a local level, encompassing land ownership, the economy and the social dimension of local authority.

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APPENDIX

Appendix 1.1: An applied doctoral programme: springboard to the academic research

This four-year doctoral research project is a PhD with Industry Experience in the Centre for Agriculture, Food and Environmental Management (CAFEM) with input from the University of Hertfordshire Urbanism Unit (UHUU), both at the University of Hertfordshire (UH). The industry partner, the Letchworth Garden City Heritage Foundation (LGCHF) is a charitable organisation, custodian of the garden city principles and the town's main local governance body, sharing some responsibilities with the North Herts District Council (NHDC, 2023a). The leadership team of the LGCHF was keen on exploring the local food-economy opportunities. The project follows a Hertfordshire Knowledge Exchange Partnership (HKEP). The first year consists of industry placement, and the second part is dedicated to a doctoral research project, based on the early findings the industry placement and although this PhD thesis reports on the academic framework, the prior year was key to constituting a research design.

The HKEP industry placement started in November 2017 and led to different forms of reporting, including a 6000-word academic essay that adapted the findings into a doctoral project proposal. The industry reporting to the LGCHF comprised a series of texts for the International Garden City Institute (IGCI) website (Andre, 2019, 2020) and a presentation to the Board of Governors (LGCHF, 2023d) in March 2019. The first-year research conclusions presented an analysis of the local food economy and proposed some recommendations (fig. 1.2). Four key themes structured the findings report for the industry partner: food accessibility, garden city identity, governance, and partnership. The exploratory investigation concluded that some areas in the town lacked food outlets within a 500-metre walkability, with, however, opportunities to improve a sound green infrastructure into an edible landscape. The garden city's layout carries a sense of place for a number of local stakeholders who shape the local food environment, creating a social backbone for an alternative and sustainable food infrastructure. Land value capture at the heart of the LGCHF governance is a unique model that enables the community land ownership to create a partnership between local stakeholders: private and public sectors along with organisation, civic-society actions, and residents. This analysis highlighted possible levers to improve the current food economy. The socio-spatial and economic context feature key elements to constitute a food strategy, bolstering the role of the LGCHF to expand its support to food education and knowledge sharing (fig. 1.2).

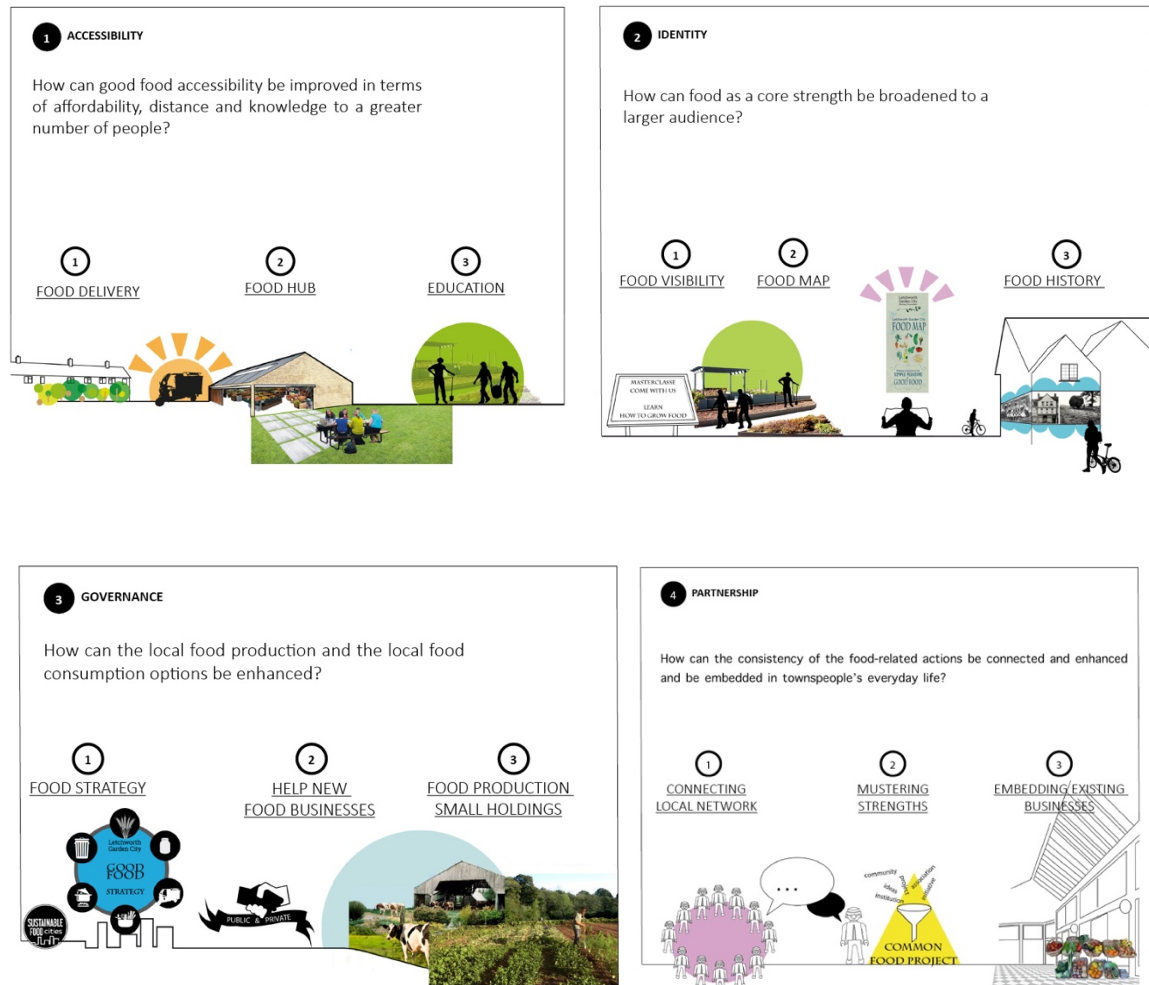


Figure 1.2: Set of propositions based on concluding questions of the urban food analysis to bolster local food economy, presentation to the Board of Governors at the end of the first year of the HKEP. Author, 2019

The exploratory HKEP stage helped develop notions that required further exploration within an academic framework in order to contribute further to the current food and garden city bodies of knowledge. Leading to questions that connect garden city and urban food studies. How can the garden city model be compared with the current urban food challenges? How can academics connect garden city food principles with sustainable urban planning issues and community empowerment? What are the social and community dimensions of urban food movements in the present day, and do they connect to some aspects of the garden city model? A doctoral literature review during the industry placement unravelled outstanding questions raised during the industry placement, and this exercise help reformulated the research questions within an academic framework, as developed in the literature review, in Chapter 2.

Appendix 2.1: Literature search criteria

Literature search – key terms for topic garden city

GARDEN CITY	
Search terms	<p>‘garden cit*’</p> <p>‘garden cit* history*’</p> <p>‘Ebenezer Howard’</p> <p>‘Letchworth Garden City’</p> <p>‘garden cit*’ AND ‘governanc*’</p> <p>‘garden cit*’ AND ‘food’</p> <p>‘garden cit*’ AND ‘agriculture’</p> <p>‘garden cit*’ AND ‘communit*’</p>
Inclusion and exclusion	<p><u>Inclusion:</u> UK, EU, and North American contexts; features of the garden city</p> <p><u>Exclusion:</u> Outside Europe and North America</p>
Data base	<p><u>Academic:</u> University of Hertfordshire data base (LRC – hardcopy and online) / Cambridge University Library / British Library / Scopus (access via UH)</p> <p><u>Grey Literature:</u> Town Country and Planning (TCPA) / Letchworth Garden City Heritage Foundation (LGCHF) / International Garden City Institute (IGCI) / The Comet, local newspaper</p>
Key authors	Hall; Howards; Miller; Mumford; Osborn; Parham Purdom; Unwin; Ward;
Key journals	Sustainable Cities and Society / Journal of Historical Geography /

Literature search – key terms for topic food economy

FOOD	
Subtopic	Food economy / Food system / Food policy /Food strategy
Search terms	<p>‘food system*’</p> <p>‘local food system*’</p> <p>‘food system*’ AND ‘cit*’</p> <p>‘food econom*’ AND ‘cit*’</p> <p>‘food’ AND ‘communit*’</p> <p>‘food polic*’</p> <p>‘food’ strateg*’</p>
inclusion and exclusion	<p><u>Inclusion:</u> relation to specific scope: national, regional, and municipal and community empowerment in the UK, Western EU, and North America.</p> <p><u>Exclusion:</u> Outside of Europe or North America; study paradigm and methodology relevant to the study. (e.g., purely quantitative papers)</p>
Data base	<p><u>Academic:</u> University of Hertfordshire data base (LRC – hardcopy and online) / Cambridge University Library / British Library / Scopus (access via UH)</p> <p><u>Grey Literature:</u> Sustainable Food Cities (SFC) / Sustain website / UN / FAO</p>
Key authors	Barling; Blay-Palmer; Caraher; Jarosz; Lang; Moragues-Faus; Morgan; Sonnino; Kneafsey;
Key journals	Built Environment; City Culture and Society; Nature; Environment and Planning A; Environmental Science and Policy; Food Policy; Food Security; Geo-forum; Geographical Journal; Journal of Rural Studies; Land Use Policy;

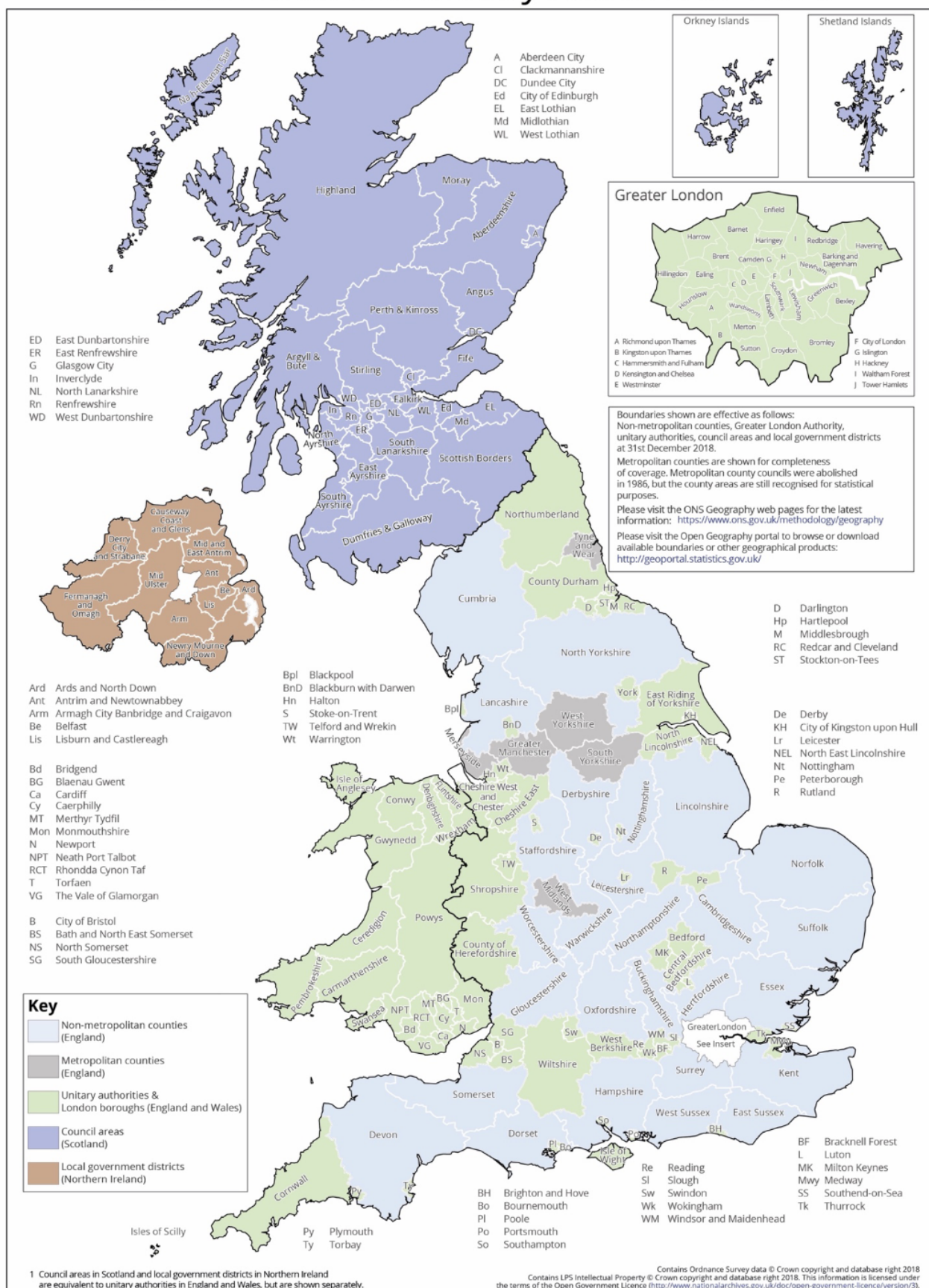
Literature search – key terms for topic urban planning

URBAN PLANNING

Subtopic	<p>Land value capture</p> <p>Foodscape</p> <p>Foodshed</p> <p>Neighbourhood</p> <p>Green infrastructure (AND Food)</p>
Search terms	<p>“land value capture”</p> <p>“foodscap*”</p> <p>“food map*”</p> <p>“sustainable cit*” / AND “food”</p> <p>“urban food planning”</p> <p>“urban agriculture” / AND “foodscap*”</p> <p>“green infrastructure*” / AND “food”</p> <p>“neighbourhood*” / AND “food”</p> <p>“place-making” (“placemakeing”) / AND “food”</p> <p>“food accessib*”</p> <p>“nature-based solution*”</p>
Inclusion and exclusion	<p><u>Inclusion:</u> relevance to food or garden city</p> <p><u>Exclusion:</u> Outside of Europe or North America; too broad on health or too narrow on a specific context (not generalised)</p>
Data base	<p><u>Academic:</u> University of Hertfordshire data base (LRC – hardcopy and online) / Cambridge University Library / British Library / Scopus (access via UH)</p>
Key authors	<p>Bohn; Kaufman; Morgan; Parham; Pothukuchi; Viljoen; Wiskerke</p>
Key journals	<p>Journal of the American Planning Association; journal of Urbanism;</p>

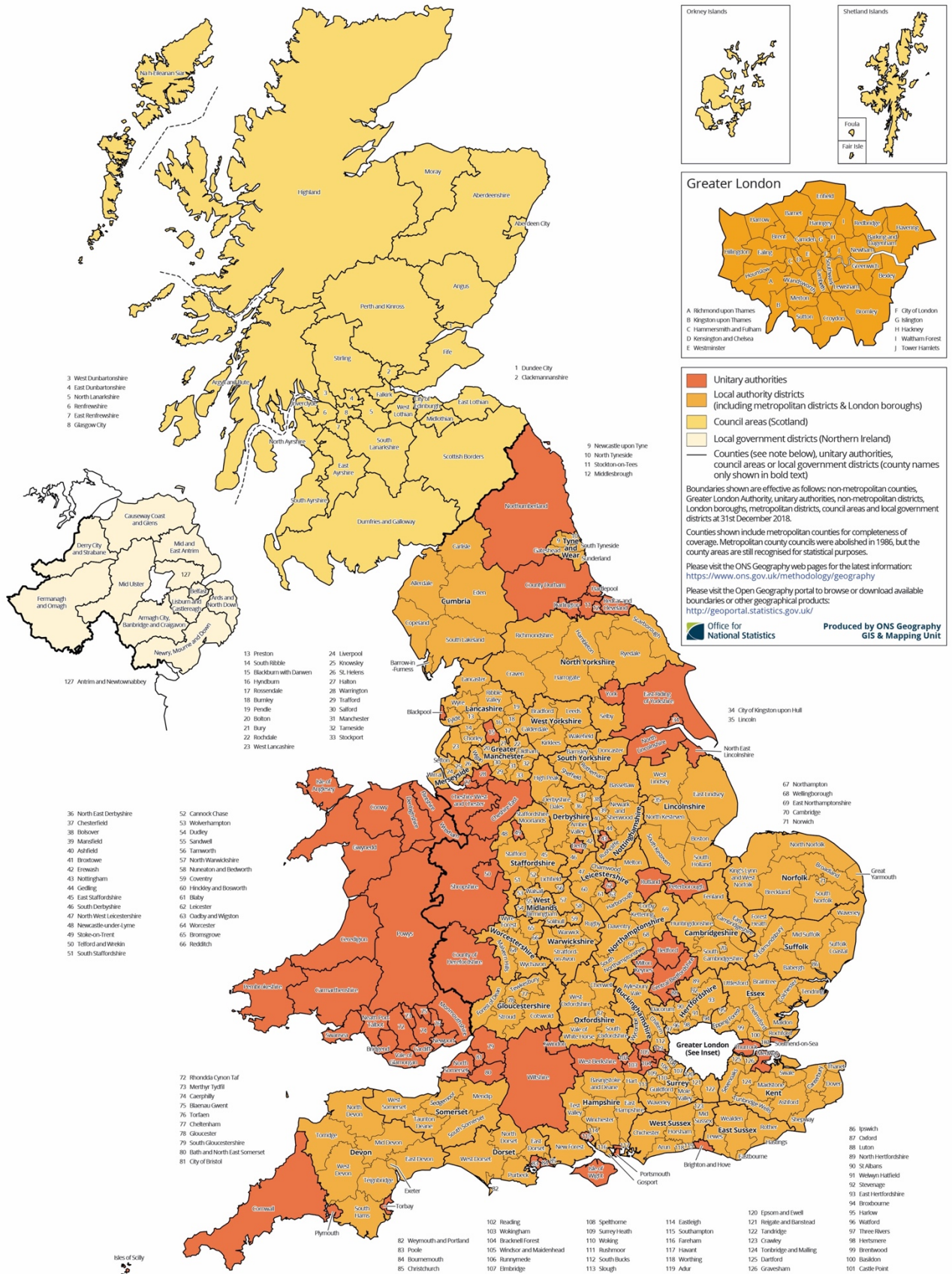
Appendix 2.2: Map of Counties and Unitary Authorities - Source ONS 2018

UK: Counties and Unitary Authorities¹ 2018



Appendix 2.3: Map of Local authority: District, Counties, and Unitary Authorities - Source ONS, 2018

UK: Local authority districts, counties and unitary authorities,¹ 2018



¹ Council areas in Scotland and local government districts in Northern Ireland are equivalent to unitary authorities in England and Wales, but are shown separately.

Appendix 3.1: List of the participants and their profiles

Names are pseudonyms.

BUSINESS	
B.01	Independent specialist shop owner in Letchworth
B.02	Business partnership representative based in Letchworth
B.03	Vegan food outlet owner in Letchworth
B.04	Business partnership representative based in Letchworth
B.05	Supermarket staff based in Letchworth
EXPERTS IN THEIR FIELDS	
E.01	Co-operative volunteer for CSA in a garden city in European a city
E.02	Governmental representative for UA project in European a city
E.03	Non-governmental land trust representatives - gardener
E.04	Non-governmental land trust representatives – food and drink
E.05	Director of a food partnership in an English City as a part of the SFP programme
E.06	Working for SFP food partnership programme in England.
FARMING COMPANIES	
F.01	Farmer for a non-governmental land trust - Cambridgeshire
F.02	independent farmer based in Hertfordshire
F.03	Educational Farm in Letchworth – staff member
HOUSING ASSOCIATION	
H.01	Housing Association representative in Hertfordshire

H.02	Housing Association representative in Hertfordshire
LOCAL GROUP REPRESENTATIVES IN LETCHWORTH *	
G.01 / Emma	Involved in XR movement North Herts, living in Letchworth
G.02 / Muriel	Involved in Letchworth District Gardeners Association
G.03 / Dawn	Involved in organic gardening network as a Letchworth representative
G.04 / Sacha	Involved in food rescue café in Letchworth
G.05 / Christine	Involved in food rescue stalls in Letchworth
G.06 / Richard	Involved in a therapeutic horticultural group Letchworth
G.07 / Grace	Involved on food growing knowledge sharing
G.08 / Gary	Involved in food rescue stalls in Letchworth and community faith venue
G.09 / Owen	Involved in food bank in Letchworth
Letchworth Garden City Heritage Foundation LGCHF REPRESENTATIVES	
L.01	Staff
L.02	Staff
L.03	Executive Team
L.04	Working with the LGCHF
L.05	Staff
L.06	Governors or Trustee
L.07	Governors or Trustee
L.08	Executive Team
L.09	Executive Team

L.10	Staff
PUBLIC OFFICERS	
O.01	North Herts District Council
O.02	North Herts District Council
O.03	North Herts District Council
RESIDENTS *	
Emma / R.01	<p>I met Emma when was helping a food rescue project in town. We met again during a talk in Letchworth of Extinction Rebellion, and she was part of the organisation committee. I wanted to hear her perspective as a resident and as an activist. We meet in her house just before the pandemic outbreak. Emma was born and raised in North Herts (Letchworth). After travelling, she came back with her family (she has two young children and bought a house on the Jackmans estate. Her extended family live in or around Letchworth. Emma provided invaluable insight about her experience of the town regarding food access, community feel, the opportunity in our neighbourhood. Emma is on maternity leave, her ten-month-old daughter is with her on the day of the interview, playing.</p>
Rosaline / R.02	<p>I met Rosaline at volunteering in the community food garden. For our interview, conducted before the pandemic, we meet in a coffee shop restaurant in the town centre. “That’s All” from Genesis is on the radio. We are having morning coffee and croissant.</p>
Karin / R.03	<p>Karin is very much involved in community life, especially in the environmental and sustainable aspects of the town. I conduct the interview as a resident, bearing in mind that she is knowledgeable about the town. Karin lives in Letchworth since 1999. She’s located in South View, in the centre of the town. she has a “medium-sized garden, compared to other gardens in the town”. She attempts to grow vegetable but it’s not her most successful enterprise, like Patrick”. She mentions that she tries to recycle plastic to make raised beds to increase her success rate at home-growing food. In her garden, she has a couple of fruits trees. She’s involved in a movement and a local group for sustainability for ten years. Her engagement t means that she’s fairly aware of the projects that are going on in the town and the locations of the orchards and the different growing spaces. She regrets she cannot do too much gardening as she’s already really involved with many projects.</p>

Janet / R.04	Janet contacted me via email after a neighbourhood spread the word about the research project. We were chatting before we started the formal interview. Janet lives in Letchworth for about a year at the time of the interview – on South View, a quite central location
Harriet / R.05	Harriet and I know each other from common acquaintances in Letchworth and from volunteering with local groups. I also have met her in masterclasses organised by the Heritage Foundation. We share some common background in terms of research work, so I can use some sort of different jargon with her. She kindly contacted me after a local group relayed my advertisement.
Sonia / R.06	Sonia contacted me after seeing my posts on social media. She wrote an email to my UH address and we arranged a time to meet online. My research is of her interest because her occupation relates to food, and food takes a great place in her daily life, mostly different aspects of health. She has pre-teens children and lives in LGC for 9 years, in the SG62 area, next to the Lordship estate.
Grace / R.07	Grace contacted me via a local group that kindly advertised my research. Grace had just launched a food-growing project in her neighbourhood and was keen to talk to me about it. As she is also a resident of Letchworth, I asked whether she was interested in giving me her perspective on Letchworth as a resident. I decided to follow two sets of questions and not to merge them, one for the local group representatives and the other for the residents, thus two recordings.
Gary / R.08	Gary and I know each other for volunteering and other food-related action in town with the various group. He let me know he was keen to participate, and we agreed on an online meeting. Gary is involved in many local actions, all of them for sustainability and most of them somehow related to food, whether to food waste, food growing and beyond. I asked him whether he was keen to also explain his motivation behind his local engagement to improve food sustainability in Letchworth and he kindly agreed. To keep the overall interview within a sensible time frame I've aimed at a total time of an hour interview, divided into two 30-min sessions following two different question grids.
Alice / R.09	Alice contacted after hearing about the study from a friend. We first had a phone call so I could explain the aims of the research and the different ways to engage in the study. She readily said that SSI is the best way for her to participate as visuals weren't her favourite media. Alice is an EEA citizen. She does next Letchworth for 10 years. Although not living in Letchworth, her outlook gives an idea of the nearby hamlets and more rural areas around Letchworth and the food connection there.

Adrian / R.10	Adrian lives in Letchworth for three months and a couple of days. He moved with his partner from St Albans where they were renting. They had there a garden and they moved bought a flat “without a garden”. He doesn’t know the area very well yet, “getting his bearing, getting his shopping habits”. He says that it’s likely that he will also learn from the group today. He enjoys living in Letchworth, dispute not having the chance to go out too much (lockdown) and hope to see “things going back to life”
Sophie / R.11	Sophie and I know each other from common volunteering in Letchworth. I advertised the research amongst the group of volunteers, and she kindly contacted me via text message to know more precisely how she could help. After an email where I explained the three different ways to engage, she’s chosen the visual media. Her pictures were illustrations gleaned from the Internet. I was at first surprised but found this idea very interesting and meaningful as it was a representation of her food environment and practices that were also timeless and not only related to a place but also values and practices (i.e., veg tall, supermarkets, bramble, milk delivery)
Stephen / R.12	Stephen contacted me via an appeal made through the Heritage Foundation. I am glad to have a male view in my participant poll. Stephen is also governor at the Heritage Foundation.
Pauline / R.13	Pauline contacted me via an appeal made through the Heritage Foundation. She is also a governor at the Heritage Foundation. On a technical note, unfortunately, the sound quality of the recording was poor at times, which made the transcription more complicated.
Emily / R.14	Emily lives in Letchworth for five years in November 2021. She moved from a short spell living in Hitchin and prior to that in Kent, travelling. She lives in the Lordship Estate, next to Lordship Farm Primary School. She lives in 1960s style house with a very large garden. She has two young children (a five-year-old boy and a two-year-old girl), currently not working and is a full-time mum. She hopes that after her little girl goes to the nursery, she will have more time for gardening. (laughter). She stresses that as she hasn’t lived in Letchworth all her life, she hasn’t a long view of the evolution of the town. She says that she believes Letchworth has grown for the last five years, the town centre development, the businesses and the increasing number of cafés and café culture.
Patrick / R.14	Patrick has lived in Letchworth since 1986 with his family. They moved to Letchworth with his wife when she was pregnant with their second child. They live in Wilbury. Patrick specifies that it is one of the most deprived areas in tow, but it does not seem that way where he lives. He has a 1930s garden that he defines as quite big by modern

	standards. His wife loves flowers, and he tries to grow vegetables, but not very successfully, as he says. His wife does most food shopping: “She knows most of our food infrastructure.” Once every one or two weeks, he goes to a local Farm (just east of the town) to buy home-bread grass-reared meat and get a few bits and bobs from the local plastic-free shop in the town centre. They get all their food from Sainsbury’s, which he’s not happy about because there is too much plastic.
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* Residents and local group representatives have interchangeably a code and pseudonym to insert their view in a more sensitive approach with names or compare viewpoints amongst the other categories of respondents.

Appendix 3.2: Ethics

Ethics approval notification



HEALTH SCIENCE ENGINEERING & TECHNOLOGY ECDA

ETHICS APPROVAL NOTIFICATION

TO Amelie Andre
CC Dr Susan Parham
FROM Dr Simon Trainis, Health, Science, Engineering & Technology ECDA Chair
DATE 12/03/2018

Protocol number: **LMS/PGR/UH/03241**

Title of study: Delivering a Healthy and Sustainable Food Economy in Letchworth Garden City

Your application for ethics approval has been accepted and approved by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

This approval is valid:

From: 12/03/2018

To: 28/02/2021

Additional workers: no additional workers named

Please note:

If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and your completed consent paperwork to this ECDA once your study is complete. You are also required to complete and submit an EC7 Protocol Monitoring Form if you are a member of staff. This form is available via the Ethics Approval StudyNet Site via the 'Application Forms' page <http://www.studynet1.herts.ac.uk/ptl/common/ethics.nsf/Teaching+Documents?Openview&count=9999&restricttcategory=Application+Forms>

Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

Approval applies specifically to the research study/methodology and timings as detailed in your Form EC1A. Should you amend any aspect of your research, or wish to apply for an extension to your study, you will need your supervisor's approval (if you are a student) and must complete and submit form EC2. In cases where the amendments to the original study are deemed to be substantial, a new Form EC1A may need to be completed prior to the study being undertaken.

HEALTH, SCIENCE, ENGINEERING AND TECHNOLOGY ECDA

ETHICS APPROVAL NOTIFICATION

TO Amelie Andre
CC Associate Professor Susan Parham
FROM Dr Rosemary Godbold, Health, Science, Engineering & Technology ECDA Vice Chair
DATE 02/10/2020

Protocol number: **LMS/PGR/UH/03241(3)**

Title of study: Delivering a Healthy and Sustainable Food Economy in Letchworth Garden City

Your application to modify and extend the existing protocol as detailed below has been accepted and approved by the ECDA for your School and includes work undertaken for this study by the named additional workers below:

no additional workers named

Modification: Detailed in EC2.

General conditions of approval:

Ethics approval has been granted subject to the standard conditions below:

Original protocol: Any conditions relating to the original protocol approval remain and must be complied with.

Permissions: Any necessary permissions for the use of premises/location and accessing participants for your study must be obtained in writing prior to any data collection commencing. Failure to obtain adequate permissions may be considered a breach of this protocol.

External communications: Ensure you quote the UH protocol number and the name of the approving Committee on all paperwork, including recruitment advertisements/online requests, for this study.

Invasive procedures: If your research involves invasive procedures you are required to complete and submit an EC7 Protocol Monitoring Form, and copies of your completed consent paperwork to this ECDA once your study is complete.

Submission: Students must include this Approval Notification with their submission.

Validity:

This approval is valid:

From: 02/10/2020

Question grids

Please Note: The research explores the food place-making of a town by the various actors on-site. Therefore, the breadth of participants embraces residents, institutional officers, organisation representatives, experts, business owners to capture the multi-faceted feature of the food system on a city-wide level. The samples below show systematic question processes. However, interviews are semi-structured and allow for variation, adaptation, or additional questions to clarify some responses. If each set of questions are specific to a range of stakeholders, few items can be relevant across categories. Likewise, topics listed on the indicative list of questions in March 2018 are still relevant.

Individual interviews with local institution officers, community group representatives, business owners, experts. Info to obtain roles and motivations of each actor of the local food economy; individual narratives, opinions, experiences, and observations of different stakeholders, corroboration of subjective observations.

Resident – code: R.00 or pseudonyms

- Opening: Could you please introduce yourself?
- Introduction: How long have you been living in Letchworth? What is your [neighbourhood / district / four first postcode number]? What do you know about the history of Letchworth Garden City?
- Transition: Where do you get your food? What are your favourite food places in town? What are the priorities when you choose your food? How frequently you go to get food? Are there places you particularly like for food?
- Key questions: Are the green areas a prevalent feature of the town for you? Do you think this somehow helps/underpins a healthy and sustainable food economy?
- Conclusion: Do you think the Letchworth Garden City [history / setup / institutions / community / geography / governance] influences the development of a local food network?
- Ending: Is there anything you would like to add?

Business owner – code: B.00 / F.00

- Opening: Could you describe your business? What are the values you promote?
- Introduction: Do you work with other businesses? Who are your suppliers?
- Transition: What is the feedback from the local community on your activities? Who are your clients?
- Key Question: To what extent [the local context / political structure / the history of the town/the structure] of the tow is important for your food activities? What are the enablers and the challenges for food-related [decision/initiatives/business] in Letchworth or North Herts?
- Conclusion: Did you change or adapt your business lately? What are your plans for the future?
- Ending: Is there any topic we haven't talked about you would like to add to our discussion?

Community group / organisation – code : G.00 or pseudonym

- Opening: Could you tell me how it all began? What were your motivations? How you initiated the project? How do you operate in terms of logistics? What is your role in this organisation? Could you explain how your organisation works?
- Introduction: What is your message to the community / your values? What is the feedback from the resident? Who are your clients/people helping/taking part in the organisation?
- Transition: Do you have partnerships/associations with other organisations? What are the economic and non-economic support you're receiving from external entities? What are these supports?
- Key questions: In your opinion, what are the enablers and the challenges of Letchworth, in terms of political setup, institutional support, organisation of the town, social cohesion? To what extent the local context of the town as a garden city is prevalent for your organisation?
- Conclusion: Did you change or adapt your organisation lately? What are your plans for later? What are your plans for the foreseeable future? What is/was the organisation's response regarding food during the Covid-19 crisis?
- Is there any topic we haven't talked about you would like to add to our discussion?

Governance representative – code: O.00 / L.00 / H.00

- Opening: Could you please explain your role in your organisation? What is your organisation remit/objectives/strategy? How this influence the local food network/food economy?
- Introduction: Could you explain the work/ strategy conducted regarding food issues on a city/ strategy-wide level?
- Transition: Onsite, what actions that support local food network and food economy, and where are these the most visible? What is the role of food in the local governance/decisions? Do you have a strategy to help underpin a local food economy?
- Key questions: In your opinion, what the specific institutional setup in Letchworth enables? What are the major challenges and enablers of the local context that helps support a sustainable and healthy food economy? What is the political will to underpin a local healthy and sustainable food network on a city-wide/district-wide level?
- Conclusion: What is/was the organisation's response regarding food during the Covid-19 crisis?
- Ending: Is there any topic we haven't talked about you would like to add to our discussion?

Expert in their field (urban planning, food, garden city) – code: E.00

- Opening: Could you please introduce yourself and your role in your organisation? What is your remit/your expertise/your role?
- Introduction: What are your views on the garden city history regarding food? What is the core value of the garden city to support a local food network? Today what is the main problem with food systems?

- Transition: To what extent is local government in England supported by multi-level governance? Do the local responsibilities to implement food policies / food decision exist at the local government level?
- Key questions: Are there any structural or political factors that affect the decision for food policies / decisions? How do compare these with the garden city model?
- Conclusion: Is there any topic we haven't talked about you would like to add to our discussion?

Group discussion with resident with residents of the town. Info to obtain residents' outlooks onto their town and their understanding of the local food context for local food agenda (political, economic, social, geographic, historical), identify the different perspectives, uncover factors for opinions or practices.

- Opening: Tell me your name and how long you have been living in or around Letchworth Garden City. What do you know about the history of the town and its principle upon which it was built?
- Introduction: What is for you a healthy and sustainable food?
- Transition: What are the characteristics of the town regarding food, to what extent is it specific to Letchworth?
- Key question: What do you think the local context offers to support an inclusive, healthy, and sustainable food?
- Conclusion: What are the strengths and weaknesses of the food offer in Letchworth? This can be with the economic, institutional, social context. What could be done to improve access to healthy and sustainable food in Letchworth?
- Ending: Is there anything we have missed, or is there anything you would like to add?

Visual elicitation, mostly from residents and workers of the town and its environs but could apply to visitors. Info to obtain: a focus on spatial and temporality features of eating practices of individuals; individuals' outlook on their town in terms of food experience, to record and reflect their everyday food experience outside their home; to highlight various narratives of place.

Visual elicitation prompt:

Take pictures of your everyday *food environment experience** in Letchworth. If you prefer, you can also draw, sketches, and/or maps. If you agree to do so at least once a week for a few weeks, I will send you a reminder.

Please add captions, comments, or longer stories of your visual support that explains why and how this reflects your everyday food experience in Letchworth.

Would you mind indicating an element of a location where you have taken the picture, such as a street, a postcode, an estate?

*Note: your food environment is the everyday places you get your food. These are stores or supermarkets, restaurants, gardens or allotments, fields, edible trees or bushes, events. It also can be unique places in town that highlight the uniqueness of Letchworth Garden City and are important for you.

Visual elicitation interview

- Opening: Could you introduce yourself? How long have you been living in Letchworth?
- Introduction: You shared visuals with me. May I ask the reasons you've chosen these places?
- Transition: Where and how do you go for food shopping / like for food in town, or in North Herts? How often do you go to the places on your visual materials?
- Key Question: Are the issues and the advantages you meet with food procurement in Letchworth Garden City?
- Conclusion: What is your view on the features of the town? These can be political, geographic, social, economic characteristics?
- Ending: Is there anything you'd like to talk about?

Broadcast (social media, website, leaflet)

"Delivering a Healthy and Sustainable Food Economy in Letchworth Garden City"

Study reference: LMS/PGR/UH/03241(3)

Today, the way food is produced, distributed, and disposed of is mostly based on a globalised network that affects health and the environment.

The study explores the food system at the heart of the garden city model. We explore the local governance and foodscape in Letchworth to identify whether the garden city model can stand out in terms of political, geographic, social, and economic features.

We are looking for residents to take part in our research. We would be glad if you want to take part in our research project [by sharing pictures of your everyday food practices in Letchworth/by responding to a few questions regarding food in Letchworth Garden City during an interview]. Please email me for further details at this address: a.andre@herts.ac.uk

Many thanks, Amelie Andre - PhD researcher

University of Hertfordshire

Appendix 7.1: Table of criteria of good food for the residents who participated.

	Fresh	Local	Seasonal	Food safety	Plain and simple food	Aspect of the food	Plastic free	Taste	Organic	Price
Emma										
Rosaline										
Karin										
Janet										
Harriet										
Sonia										
Grace										
Gary										
Alice										
Adrian										
Sophie										
Stephen										
Pauline										
Emily										
Patrick										

Appendix 8.1: Table summarising the findings in the light of the literature review.

Topic	Key elements identified in the literature review.	Instances identified in findings
Spatiality	The layout of the garden city led to a misunderstanding of Howard's prescription, and his diagrams were taken by some to be a blueprint.	<p>The layout of Letchworth is based on Unwin and Parker's masterplan, which respects the overall organisation of a garden city with an agricultural and urban estate.</p> <p>The town has a varied urban morphology with a variety of built environments and green infrastructure links.</p>
	<p>In addition to agricultural activities, the agricultural belt should play a social role through education and health care.</p> <p>Food can be seen as an economic opportunity: the green infrastructure of the garden city is a living canvas to empower residents either to access food or to produce food themselves, thus becoming independent of external apparatus.</p> <p>The agricultural and urban sectors of the garden city should work together thanks to an existing market.</p>	<p>Early residents were keen to introduce meaningful activities around food and to represent multiple uses of the land.</p> <p>Today there are limitations to introducing different scales of food production and trade.</p> <p>The economic value of food growing areas is given to agricultural output for the national commercial commodity market, disconnected from the local market that provides a steady income for the town.</p>
	The town estate is organised as an accessible commercial area in each ward.	Food outlets are concentrated in two areas: the town centre and the industrial estate. Although Letchworth has retained its walkable characteristics, it has succumbed to a car-based industrial estate, which has resulted in certain areas of the town having little proximity to food outlets or limited safe road infrastructure for walking and cycling.
	On a larger scale, a garden city is an independent entity with a limited population connected to nearby garden cities.	The multilevel aspect of the local governmental entities is defined by the UK administrative organisation, in the case of Herts a County-District-City nested organisation.

Economy	Howard describes a “local option” which gives an advantage to local enterprises yet should be confronted with fair competition to ensure high-standard offers. Overall, the local option is very little discussed in the articles.	There is currently no labelled “local option”, however, the LGCHF as a landlord provide support to local and independent business.
	Whether in AFN, LFS, or SFSC, a hiatus is represented by the “middleman monopoly” between producers and consumers.	Access to local food can also be challenging in terms of outlets or conveniences for residents. On the other hand, businesses mentioned two things. First, the middleman sells a commodity. To some extent, transparency is achieved by the global market.
	A growing interest in local food economies can be understood through different streams and concepts: AFN, SFSC and LFS are the three branches explored in the literature review. The local food economy can struggle to access a market, while the garden city model champions direct access to the local market.	Terms such as AFN, SFSCs and LFS don’t appear in the data set. However, the role of local food is undeniably connected to sustainability and health.
	The garden city model relies on the land value capture scheme to link the administrative purpose with the community's needs. The “unearned increment” represents the capital available to the garden city to improve the social life of the town.	The LVC allows the LGCHF to provide additional services to the town, in terms of reinvestment for cultural and educational purposes. There are several explanations for a forgotten food parameter, including expertise, global economic forces, and a lack of partnerships.
Governance	The garden city governance model involves an independent governing body dealing with local issues following a place-based approach. The Letchworth Garden City Heritage Foundation is this body today. It owns and manages the land on behalf of the residents.	The place-based approach of the LGGHF is justified by strong evidence-based support for decision making, but in some instances suggests a gap in the partnership between the community and the institution.
	The lack of available land and the right of freehold to acquire land means that local authorities have	Letchworth's situation is unique and allows for the protection of UA spaces both in the rural estate and in garden plots. Until the outbreak of the COVID-

	<p>insufficient powers to manage agricultural issues, including urban food planning (2.3.2).</p> <p>In this situation, land value capture or urban agriculture is difficult for most local authorities to implement.</p>	<p>19 pandemic in 2020, the vacancy rate was relatively high.</p> <p>Despite their key role in the food economy, local authorities lack expertise in food issues, which fall under different departments and sub-systems.</p>
	<p>Based on the principle of self-sufficiency, self-governing communities and local control of resources, the Garden City governance model can be seen as a compromise between protecting individual rights and promoting collective action.</p>	<p>The findings suggest that the model, as implemented as part of the LGCHF, addresses three issues: understanding an a-political institution and its role; its core organisation and how it represents the community; and its expertise, which can reach across the boundaries of overarching food issues.</p>
	<p>The literature review suggests a challenging joined-up approach that reflects the multi-agency challenges facing the urban food systems.</p>	<p>The findings show that there are gaps in communication and a joined-up approach in Letchworth, both between agencies and between agencies and residents / community groups.</p>
	<p>Howard credits the residents of the garden city with the development of the model and the adherence to its economic and administrative functions.</p> <p>The literature suggests that food justice can be achieved through co-governance with a variety of actors, including non-experts. However, some incompatibilities of the institutional framework with community group initiatives were also noted.</p>	<p>Letchworth's LVC provides a unique framework for partnership between communities and the LGCHF, the local authority. However, there a gap persists in the way the institution and residents can work together and in the expectations of each side.</p>

	<p>There are several dimensions that define a foodscape, and its socio-cultural approach includes micro (as in individual) food-related behaviours, which can constitute a resistance to a globalised food system.</p> <p>Accessibility and availability of food are two of the three A's of food security.</p> <p>Contributions highlight the importance of environmental and structural factors in food practices, providing convenience through bundled practices.</p>	<p>Residents experience food outlets and food growing areas differently in terms of convenience.</p> <p>Access to local food may be limited or unclear, and inconvenience can be a barrier, but some respondents explain that they will try to access a particular food that embodies values despite the obstacle.</p> <p>Transport, cooking and other sustainable practices are associated with sustainable foods.</p>
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