



# The Sheffield City Centre Strategic Vision, Placemaking and Urban Design Policy

Developing Sheffield city centre for a 'good food' future  
through urban agriculture

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Produced in collaboration with the University of Sheffield, Regather and ShefFood



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# The Institute for Sustainable Food

The Institute for Sustainable Food at the University of Sheffield finds dynamic solutions to the challenges of food security and sustainability. Our innovative research draws on the fields of science, engineering, social sciences, and arts and humanities.



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## Regather

Regather is a co-operative of local people working to improve food and build community in Sheffield. We run an organic farm, veg box scheme, and many other community projects.



## ShefFood

ShefFood is a cross-sector partnership of organisations across the city formed of local public agencies, businesses, individuals, academic and community organisations committed to working together to create a more sustainable food system for Sheffield.



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# Foreword

With food systems responsible for around one-third of global greenhouse gas emissions (Nature Food 2021) and with agriculture recognised as the biggest threat to the estimated 86% of plant and animal species at risk of extinction (Chatham House 2021), it is now clear that the way we produce our food urgently needs to change.

Despite this knowledge, government continues to fail at every level, from global to local, to establish the appropriate policy frameworks for food system transformation. For example, COP27 was billed as 'the food systems COP', but focused narrowly on supply side agriculture issues dominated by global agri-food corporations, and failed to adopt a holistic food systems approach to include issues such as food waste and loss, nutrition, sustainable diets and resilient supply chains. The UK Government's dismal response to Dimpleby's National Food Strategy report represents another missed opportunity, greeted with dismay and disappointment, failing to give the challenges of food security and sustainability the urgent response that is required if we are to provide affordable, safe and nutritious food for all while living within planetary limits.

The many examples of government failure, at home and abroad, reinforce the importance of local action and innovation if we are to make our food systems sustainable and fair. To achieve food security, "when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (FAO 2009), we all urgently need to reflect on what we can do as individuals and communities to lessen the impact of the food that we eat on the natural world, to allow us to exist within the constraints defined by our Planet's limited resources. The COVID-19 crisis revealed the vulnerability of our food system, plunging people who never imagined that it would affect them into food insecurity, almost overnight. The global supply chains on which our current food system is based are fragile and this realisation has highlighted the need to develop our local and regional food production capacity to help mitigate these risks.

In 2022, Regather teamed up with the University of Sheffield's Institute for Sustainable Food to create a 'Local Food Systems Policy Accelerator' to develop evidence-based food system policy change in Sheffield. As part of the project, eight students were recruited to conduct original research into food system issues affecting Sheffield. The student researchers were asked to identify the mechanisms or 'levers for change' that can hasten the development of more sustainable food systems and infrastructure throughout Sheffield. They were given access to the assessment frameworks created



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by Sustainable Food Places (SFP), to provide them with an insight into the multi-faceted world of food systems. SFP has previously granted Sheffield a Bronze Award, recognising the standards already achieved with the city. The work to achieve a Silver Award is underway, supported by the creation of Working Groups on specific subject areas within ShefFood, Sheffield's food partnership, and the creation of a Food Action Plan for Sheffield. This important work has in various ways been informed by the research undertaken and the evidence collected by the 'Local Food System Policy Accelerator' team.

We hope you find this report interesting and informative, and that you will join us in commending the student researchers responsible for making their time and effort available, and for contributing their skills and intellectual resources to tackling the critically important challenge of food system transformation.

*Gareth Roberts, Co-Founder & Director of Regather*

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# 1.0 Executive Summary

Sheffield's city centre is a space that poses both challenges and opportunities for urban planners. Despite suffering a period of marked decline in the late 20th century, the area is now experiencing a revival thanks, in part, to the emergence of a strong and dynamic local food scene. This report proposes three main pillars for the continued strategic development of a 'good food' future for the city centre. Each pillar must be considered equally important in order to achieve a sustainable and socially-just outcome. They are:

- 1. The environment**
- 2. The economy**
- 3. Local people**

Under each pillar falls a number of key objectives for urban planners to consider:

- 1. The environment**
  - a. The development of hyper-local food networks through agroecological urban growing and community gardens.
  - b. The introduction of measures to reduce food waste from households and businesses.
  - c. An effective programme of food waste recycling which facilitates nutrient recovery.
  - d. Support for food businesses and producers to become more sustainable.
- 2. The economy**
  - a. The facilitation of a thriving and diverse food and hospitality sector.
  - b. The strengthening of local networks of food producers and consumers.
  - c. Investment in food-based research and development projects.
- 3. Local people**
  - a. The introduction of measures to combat food poverty and food insecurity.
  - b. The promotion of healthy dietary choices.
  - c. Communities brought together around food and eating.
  - d. The provision of high-quality education and training opportunities for those wishing to enter the food industry.

In the following report, one key objective will be explored in detail, namely the development of urban agriculture in Sheffield's city centre.

The literature review provides an analysis of a number of key papers, reports and policy documents that cover aspects of the development of food-growing initiatives in and around the city centre. Case studies are used to highlight inspiring work that is already being carried out in the food sector in other cities within the UK and beyond.

The 'discussion and debate' section delves deeper into some of the key arguments in the field. This is followed by the 'levers for change' section, which suggests some tools by which Sheffield's planners can overcome challenges and develop a successful and inclusive urban strategy which facilitates a 'good food' future for all.

Throughout the report there is an emphasis on taking a holistic approach to developing Sheffield's city centre food future. A commitment to 'good food' must underlie all urban development decisions as connectivity between otherwise disparate parts of the city and of the food system is one of seven interrelated principles for the maintenance and sustainability of socio-ecological systems (Simon, 2016, 84).

The report concludes that in order to combat the detrimental effects of urban stagnation, widening social inequality and the climate crisis, those in control of future urban development must employ a holistic approach to the design of urban food-growing policy, one that includes all sectors of society and builds a 'good food' ethos into the fabric of the city centre.



# 2.0 Introduction

## 2.1 Historical context

Food has always been an intrinsic part of Sheffield's city centre, playing a central role in both social and economic life. Castlegate is so called because it was once the site of the town's castle, built by William de Lovetot following the Norman Conquest of 1066. What is now Nursery Street was the castle's vegetable garden and Exchange Street was its orchard, providing a vital source of fresh produce for the city's early residents (David, 2010).

In the 1950s and 60s, Sheffield boasted nearly full employment and ambitious city centre visions. The development policy at the time favoured widespread slum clearance programmes, which necessarily coincided with the building of some of the largest council estates in the country (Lane, Grubb and Power, 2016, 11). The Castle Market was constructed in the centre of the city in the 1960s, providing permanent accommodation for traders including butchers, fishmongers and greengrocers as well as a place for people to socialise.

Yet in subsequent years the nationalisation of steel and coal industries reduced local control over production, and deindustrialisation and the devastating policies of Margaret Thatcher's radical Conservative government accelerated factory closures and unemployment. By the 1980s Sheffield city centre had lost its inspiring city vision, and by the time of the National Miners' Strike, had become 'an industrial graveyard' with 'almost total loss of purpose' (ibid, 12).

Meadowhall shopping centre, five kilometres north-east of the city, was developed in 1990 and continues to detract from potential commerce in the city centre. Hand-in-hand with the decline of the high street since the financial crisis of 2008, this has left Sheffield City Centre in need of reinvention. The closure of the Barker's Pool John Lewis, a sixty-year-old Sheffield establishment, was met with widespread dismay and sparked key questions for twenty-first-century urban design: 'Sheffield is becoming a test case for where our urban centres could be heading, and who gets to decide' (Harris, 2022).

Sheffield has reinvented itself before: its 1950s and 60s brutalist council housing architecture, as mentioned above, positioned it as a modernising city whose industrialisation was pioneering rather than retrograde. Even more important to this report was the formation of the Cultural Industries Quarter in the 1990s. This focused on the development of an abandoned industrial area between Sheffield Station and the city centre, rebranding the city as a cultural attraction. While Linda Moss argues that this transformation was not geared towards long term success (2002, 212), the city's role as a pioneer is not to be underplayed.

## 2.2 Sheffield city centre today

Although the city centre has faced numerous challenges to date, significant investment has been made by both public and private funders in recent years. Major developments include Leopold Square, The Moor, and St Paul's Place, which have incorporated a variety of food retail and hospitality businesses. The £470 million Heart of the City development began in 2017, with the aim of driving economic growth back into the city centre. It is also hoped that the scheme will promote a more eco-friendly and greener environment (Wilkinson, 2022).

In 2013 the Moor Market was opened, and has since become the main destination for fresh produce. This indoor shopping centre, owned by the City Council, was intended to replace the Castle Market which has since been demolished. The Moor Market plays host to 90 independent traders and offers a wide variety of local and organic food, as well as international cuisine from India, China, Africa, the Caribbean, Italy and France (Sheffield Markets).

The hospitality sector in Sheffield has grown rapidly in recent years. Lively markets such as Peddler Market, social-eating hubs such as Cutlery Works, and fine-dining restaurants including Michelin bib Gourmand-holder Jöro, are attracting a diverse clientele of discerning eaters from across the region. Independent cafes and food shops in the city centre have flourished post-pandemic, showcasing a strong entrepreneurial spirit among local business owners and staff.

Despite some examples of apparent success many critics argue that the constant redevelopment of the area alongside the social shifts brought about by the pandemic have resulted in a loss of a sense of identity and purpose for the city centre, leaving a gap that current commercial focuses are not filling.

## 2.3 Why does this subject matter?

In Sheffield 2.51% of the adult population were classed as hungry in January 2021, with 8.1% struggling to access sufficient food and a further 11.4% experiencing worry around access to food (The Institute for Sustainable Food, 2021). Reliance on food banks increased by 92% between April and June 2020 (Food Poverty Working Group, 2021, 2), and 24,000 children currently receive free school meals. The unprecedented rise in fuel and food prices predicted for the coming winter will undoubtedly hit those on tight budgets the hardest, forcing many to make the choice between 'heating or eating'.

Concurrently the number of people who are overweight and obese is also increasing, a stark indicator of entrenched health and social inequality (Rogers, 2020). Another major factor - the Climate Crisis - necessitates a root-and-branch rethink of the way we produce, consume and dispose of food in our cities. Recent research revealed that 31% of human-caused greenhouse gas emissions

originate from the world's agri-food systems (Crippa et al., 2021). In 2019 the City Council declared both a 'Climate Emergency' and a 'Nature Emergency' reflecting the damage being carried out by humans on the local environment and ecosystems.

Consumers have become disconnected from the production of food they eat and the land on which this production depends. The need for a food-system transformation has never been more urgent.

## 2.4 Sustainable Food Places

Working towards a 'good food' future through expanding food-growing activity in the city centre directly responds to the Key Issues laid out in The Sustainable Food Places Award Framework. The Key Issues are listed below:

1. Taking a strategic and collaborative approach to good food governance and action.
2. Building public awareness, active food citizenship and a local good food movement.
3. Tackling food poverty and diet-related ill-health and increasing access to affordable healthy food.
4. Creating a vibrant, prosperous and diverse sustainable food economy.
5. Transforming catering and procurement and revitalising local and sustainable food supply chains.
6. Tackling the climate and nature emergency through sustainable food & farming and an end to food waste.

# 3.0 Literature Review

The following literature review explores some key publications related to food-growing and sustainable cities

## 3.1 Sheffield City Council publications

### Sheffield City Centre Strategic Vision

#### Summary

This document is intended to act as a new roadmap for positive change that can reset and shape the future of Sheffield in a post-pandemic world, aiming to achieve a vibrant, sustainable community in the City Centre. Underpinning the Strategic Vision is a series of vision principles and strategic ambitions which are seen collectively as the building blocks to creating a successful future City Centre.

#### Vision principals:

1. Distinctive
2. Productive
3. Innovative and resilient
4. Livable
5. Connected and accessible
6. Collaborative
7. An Outdoor City

#### Strategic ambitions:

1. Strong economy
2. Inclusive neighbourhoods
3. Sustainable transport
4. Environmentally friendly
5. Health and wellbeing

#### Key points

- Emphasis is placed on the need to deliver 20,000 new homes and repopulate the city centre which is seen as a key driver of regeneration.
- It is recognised that: 'The City Centre more than ever has an important function to deliver health and well-being benefits to its residents through green spaces, well-designed public spaces, walking and cycling routes, delivering on its net zero carbon objectives and making the most of its natural assets in creating new communities.' (p.17)
- On page 34 the Vision makes a commitment to 'Create new green infrastructure where gaps in provision are identified to increase biodiversity in the City Centre and build on the success of the Grey to Green initiative. Consider opportunities to include dynamic, people focussed activity in the public realm as well as improving the environmental quality of existing streets, squares and spaces around buildings'.
- In 'Annex 01: Neighbourhoods of the Future' - it is stated that 'Neepsend will become an 'Outdoor' Neighbourhood which epitomising the Sheffield Outdoor lifestyle through design of new development, new public realm, events programmes and the types of occupiers that locate there.' (p.62)

## Sheffield City Council Green and Open Spaces 2010-2030 plan

### Summary

The Sheffield City Council Green and Open Spaces plan is split into three sections: summary, strategy, and implementation. The plan offers fifty-four priority actions to be undertaken between 2010 and 2030, split into the themes of people, places, environment and sustainability, and quality management.

The plan sees green and open spaces as functioning threefold: 'countering climate change impacts, working productively for income and jobs and providing space for people's recreation and enjoyment' (9). Despite the absence of food in the plan, the adaptation of unused land into community growing projects would fulfil all three criteria.

### Key points

- One of the council's 'people' priority actions proposes to 'promote greater participation of the community in planning, developing and managing their local green and open spaces' and 'explore opportunities for the transfer of ownership and management of green and open spaces to local communities' (31), suggesting a willingness to cooperate with potential partners such as Regather or ShefFood to create spaces for food production in the city centre. The plan already highlights Heeley City Farm as a lead partner for this priority action (69).
- In the 'places' section, the council proposes to 'protect, enhance and interpret key green and open spaces as sites representing the best of Sheffield's heritage' (38). This suggests that attention to culture and heritage represents a key lever for change, with emphasis on Sheffield's historical market gardens and events such as Beer Week providing opportunities to return urban agriculture to the city centre. Sheffield's status as the 'Outdoor City' might be drawn upon and expanded to encompass food systems as well as leisure activities.
- The plan makes one specific reference to agriculture, with one 'places' priority action proposing to 'encourage business and partnership opportunities with respect to sustainable and productive land-use - forestry, moorland estates, agriculture, waterways and renewable energy' (40). This action could be applied to the city centre itself, as well as the Sheffield City Region and surrounding land. The plan cites Heeley City Farm as a lead partner for this action, suggesting a readiness to apply it to the city centre.
- The plan highlights Sheffield's existing efforts towards local food growing in the form of allotments, which at the time of writing were 'predominantly rated poorly' (19). However, more recent testimony, such as a 2021 article in SheffNews, suggests that allotments have improved, with Councillor Alison Teal revealing that the Community Payback team has been involved in getting 'many of Sheffield's vacant plots back to usable condition.' The further improvement of allotments alongside other forms of urban agriculture is in keeping with the council's report and should be utilised.

## Sheffield City Council 'Our Sheffield: one year plan 2021/2022'

### Summary

Sheffield City Council's one year plan ensures that climate action is built into business, with an emphasis on building nature into communities.

### Key points:

- The council intends to maintain Sheffield's impressive outdoor spaces and their integration with urban infrastructure, as they will 'continue to invest in our parks and open spaces working with communities and Friends Groups and continue to deliver our Trees and Woodland Strategy. Build on the good work of the Street Tree Partnership to deliver new street trees and build nature into communities.' (5) There is an emphasis here on working with the public, allowing for social and environmental policies to overlap.
- The council also plans to 'tackle harmful pollution and improve the safety of the air we breathe. We will finalise our approach to the proposed Clean Air Zone as part of a wider package of interventions to improve air quality in Sheffield' (9). This approach must include the maintenance and improvement of green spaces, and could also benefit from urban agriculture via a decrease in transportation of food from outside of the city.

## Sheffield City Council circular economy motion

### Summary

In July 2021, Sheffield City Council passed a motion regarding circular economies, pledging their belief that 'successful local councils of the future will be those which adopt the "circular economy" approach, which designs out waste, is regenerative by design and is powered by renewable energy; at its heart is the idea of reducing resource use through well-developed local plan policies that embeds reusing resources and materials that are in circulation in the economy and recycling as a last resort.' Importantly, this motion was passed with the amendment that 'a joined up, holistic approach is needed to tackle [the climate crisis], not politically motivated isolated concepts,' inviting large scale projects that address Sheffield's urban infrastructure as a whole.

### Key points:

- The council resolved to 'make "evidence of environmental improvement" a requirement for all businesses and organisations seeking grant funding or any other form of financial support,' indicating a readiness to work with organisations who have climate action at their heart.
- Amendment (k) (xv), to 'explore the establishment of green-house systems to cultivate food in a sustainable way locally, and use by products of Enzymatic Digesters to cultivate value food crops, like mushrooms' suggests that the council might also be amenable to other forms of controlled environment agriculture, as explored by Edmonson et al in 'The hidden potential of urban agriculture.' The mention of local food growing in this amendment suggests the council's readiness to consider urban agriculture on a wider scale than the existing allotments.

### 4.3.7 Sheffield City Council 'Why local food production is important to Sheffield City Council' Julie Grocutt

#### Summary

This presentation outlines the ways in which local food production intersects with Sheffield City Council's existing aims and strategies, including the areas of 'economy, sustainability, poverty, public health and many others. In particular it forms part of our Food and Wellbeing and Tackling Poverty strategies. People having access to a "good" diet that includes a lot of fresh produce - both physically (locally available) and financially. This is about social justice as well as being about health outcomes' (1).

#### Key points:

- Supplementing the existing health and wellbeing strategies of previous years, Grocutt emphasises the importance of paying attention to food through a social lens, opening up the potential for a strategy that reinvents a city that currently holds pockets of disadvantaged groups. Grocutt also states that 'in many cases a single set of actions can support several agendas - e.g. a healthy diet is generally a climate friendly diet' (2) - overlapping these agendas is important in appealing to Sheffield City Council's aims and highlighting the diverse ways in which a local food production action plan might fulfil them.
- Grocutt also highlights the economic advantages to local food production: 'The recent scrutiny inquiry into food poverty highlighted how for many families a healthy diet is unobtainable - either because it is too expensive or because their local shops simply don't stock fresh produce. Hyper-local food production has the potential to allow us to have more control over this than we do currently' (3). Greater control over prices and distribution of local food would allow for a wider range of groups to access healthy and sustainable lifestyles, which are currently only available to a privileged few.

## 3.2 Fringe farming

### Walton, M (2021) Farming Sheffield's Fringe

#### Summary

Shared Assets' Urbanising in Place project originally involved four cities: London, Brussels, Riga and Rosario. The project asked three questions:

1. 'How can [...] policy commitments to protect and create food growing spaces in London be realised in practice on the ground [...]?'
2. 'What strategies are growers currently using with respect to soil care and what is the potential for agroecological food growing at commercial scale in the peri urban and Greenbelt?'
3. 'What is the potential for incorporating the protection and agroecological enhancement of soils in planning and land use policies?'

This is an ongoing project which has now been extended to Sheffield through a partnership with SheffFood, aiming to 'repeat this process; researching access to land for peri-urban farming with a briefing and action planning even in each city.' This will result in 'an overall analysis/policy briefing on land availability with a clear socio-economic case for increasing peri-urban farming as part of a green economic recovery', 'a model of progressing land for peri-urban farming that can be replicated in other cities' and 'a series of local and national policy recommendations to unlock land in the urban fringe for food production.' Walton's blog clearly states that peri-urban farming will be beneficial to cities such as Sheffield. ([Shared Assets blog 15th March 2021](#))

Shared Assets has successfully developed a Fringe Farming project, 'supporting the development of peri urban farming in London, Sheffield, Glasgow and Bristol' (addressed below). This blog identifies eight building blocks for urban agroecology: land and market incubator; productive housing estates; farming the fragmented land; territorial food hubs; healthy soilscape; political pedagogies; peri urban agroecological park; community kitchens.

## Fringe Farm report: UK

### Summary

The Fringe Farming UK report outlines the benefits of peri urban agroecology, as quoted in the introduction above. The report defines agroecology as taking 'an integrated and holistic approach to producing food where ecological and social principles underpin regenerative systems that work to meet every person's right to access and produce healthy and culturally-appropriate foods' (6). These principles align with those outlined in Sheffield City Council's Green and Open Spaces plan, approaching agriculture with an eye to community, culture and climate.

### Key points

- The report suggests a variable scale of urban agriculture: 'the report, while focusing on peri-urban market gardening, also references community gardens and allotments, as these largely urban spaces provide pathways to farming' (9). This recognition of a variety of approaches to growing food in the city makes this report especially relevant to Sheffield city centre, where smaller spaces such as unused green or brownfield sites may be utilised.
- The report also suggests that 'a key barrier and initial focus of the project continues to be "access to land", to set up new agroecological initiatives that could connect rural and urban areas and generate multiple benefits and public goods. Accessing land also means creating secure, long-term tenancies' (9). Giving the community and businesses firm access to unused land in Sheffield City Centre for the purpose of food growing would fulfil several actions in the Green and Open Spaces plan, which promotes community ownership and business investment in green spaces.



## Fringe Farming report: Sheffield

### Summary

The Sheffield-specific Fringe Farming report, *Farming Sheffield's Fringe: the potential of food growing and farming on peri-urban land around Sheffield*, analyses existing peri-urban projects in and around Sheffield, alongside inspiring case studies elsewhere. This report is invaluable as it directly responds to Sheffield City Council's achievements (17-18) and makes corresponding demands within the council's remit, suggesting potential partners where appropriate.

### Key points:

- The report begins by outlining the areas of Sheffield that are appropriate for growing food, suggesting the suitability of the Moss Valley and stating that 'the proposal to concentrate on this area at the event recognises the fluidity of this border, and the potential of this landscape to feed the citizens of Sheffield, Chesterfield and the rest of the South Yorkshire Mayoral Combined Authority' (4).
- The existing context of this area is outlined: 'two organic farms operate in the Moss Valley, including Sheffield Organic Growers (21 acres) and Regather Farm (15 acres), but overall the proportion of land farmed organically in both the East Midlands and Yorkshire and the Humber are amongst the lowest in England, at just 1.3 and 1% respectively' (11) and the report strongly suggests further agricultural involvement in the Moss Valley.
- The current success of fringe farming here is quantified: 'it has been estimated that these larger "nature friendly farms", when combined with the wider network of community food growing and therapeutic gardens, allotments and apiaries across South Yorkshire "cultivate nearly 40 hectares, employ nearly 100 staff with a collective turnover of £8m, engage nearly 2,000 volunteers contributing 200,000 volunteer hours and support over 1,000 vulnerable people annually"' (11), with the report citing Le Corney's Nature-friendly food growing in South Yorkshire, 2021. The increase in fringe farming therefore might be projected to increase employment and the support to vulnerable people.

The Fringe Farming report for Sheffield delineates actions and policy changes for Sheffield City Council and the South Yorkshire Combined Mayoral Authority:

#### A. 'Develop a City & Regional Food Strategy' (5)

The report argues for the current food strategy, written from a public health perspective, to be reconfigured from a climate and community wellbeing perspective. This allows for a development of the city as well as the physical and mental wellbeing of its citizens, and takes into account the ever growing priority of climate action. The report suggests that the council and authority collaborate with ShefFood in order to build this strategy with their expertise to ensure that the priorities of health, city and climate are integrated together into the new plan.

**B. 'Provide access to the Carter Jonas Land Asset Review' (6)**

This review would allow ShefFood to analyse the availability of public land for the purpose of agriculture, and also to understand the council's current intentions for this land. Access to maps of available assets is indispensable in constructing strategies for Sheffield's urban and peri-urban agriculture, and this work has already been done by Carter Jonas. The publication of this work would fulfil the suggestions of Tomkins and Edmonson above.

**C. 'For the SCR to announce itself as an "Agroecological City Region"' (6)**

As addressed above in response to Linda Moss' analysis of the Cultural Industries Quarter, Sheffield is a pioneering city with a history of radical and leading city strategies. In announcing itself as an Agroecological City Region, Sheffield would be at the forefront of national climate responses. This status would mean that 'food production would be considered a priority enterprise on any suitable land' (6) highlighted by the Carter Jonas report above, integrating food production into the fabric of Sheffield, BarnsleyBradford, Rotherham and Doncaster. As addressed elsewhere, this would reflect Sheffield's heritage of market gardening, help to combat the climate crisis, provide food security for Sheffield's inhabitants and provide jobs within the city region.

**D. Develop an integrated horticultural and agricultural training system' (6)**

These developments must coincide with programmes which allow for the training and subsequent employment of Sheffield's inhabitants, funded by the city council and mayoral authority. The report suggests cooperation between the council and ShefFood in order to make the most of the links between food producers, colleges and universities that ShefFood is already cultivating. As outlined in the report, both the training and its accompanying awareness campaign must take into account the ethnic diversity of the city region and work hard to reflect this in resulting employment.

**E. 'Support procurement of local food to build the circular economy' (7)**

The report draws attention to the capital saved in localising food production: 'money previously spent on food imported from outside the region would instead be spent within the locality, and shorter supply chains permit greater control over emissions' (7). Sheffield City Council has already committed to building a circular economy, and the added benefit of money spent within the region is a further bonus.

**F. 'Food champions and opportunities for every neighbourhood' (7)**

The report addresses the need for the council to diversify its response to respond to each different neighbourhood's needs. Therefore, a Food Champion is suggested to liaise with each community, connecting individuals to the policies and places that provide their food.

The Fringe Farming report does commend Sheffield City Council for its existing work, such as the development of its Rural Strategy, demonstrating a shift in how the council thinks about available land in the context of food growing objectives. A key phrase here is 'to encourage more holistic sustainable land management' (12) - the word 'holistic' is a refrain throughout this literature review, with many sources emphasising the importance of viewing and understanding the connections between different elements of urban life, and creating an overarching action plan that addresses food systems and urban design as a whole.

Sheffield's status as the 'Outdoor City' ought to be taken advantage of in the context of the food sector: 'the local food sector in Sheffield, made up of 4,951 registered food businesses, employs around 25,000 people and is an important part of the city's tourist economy' (13), offering great opportunities for intersection with the celebration of green and open spaces. The report argues that 'Food of local provenance could become a mainstay of hospitality and the events industry' (13), especially with the historical backdrop of market gardens within the city and around its perimeter.

### **Sulley, R. (2021) 'Farming Sheffield's Fringe'**

#### **Summary**

Sheffield City Region, encompassing Sheffield, Rotherham, Doncaster and Barnsley, has developed a Net Zero Programme, to be fully actionable by 2041. The programme involves 'driving low carbon, green and circular economy opportunities within the economy and delivering net-zero emissions and lower overall environmental impact' (3). The project director, Richard Sulley, suggests that farming Sheffield's fringe comes with the benefits of 'increased soil carbon; reduced food miles; reduced packaging; reduced processing; lower transport emissions; employment opportunities; access to healthy food; education and outreach; skills and training; more local labour; local spend; local business' (4). These outcomes all fulfil the intentions of Sheffield City Council plans, suggesting a cohesive vision for a greener city region and city centre which incorporates urban agriculture.

## **3.3 Urban agriculture**

### **Edmondson et al., (2020) The hidden potential of urban agriculture.**

#### **Summary**

This article explores the potential for unused spaces - both green and grey infrastructure such as allotments and flat roofs respectively - to accommodate urban food growing. The article provides a national context for the potential of urban agriculture, before using Sheffield as a case study. The article presents a strong claim for the farming of unused green and grey space in Sheffield and nationally, with promises to reduce food and energy waste through transport and more effectively use the land available within the city centre.

#### **Key points**

- 'In the United Kingdom, approximately 16,000km<sup>2</sup> of land is designated as urban, of which green infrastructure constitutes approximately 50% (an area 5.3 times larger than that used nationally for the commercial production of fruits and vegetables). To understand the extent to which UH can make use of this apparent land resource, we used high-spatial-resolution datasets [...] in a GIS to analyse the current and potential productive space for UH [urban horticulture] for the UK city of Sheffield' (p.155). The article uses GIS mapping effectively to convey Sheffield's opportunities for food growth and land reclamation.

- The research undertaken by the authors 'identified an additional 1,192 ha (11%) of green infrastructure that is potentially suitable for allotment-style growing and 404 ha (4%) for community-style growing. Together, this represents 98m<sup>2</sup> per person in Sheffield: 71% in domestic gardens and allotments and 27% in the wider green infrastructure' (155). Rejecting much of this land to account for other needs, such as storage and access, Sheffield could benefit highly from this repurposing: 'effective utilisation of less than one-quarter of this area would equal the 23m<sup>2</sup> per capita nationally used for UK commercial horticultural production of fruits and vegetables' (p.155).
- The article consciously connects itself to the Sheffield City Council reports: 'albeit not explicit in their strategy, there is clear potential for the council to act as an "anchor institution" to provide security to new UH community-based businesses. There is also a recognition that council buildings could be used to distribute food or act as retail spaces for social supermarkets alongside the potential to use these spaces (or at least their rooftops) for CEH [controlled environment horticulture]' (p.158). This shows that work has already been done to integrate attention to food systems into existing plans, with the council's likelihood to agree to this development taken into consideration.

### **Shared Assets (2021) 'How urban agroecology can help tackle climate change'**

#### **Summary**

Mark Walton outlines the various benefits of urban agroecology, which 'has the potential to contribute to Net Zero targets by: reducing losses of soil carbon to the atmosphere; sequestering CO<sub>2</sub> by building up soils thereby increasing biodiversity, increasing water retention/reducing runoff and flooding, reusing organic urban waste streams; eliminating nitrous oxide emissions from artificial fertilisers; working from low impact principles such as renewable energy, electric/bike delivery etc.' (9) The presentation reveals the six bases on which urban agriculture should rest: livelihoods, environment, productivity, shared benefits, community control and system change. Outlining the bases and benefits in these terms allows urban agroecology to be understood by decision makers and shareholders who do not have a background in these topics.

### **Urban Agriculture Consortium (2021) Progress, prognosis, COP26 feedback, policy influencing with a focus on Sheffield.**

#### **Summary**

The consortium is a convening of organisations and individuals across the UK food system which encourages people to look beyond allotments and community gardens as the primary urban agricultural locations. This 2021 webinar discussed a range of topics, with a focus on Regather's work to implement a structured food system in Sheffield.

### Key points:

- Alison Teal, Green Party councillor for Nether Edge and Sharrow, suggested the power of the community in transforming the green and open spaces of Sheffield, citing the successes of the 'Save Nether Edge Trees' (2015) and 'It's Our City' (2019) campaigns, both of which were grassroots and community focused. Teal's presence on the council and position as the executive lead for parks, countryside and ecology allow her to access land and funding necessary to make changes to Sheffield's food systems.
- Gareth Roberts, a founder member and co-director of Regather, and coordinator of ShefFood, emphasised this public activism and stressed its existence predating the trees campaign, referring to Heeley City Farm as a 'much loved city institution that came out of the unbelievable context of the dual carriageway.' Heeley City Farm's existence and importance, coupled with Sheffield's residents' memories of food education that no longer seems to be on the curriculum, demonstrates the importance of locally sourced food in Sheffield's heritage and the city's ability to support its resurgence.
- Roberts also referred to Regather's position within the city: expansion into rural and peri-urban areas involves competing with housing, horses and commodity production, and given what kind of city Sheffield is, where the population is, where the market is, it is the urban areas that Regather are looking to increase productivity. Coupled with the pressures to increase agroecology in cities above, this indicates the importance of urban food growing in Sheffield itself. Duncan Williamson, founder and director of Nourishing Food Systems, added the benefit that 'communities like this kind of development', indicating an invitation to return the market garden to the city centre.
- Another key takeaway from this discussion was the need to coordinate, with a 'plethora of national programmes' existing without the appropriate structured response to implement them. Roberts advocated for an 'integrated systems approach'.

# 4.0 Case Studies

The following case studies give examples of successful inner-city growing initiatives both from within the UK and around the world.

## 4.1 The Story Garden, Kings Cross, London

This inspirational project began in 2009 as a moveable vegetable garden built in skips. Known as 'the garden of a thousand hands', the garden has moved around King's Cross as it has been developed. Each time, growing in scope and scale. The garden is run by Global Generation - the educational charity on a mission to connect people to nature in the middle of the city.

Offering a green oasis in the heart of the city, The Story Garden includes a tranquil orchard, a small oak forest, and lots of beds for the local community to grow herbs, vegetables and flowers, which are then used to make the food sold in the garden's café.

The emphasis is for hands-on activities with young people, working alongside business volunteers to develop and implement ideas that have a positive impact on the environment in and around King's Cross. Activities include:

- Using site materials to build the garden and the planting containers
- Gardening and maintaining the garden through Twilight Gardening sessions and corporate volunteer days
- Helping run the garden kitchen and café
- Supporting BTEC Business and Sustainability students with business plans
- Increasing biodiversity and learning about bees as part of the Honey Club

Local young people work alongside construction workers, students and volunteers to build and run this urban oasis, picking up invaluable skills and connections along the way.



## 4.2 Sydney Pocket Farms

Sydney Pocket Farms is an organisation which works alongside communities, schools and businesses to set up and maintain urban food farms, food forests and to increase urban greening, biodiversity and food security in the city.

Pocket City Farms was established in 2015 with the aim of creating a model of urban farming that operates off three main pillars - growing local fair food, providing education and connecting communities. Pocket City Farm's first urban farm is part of the Education & Community Hub. Established in 2016 on the previously unused bowling greens at Camperdown Bowling Club, the farm is a part of Camperdown Commons - a community revitalisation project developed by Camperdown Project Pty Ltd in collaboration with Pocket City Farms.

The Camperdown farm has become a productive hub where the local community can gather to learn about all things farming and food growing, buy local, organically-grown produce and take part in many workshops and events. The bowling greens have been converted into 1200m<sup>2</sup> of market garden using organic practices to grow vegetables, herbs and salad greens. A greenhouse grows seedlings for the market garden and for sale to the public, and a 16 m<sup>3</sup> compost unit has been established for composting local food waste. The farm is a community-oriented social enterprise and open to the public as a demonstrative showcase of urban farming. The street verge of the farm has also been planted out with edibles and is growing into a lush 180m<sup>2</sup> food forest that provides free food for the local residents.

The organisers believe that local sustainable food production close to where the bulk of the population live - and can connect with and learn from - is integral in securing a healthy future for our communities and our planet. Their model of farming is multidimensional - balancing growing local and organic produce with the goal of providing education on food and farming, and providing community connection through place and programs.

The organisation is now working towards establishing or assisting multiple projects throughout Australian major cities. Their long-term vision is to see urban farming as a normal part of our society and urban fabric.



### 4.3 Los Angeles Community Garden Council

The Los Angeles Community Garden Council's mission is to strengthen communities by building and supporting community gardens where every person in Los Angeles County can grow healthy food in their neighbourhood. This organisation aims to build a garden network for Los Angeles where people of all ages and backgrounds live healthy, active lives in a clean environment by growing fresh food. This network fosters the meeting of people from diverse backgrounds to share experience and knowledge, promote urban agriculture and economic justice, provide leadership and job training, and grow more beautiful and sustainable communities.

The Los Angeles Community Garden Council partners with 42 community gardens in LA County to take care of the business side of gardening. They also offer gardening advice and workshops to more than 125 community gardens in LA County.

The website contains a 'Find a Garden' tool which enables local residents to easily find and join a gardening project in their local area.





#### 4.4 LokDepot, Basel, Switzerland

Roman Gaus founded Urban Farmers as a way to bring “growing back to where you live.” The company’s mission is to scale up urban agriculture, and promote local food production.

UF001 LokDepot, a rooftop greenhouse built in 2013, was Urban Farmers’ first full-sized commercial farm. Located in Dreispitz, south of Basel, Switzerland, this prototype was notable because of its integrated systems and made visually striking by the use of shipping containers. The University of Applied Sciences (ZHAW) in Wädenswil helped test the production processes before the company replicated the system.

Within their greenhouses, growing is through an aquaponic system, which links fish farming to hydroponic (soil-less) farming. Fish provide fertiliser for the plants and the plants purify the water the fish swim in. This system not only produces fish but also herbs, salad greens and other vegetables. This is all controlled from start to finish by their own custom software. Customers for their greenhouses can buy the entire system and Urban Farmers offer support services, from training to technical support.

All the greenhouses they design are modular. Their smallest greenhouse, the UF Globe, is a lightweight geodesic dome that comes ready to assemble, and is suitable for a small yard or a rooftop. Their midsize greenhouse, the UF Box, is designed to fit precisely on a shipping container. This size is recommended for school groups. Their largest greenhouse is the UF Farm, a modular unit that can be multiplied to fit the expanse of a roof to accommodate commercial production.

The rooftop system is designed to harvest rainwater, compost organic waste and rely on renewable energy. The greenhouses themselves minimise heat loss, and in addition, by constructing these farms on rooftops, waste heat from the building can help to heat the greenhouses.

The yield of their newest facility, UF Farm at LokDepot, has reached 5 tons of vegetables and 850 Kg of fish annually. These are sold to a variety of customers from small grocery stores to neighbourhood communities through a subscription system called Fresh Revolution.Basket. With this method, customers are buying a consistent product and the farm has a reliable customer base - all coming from what is likely the world’s first urban rooftop aquaponic farm.



# 5.0 Key areas for discussion and/or debate

## 5.1 Space

In a city where land prices are high it can be impossible for urban gardeners to compete with the financial power of property developers and businesses. The City Centre Strategic Vision clearly emphasises the Council's priorities around new home construction which is seen as a key part of urban regeneration. This means that food production in the city centre needs to take an innovative approach which maximises the space available. This may include developing growing techniques suitable for areas such as courtyards, rooftops, balconies and car parks. Mapping the available space, potentially using GIS technology, is an important first step to achieving this.

## 5.2 Social justice

As highlighted by the Fringe Farming report, it is essential to ensure that any agroecological development in Sheffield City Centre must encourage a diverse group of food growers: 'as with all food systems, peri-urban food policy and practice needs to be based on just and equitable access to land and community wealth building' (Spelling et al., 2021, 10). This means that social justice approaches must be integrated into the establishment of food growing spaces in Sheffield - access to the land must be open to all, but furthermore participation of different races, genders, classes and cultures must be encouraged. The offer of training must be extended to invite groups that currently do not take part, and the food grown and made available must be culturally appropriate to Sheffield's diverse communities.

## 5.3 Leadership

The leadership of these spaces must be carefully considered. This report proposes an interconnected, holistic approach to food production in the city centre, meaning that different sites must coordinate and correspond with one another long term. Following R-Urban's example, sites may be set up by more experienced groups before being slowly handed over to the community of the area. In this case, training programmes for otherwise inexperienced members of the community should be established in conjunction with or following the establishment of the sites. An overarching framework for training, leadership and maintenance of the sites, as well as usage of the food grown, must be put in place to maintain connections between different sites and the adherence to a long term, city-wide plan.

## 6.0 Levers for change

The Vision Principles and Strategic Ambitions outlined in the latest City Centre Strategic Vision can all be related to the development of urban agriculture, offering significant opportunity to harness the funding and political power of the City Council and associated organisations. One example of a potential opportunity that could be exploited is found on page 12 of the Vision, where it is written that: 'A specific focus is however needed on how young people can further engage with the City Centre - from children, teenagers through to young adults.' The development of urban growth initiatives that offer employment and educational opportunities for local people can be offered as a perfect way to engage young people in Sheffield's urban spaces and build a sense of community. Neepsend is highlighted as an area which the City Council seeks to develop as an 'Outdoor Neighbourhood'. This commitment could be capitalised upon to maximise the potential for new urban agriculture initiatives to be incorporated in development proposals.

Many of the Council's existing food schemes emphasise the importance of improving physical health through increased exercise and an improved diet. This represents a lever for change, providing an important opportunity for policies which promote local, organic food-growing to overlap with public health policy objectives. Focusing on the benefits of fresh fruits and vegetable consumption and the socio-physiological benefits of participating in community gardening activities would help to underline potential synergy between food-growing and public health targets.

Another important lever for change is the overlap between Sheffield City Council's dedication to climate action and the various ecological and climate benefits of agroecology in the city centre. For example, Sheffield City Council's Green and Open Space Strategy proposes to 'strategically plan the enhancement of the urban trees, woodlands, parks, rivers and natural landscapes that characterise Sheffield's greenness' (2010, 38) - a plan for an agroecological city centre should argue that the transformation of existing and potential green spaces enhances Sheffield's greenness and builds on its reputation as an 'Outdoor City'. The high demand for allotments over the course of the pandemic might be translated into a need for more spaces for community food growing, drawing this practice beyond the allotment and into the city centre itself.

The Fringe Farming report for Sheffield includes a case study of Rosario, Argentina, focusing on the flagship Urban Agriculture Programme which responded to the 2001 financial crisis. The programme has since 'grown to preserve over 700 hectares (1,730 acres) of agricultural land, produce 25,000 tonnes of fruit and vegetables each year, and reduce greenhouse gas emissions for locally produced vegetables by 95%' (16). This case study provides inspiration for Sheffield's own greenhouse gas reduction, a key element of climate action which elsewhere has been highlighted through the use of farms as carbon sinks. Rosario's programme, 'began by mapping and then taking over vacant and underutilised land that could be used for farming' (16), a step that has already begun to be taken in Sheffield through the Carter Jonas Land Asset Review. The municipality then 'offered tenancies to small-scale agroecological farmers' (16), as suggested in the UK Fringe Farming advice to national and local governments. Following this step, they provided 'technical agricultural assistance and trained farmers in commercial skills such as food safety and quality control' (17), a step which has been highlighted through the Fringe Farming documents, stressing the importance of a diverse intake and employment scheme. Finally, Rosario's Urban Agriculture Programme 'strengthened routes to market through home delivery schemes, setting up farmers' markets, and processing plants' (17), tying agriculture further into the urban environment through engagement with urban infrastructure and social areas.

The case study of LokDepot highlighted the importance of applying innovative technological approaches to urban food growing to overcome barriers posed by poor soil quality or lack of available land. This approach is already being trialled in a collaboration between Regather and the Institute for Sustainable Food at the University of Sheffield through the construction of an aquaponic minifarm on Club Garden Road. This initiative is designed with circular economy principles in mind, and offers great potential for further development.

The Los Angeles Community Garden Council case study revealed the value of a strong network to unite urban growing projects, offering advice and expertise to those volunteering and running community initiatives. The establishment of a similar organisation in Sheffield would be of great value, ensuring that new projects had a higher chance of success and maximising social impact.

# 7.0 Conclusion

Sheffield's city centre has faced a significant number of challenges over recent decades as the way people shop, work and socialise has changed dramatically, altering the function of urban space and the interactions that take place within it. At the same time, the city is facing a crisis of rising poverty amongst its residents and the inherent instability and volatility of our hegemonic supply system is putting food security under threat for thousands more.

This report has shown that inner city food-growing offers a potential opportunity to stem urban decline and reinvigorate our urban centres, providing benefits that link development policy in the social, economic and environmental spheres. As noted by Edmondson et al.: 'Urban areas offer considerable potential for horticultural food production, but questions remain about the availability of space to expand urban horticulture and how to sustainably integrate it into the existing urban fabric.' (2020: 155).

Case studies have shown that the key to success lies in drawing upon the resilience, determination and innovation of local people, with the role of the Local Authority being to provide an enabling environment and network of support for developing food-growing projects.

Although food-growing is one important part of sustainable urban development, this report acknowledges that it is unrealistic to expect that a significant proportion of Sheffield's nutritional requirements can be met through inner-city growing. Therefore it is important to capitalise on the other benefits that urban agriculture can provide, such as increased community cohesion, biodiversity and flood mitigation.

This report has explored the potential of expanding urban agriculture within Sheffield city centre, one key objective of a 'good food' future for the area. Future work should build on this report by exploring the potential of the other key objectives to build a more comprehensive strategy.

It is important to remember that Sheffield's history and culture is a key part of what makes the city such a fantastic place to live; any strategy must underline the importance of retaining the city's character and highlighting the best of what is on offer locally, while simultaneously calling for a transformation of food infrastructure to allow for a reinvigoration of the local economy and a fairer society.

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