

# Enabling Urban Social Farming: the need for radical green infrastructure in the city

Louise M. Mitchell, Lawrence Houston, Michael Hardman, Michelle L. Howarth & Penny A. Cook |

To cite this article: Louise M. Mitchell, Lawrence Houston, Michael Hardman, Michelle L. Howarth & Penny A. Cook | (2021) Enabling Urban Social Farming: the need for radical green infrastructure in the city, Cogent Social Sciences, 7:1, 1976481, DOI: [10.1080/23311886.2021.1976481](https://doi.org/10.1080/23311886.2021.1976481)

To link to this article: <https://doi.org/10.1080/23311886.2021.1976481>



© 2021 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.



Published online: 27 Sep 2021.



Submit your article to this journal [↗](#)



Article views: 46



View related articles [↗](#)



View Crossmark data [↗](#)



Received: 13 July 2021  
Accepted: 31 August 2021

\*Corresponding author: Louise M. Mitchell, School of Science, Engineering and Environment, University of Salford Peel Building, M5 4WT, UK  
E-mail: [L.Mitchell8@edu.salford.ac.uk](mailto:L.Mitchell8@edu.salford.ac.uk)

Reviewing editor:  
John Kwame Boateng, University of Ghana, Accra GHANA

Additional information is available at the end of the article

## GEOGRAPHY | RESEARCH ARTICLE

# Enabling Urban Social Farming: the need for radical green infrastructure in the city

Louise M. Mitchell<sup>1\*</sup>, Lawrence Houston<sup>2</sup>, Michael Hardman<sup>1</sup>, Michelle L. Howarth<sup>3</sup> and Penny A. Cook<sup>3</sup>

**Abstract:** With the global population projected to continue growing, there are concerns that health services are beginning to be stretched beyond working limits, particularly in the Global North, where many nations face ageing populations and similar obstacles. One suggested radical method to tackle these issues would be to provide access to Green Infrastructure (GI) interventions, including the development of social farms, particularly within urban areas and across deprived communities; enabling conventional health services to be supplemented by nature-based therapy. Social farms encapsulate this ideology, by enabling spaces for farming practices to also be used for therapeutic outcomes: providing care, rehabilitation, and even educational programmes. This focuses around the concept of social prescribing, with activities within social farms, amongst other spaces, such as community gardens and urban farms, acting as non-medical approaches to aid people with mental health or related conditions. Currently, research across social farming and social prescribing is relatively novel and therefore tends to be based in Scandinavian countries or the USA, in which these spaces are more readily available. This paper focuses on the concept of social farming, which has received increased attention in the UK context, particularly within the Department for Environment, Food, and Rural Affairs (DEFRA) recent 25-year Environment Plan. The paper argues that there is

### ABOUT THE AUTHOR

This cross-disciplinary working team has interests in geography, public health, social prescription and are driven by creating impact from research. Louise Mitchell is a PhD researcher, investigating social farms and community gardens with older adults. With wider interests in environmental sustainability, justice and empowerment. Lawrence Houston holds a master's degree in public health and is a Research Officer for East Lancashire Hospitals NHS Trust. Dr Michael Hardman is a Senior Lecturer in Urban Geography at The University of Salford, and specialises in urban agriculture, planning and food security. Dr Michelle Howarth is a Senior Lecturer in Nursing at The University of Salford, and PGR Deputy Director, while specialising in social prescribing and the use of nature. Professor Penny Cook specialises in Public Health within the University of Salford, with research interests in Fetal Alcohol Spectrum Disorders (FASD), alongside physical activity and the health benefits of greenspace.

### PUBLIC INTEREST STATEMENT

Global populations are growing, life expectancy is increasing, and health services show signs of being stretched beyond working limits. Alongside this more people are living in urban areas, where access to nature is limited, which is detrimental to health. One suggested method to tackle these issues is facilitating access to nature through Green Infrastructure (GI). This article discusses one radical method of GI, the concept of social farming. The idea involves linking farms with therapeutic practices: providing care, rehabilitation, and even education. In doing so, these spaces act as non-medical approaches to aid with mental health or related conditions, with those in need often referred through social prescribing. Currently, research across social farming and social prescribing is relatively novel, with this article focusing on the UK context, while advocating for development particularly in urban settings. To conclude the article, we highlight barriers and opportunities to enable success of social farms in the future.

a need for development of this practice within urban settings, with findings showing an agglomeration of sites in the rural context. In addition, we discuss tools for development and barriers, to illustrate opportunities for the future.

**Subjects:** Urban Studies; Cities & Infrastructure; Human Geography; Planning - Human Geography; Geographical Thought; Social Geography; Urban Geography

**Keywords:** social farming; care farming; urbanisation; green infrastructure; health geographies; social prescribing

## 1. An introduction to social farming

As urban populations rise and more pressure is placed on conventional medical services, key actors, such as central/local government, planners, public health professionals, and others, are beginning to explore other innovative means to care for people in need (European Commission, 2012; Perrott & Holland, 2005).

Green Infrastructure (GI) or Nature-Based Solutions (NBS), is increasing in popularity, encouraging nature to be incorporated into planning, design, and implementation of the spaces people live, while enabling a range of socio-environmental benefits to be possible for those directly or indirectly using them (Lin et al., 2017; EEA, n.d). With this umbrella term being used for development at different scales, radical examples now include community gardening, urban (city) farms, and pocket parks (Mell, 2018; Forest Research, n.d).

In the UK, one option has been to invest in practices, such as social farming; this concept can be defined as: “*the therapeutic use of farming practices*” (Social Farms and Gardens, n.d). Others suggest that social farming is “*the use of commercial farms and agricultural landscapes as a base for promoting mental and physical health, through normal farming activity*” (Elsey, et al, 2014, p. 1). In the UK, social farms are often labelled “care farms”, but increasingly academics and professionals alike are moving away from this language, arguing that the latter causes confusion and that different terms need to be adopted for the space (Social Farms & Gardens, n.d.). Within this paper, we use the term “social farm”, due to Social Farms and Gardens (the national body for the movement) encouraging this approach, through rebranding.

Social farms are urban or rural farms, with an added therapeutic angle (Pölling et al., 2017); this often enables an element of added value to these conventional spaces whilst also allowing for an extra income stream to supplement agricultural activities. Social farms use pre-existing farmland for the benefit of humans primarily through health improvements, evidenced with reduced anxiety and depression levels (Pedersen et al., 2011), improving work and social skills (Hine et al., 2008), and providing structured daily lives for those living with dementia (De Bruin et al., 2010). Hemingway et al. (2016) argue that benefits can be seen within the staff as well as clients, as they benefit from the caring nature of these spaces, whilst farming diversification can provide viable incomes whilst accommodating human interaction with the natural environment.

## 2. Nurturing urban social farming

Increased global populations coincide with additional pressure being applied by ageing populations, particularly within the Global North; this in turn is increasing pressure on health-care systems (Elsey et al., 2019; Guzman-Castillo et al., 2017). Further pressure has been applied during the Coronavirus (Covid-19) pandemic, accelerating interest in the field, and use of the environment for both physical health and mental wellbeing (Bu et al., 2021; Horton, 2021; Pierce et al., 2020). Populational increases coupled with the future effects of climate change, resource competition, disparities across inequalities and increasing urbanisation provide a necessity for all stakeholders to identify ways in which health and environments can be sustainably maintained, whilst hopefully improved (McKee et al., 2021; Szreter, 2004; Van Den Bosch & Sang, 2017; Whitmee et al., 2015).

As mentioned, the use of GI, particularly social farming, is a developing area being explored as an opportunity for nature to be integrated within healthcare. Therefore, establishing a space to tackle the increasing pressure across this sector in the coming years (Bowen & Lynch, 2017; Cameron et al., 2012; Lee & Maheswaren, 2011), particularly post-pandemic, with “*less money and more work*” (p.1) shedding light on the major funding crisis with increased numbers requiring support (Mahase, 2020).

Creating nature-based spaces and activities, initially benefits the users, while also providing wider societal benefits, including maintaining (natural and healthcare) ecosystem services, mitigating climate change, building community cohesion, and ultimately improving health and well-being (see Nicolosi et al., 2021; Russell, Beattie & Heaney, 2021; Seddon et al., 2021; Gianferrara & Boshoff, 2018). GI has therefore been identified as a possible salutogenetic opportunity, enabling health to be managed and conditions prevented, whilst ensuring care is personalised (Howarth, Lawler & de Silva, 2021; Buck, 2016; Robinson & Breed, 2019; Thompson, 2018).

This opportunity can be greatly appreciated within urban contexts, with increasing population coupled with declining access to natural environments, therefore contributing to the susceptibility and prevalence of physical and mental health conditions (Corburn, 2004; Grinde & Patil, 2009; Maas et al., 2009; McMichael, 2000; Mitchell & Popham, 2008). Long-term conditions (LTCs) such as cardiovascular and respiratory diseases remain a global issue, resulting in a significant impact on death rates, with increasing academic understanding that now links urbanisation to increased prevalence/susceptibility. With studies investigating increased likelihood of conditions, such as respiratory diseases (such as Tuberculosis (TB)), type 2 diabetes, obesity, and cardiovascular disease (Lenzi, 2019; Li et al., 2012) caused by the environment.

This is evidenced by the WHO (2010), who suggests that those residing in cities, such as New York are at higher risk, of up to four times the national average of contracting TB, and city living poses risks for the epidemiology of infectious diseases by facilitating rapid spreading (Connolly, Keil & Ali, 2021; Neiderud, 2015). Urban pollution also proves a problem for health, with an estimated 1.2 million early deaths each year around the world, mainly due to cardiovascular and respiratory diseases, as this aggravates conditions such as Chronic Obstructive Pulmonary Disease (COPD) (WHO, 2010). Whilst Hoare, et al., (2019) explores the implications that urbanisation has on mental health, through suggestion that depression levels are higher in cities, with Lecic-Tosevski (2019) concurring with this suggestion and further implying the use of Nature-based solutions as an attempt to prevent cascading issues surrounding mental disorders and attempting to alleviate symptoms.

This section has highlighted the impact that development has on urbanised populations, with academics suggesting the use of GI, for example, social farms could alleviate these issues by providing a natural method to gain positives from the environment.

The paper proceeds to explore the development of social farming practices alongside the barriers and facilitators of this development, before proceeding to map sites in the UK. In doing so, we provide recommendations for advancing the practice more widely across the country.

### 3. Exploring the development of social farming

The use of the natural environment for the benefit of human health has been documented for centuries, with the most common model of social farming established in the 13th century, at Geel in Flanders, Belgium (De Krom et al., 2013). Linked to Irish legend, tales arose in the town of miraculous cures residing in the natural environment. During the renaissance, Geel became a popular place of sanctuary for people with mental illness, provoking locals to open their homes, farms and stables (Calton & Spandler, 2009). As this ideology grew, increasing numbers of people were drawn to the area to yield the positives from both the legend and the environment. In essence, this was a form of social farming, as visitors were “treated” by exposure to land and

animals, rather than traditional medicines (Gesler, et al., 2004). Today, this town is still known for welcoming people with mental illness and those who are disabled, allowing “patients” to share lives with their host families whilst receiving treatment for their conditions, taking a different approach to traditional psychotherapeutic treatment (Salomon, et al., 2018).

From these roots, the practice has since spread across the world rapidly, with pioneering countries, such as the Netherlands, pushing the concept forward. In this context, the Netherlands has seen an exponential growth in sites from ‘75 in 1998 to more than 1000 in 2009’ (Hassink et al., 2014, p. 2). The Dutch strategy has focused on three main client groups as part of this growth: those with mental illness, those requiring adult care and the elderly (Hassink et al., 2010). Yet this philosophy is slow in gaining traction within the UK, as shown:

*‘care farming is often perceived and portrayed as a relatively new form of UK farm-based activity’* (Leck et al., 2014, p. 19).

As Leck et al. (2014) argue, the concept of social farming is still relatively innovative and novel to the UK. Confusion and conflict often ensue due to the interchangeable nature of the jargon used in the UK, with funders and policymakers often failing to realise that care farming and social farming are the same activity. Indeed, evidence suggests that many social farms are inconsistently funded, with individuals/referrals coming with or without funding, resulting in farmers having “to access other funding sources to adequately cover the costs of providing services and site maintenance” (Bragg, 2020, p. 13). Which is potentially exacerbated due to confusion with the sites purpose and this issue around the jargon (see Hardman & Larkham, 2014a). Figure 1 adds context here, outlining the frequent funding streams, descriptive terms, and other elements.

As Figure 1 demonstrates, social farming crosses multiple definitions and disciplines, consequently impacting on the progress of interventions provided. However, the limited understanding surrounding the term, and a lack of knowledge on its potential impact to health, results in favouring traditional medication models for prescription and hence limits the impact of social

**Figure 1. Current landscape of social farming in the UK**  
 (Authors’ own, 2019).



farms on a wider platform. There is a need for more consistency with language and a need to reflect on exemplars, such as the Netherlands, to explore how the practice can be mainstreamed within the UK context; creating spaces which are more financially secure and able to work with health services and other key actors.

Alongside the broadness of the practice in the UK and barriers around its impact and associated issues, there is further confusion with regards to language used within the wider health sector. In a UK context, social farming adopts the use of terms, such as “personal budget” and “link workers”, as shown within [Figure 1](#). These are not typically used across the continent, illustrating a difficulty in cross-comparative analysis between countries. However, it is helpful to define these terms within this paper, to ensure clarity and enable comparison to other works.

The National Health Service (NHSE, [2019c](#)) states that “*Your personal budget is the amount of money your local council will pay towards any social care and support you need*”. This emphasises inequality within the UK, with differential spending across councils, but also on a wider scale when comparing to other countries that do not rely on nationalised health-care systems. Whilst link workers “*connect people to community groups and help the person to develop skills, friendships and resilience*” (NHSE, n.d). Highlighting a viable link between alternative healthcare and the patients.

When exploring the concept of social farms alone, this can be interpreted in many ways and the services they deliver can even be somewhat complex to define, portraying a further difficulty in mainstreaming the practice. Bragg et al. ([2014](#)) state that “*on care farms, components of either the whole or part of the farm are used to provide health, social or educational care through a supervised, structured programme of farming-related activities. Such activities can include animal care (feeding, cleaning, moving livestock); collecting eggs, crop management (sowing, maintenance, and harvesting); horticultural activities; land and forest management activities*” (p1). The interventions and programmes offered by social farms differs and often depends on those who developed the social farm and their clients: “*care farms provide services for a wide range of people, including those with defined medical or social needs (e.g., psychiatric patients, those experiencing from mild to moderate depression, people with learning disabilities, people with ASDs, those with dementia, those with a drug history, disaffected young people or elderly people) as well as those experiencing the effects of work-related stress or ill-health.*” (Care Farming UK., [2017](#), p.4). However, the fundamental role of most social farms is the same: to improve the quality of life for the individual[s] accessing care farm services (Care Farming UK, [2015](#)). Social farming sites typically feature a wide array of activities for visitors, spanning horticultural classes to interaction with animals (Gorman, [2017](#); Leck et al., [2014](#)).

Examples of social farms currently exist across mostly rural locations within the UK, with one exemplar called Willow Tree Farming, located in Norfolk, where vulnerable groups access therapeutic interventions tailored to each individual (Willow Tree Farming, [2019](#)). Whilst within an urban area, Cherwell Farm and Garden, based at PossAbilities, Greater Manchester, assists locals and those with learning disabilities to provide health/wellbeing benefits, whilst challenging stereotypes and attitudes (PossAbilities, n.d).

Each of these cases provide therapeutic services, whilst engaging with a variety of users across different land-based environmental activities, from live animals, mud kitchens, sensory gardens, and respite accommodation services. However, social farming projects still experience difficulties in development, and this will now be discussed further.

#### **4. Developmental challenges experienced across social farming**

As highlighted previously, the multiple definitions and possible pathways for delivering these spaces is proven to be inconsistent and therefore makes progress difficult; often creating confusion amongst policymakers and other key actors. We argue that this proves challenging for the practice to be mainstreamed, as many do not understand the interchangeable use of care or social farms



when referring to these sites. Barriers therefore exist for key actors attempting to research or enable the practice, from simply attempting to understand the field, with projects using different terminology, to funding of the practice, raising awareness amongst the public and beyond (Hine et al., 2008).

The current funding pathways provide an insight into the different streams of input, alongside the difficulty in competitive necessities of public spending elsewhere. The recent implementation of the NHS Long-Term Plan has placed a focus on reducing long-term conditions and supporting those most in need, through adopting community, asset-based referral pathways. These include “Social Prescriptions” (SPs) whereby a GP or other front-line professional refers a person to a link worker to determine an individual’s needs based on *what matters to them, rather than what is the matter with them* (NHSE, 2019b). This approach places a focus on the individual rather than the condition, therefore promoting non-medical services, such as social farms.

Social prescribing schemes across England were allocated £4.5 million to allow increased use of these services, through an dedicated introduction of link workers to every GP practice by 2020 (UK Government, 2018a). However, this fund only enables link workers to establish a connection with a small number of existing community projects; therefore, failing to support the sustainability of other current projects or growth of new projects (UK Government, 2018a). The Government also offer the annual Voluntary, Community, and Social Enterprise (VCSE) Health and Wellbeing Fund, with a total available up to £510,000 per applicant, although this still requires match funding and will not cover any shortfall, potentially leaving projects with aspects incomplete (UK Government, 2018b), as it impedes the financial flow to the grassroots institutions. Alternative funding streams are also available from other sources, with examples, such as The National Lottery Community Fund and Connect Well, however these often involve a competitive process with extensive application forms. These applications require large amounts of staff time and skill to complete, which puts some organisations at a disadvantage in accessing these funds. This proves problematic for community-run organisations as they must seek alternative funding streams regularly to avoid periods of limited or no income, whilst also being detrimental to participants involved, as planning of activities is difficult prior to knowing if funding is secured. However, there is scope for future improvements surrounding funding for social prescribing services due to the *NHS Comprehensive Model of Personalised Care*—this plan puts the patient at the centre of solution, by providing them with “*choice and control over the way their care is planned and delivered, based on ‘what matters’ to them and their individual strengths, needs and preferences*” (NHS England, 2019a). This therefore enables care to be tailored to the individual, making it matter to the person, rather than what is the matter with them—therefore adopting non-medical approaches, through alternatives, such as social prescribing activities, and potentially social farming.

The model has been developed in partnership with over 50 stakeholders and has now been implemented across a third of England, with more than 200,000 people joining the personalised care programme and over 32,000 with Personal Health Budgets (PHBs) (NHSE, 2019a). Furthermore, NHSE state that, “*We will roll out the NHS Personalised Care model across the country, reaching 2.5 million people by 2023/24 and then aiming to double that again within a decade.*” (NHSE, 2019b, p. 25). Thus, creating significant potential for the demand and upscale of social farming and social prescribing [services] across the UK.

The funding opportunities and referral pathways sustain these projects, whilst influencing the demographic groups that attend. This is critical to developing these spaces, through projects focused on aiding those with mental health conditions, disaffected youth, offenders, and those who are unemployed (Bragg et al., 2014; García-Llorente et al., 2018). Therefore, these facilities can stabilise life for the most needed, whilst providing health and social outcomes as a consequence.

## 5. Current social farming landscape within the United Kingdom (UK)

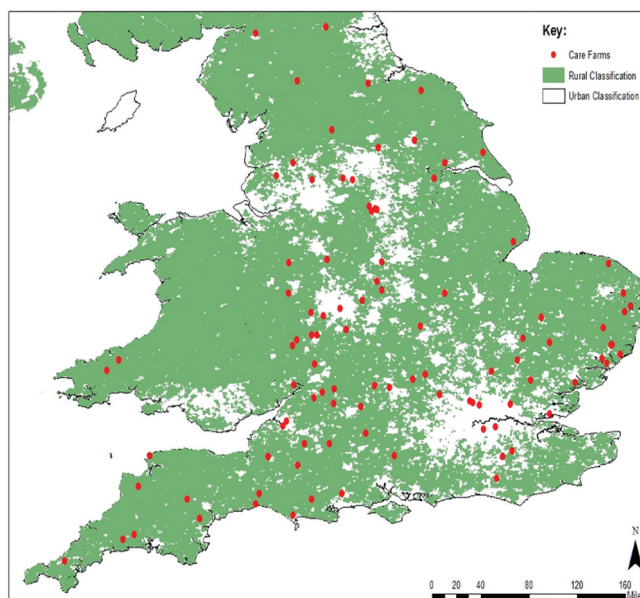
This paper has so far reviewed the development of social farming within the UK and highlighted the need for more joined-up thinking, particularly around language and evidencing the impact of projects. We argue that there is a need to explore good practice in more depth, such as the Dutch system, and replicate this within the British context. We now proceed to spatially explore social farming practice and highlight how there is a need for more urbanised models across the country.

According to recent estimates, there are approximately 299 social farms operating across the UK, with a further 90 in the Republic of Ireland (Social Farms and Gardens, 2021). With the majority mapped within Figure 2 and more than 150 prospective social farms under development (Bragg, 2020). This highlights how the sector is continuing to grow, through development of new and the expansion of existing sites, which is further aided by a nascent research and policy base. With the sector having an estimated: “10, 210 UK care farming places provided per week, which equates to approximately 469,660 - per year.” (Social Farms and Gardens, 2021).

This concept is still relatively new and developing across the UK, it currently lags behind other European countries that have an expansive network of social farms already in existence, such as the Netherlands with over 1100, and Norway with over 600 (Haubenhofers et al., 2010). Furthermore, around 67% of UK social farms were found not to be running at full capacity; and operating capacity of 63% was found to be the average for UK social farms (Bragg, 2020). Thus, the full potential of social farming is not currently being realised within the UK. Adding to this, our spatial mapping reveals that the majority of known current social farms are located predominantly within the south and across rural areas of the UK, away from populations, which would benefit most from the spaces (Figure 2).

Figure 2 reveals spatial inequality regarding social farming facilities, with many primarily situated within areas that the most deprived communities will be unable to attend, due to a lack of transport or other issues. Furthermore, there is a pooling of social farms within the South of England, with more deprived northern areas lacking in terms of services. If this was to improve, the contribution of social farming has the potential to increase the local economy (rural and urban)

**Figure 2. Geographical extent of Social Farms across England and Wales.<sup>1</sup>**





(Hine et al., 2008; Leck et al., 2014), as well as the potential to increase the number of service user places available to those who would benefit from accessing care farming services. In response to this lack of service in parts, expansion plans are afoot for social farming across the UK, which could enable more deprived populations to reach these spaces whilst also providing opportunities to enhance GI within urban areas.

A recent opportunity to bridge the divide between provision and accessibility comes in the form of UK policy advancement, particularly “A Green Future: Our 25 Year Plan to Improve the Environment” (Department for Environment, Food & Rural Affairs (DEFRA), 2018). Within this policy, there is an explicit focus on social farming by: “*supporting a national expansion of care farming by 2022, trebling the number of places to 1.3 m per year for children and adults in England*” (Department for Environment, Food & Rural Affairs (DEFRA), 2018, p. 76). This is promising in that it provides an opportunity space to engage with disadvantaged populations by situating new social farms across more accessible spaces, particularly within urban postcodes, whilst cutting down transportation costs, increasing the likelihood of attendance and overall sustainability of these projects. Indeed, adoption of this policy demonstrates the nascent evidence base and willingness to invest in the practice, in this case by the UK Government.

The Green Future policy signifies commitment to the development of natural environments, with concentration on the development of social farms for benefit of larger populations (Department for Environment, Food & Rural Affairs (DEFRA), 2018). This is advanced by advocating the use of social prescriptions to enable standardised tools to be developed to ensure best practice. Whilst the plan also suggests there will be further support given to research nature-based interventions, development of tools and ongoing support for local authorities, commissioners, and professionals—therefore ensuring a targeted approach for success. However, it should be noted that this plan still fails to provide specific detail on how national expansion will occur geographically, which casts doubt on the affectability and robustness of their approach.

Key actors, such as planners, local government officials and others have a role to play in enabling the care farm concept to transition to the urban environment. Tools and policies, such as charters, neighbourhood and local plans, alongside other key policy documents can help to grow the practice (Hardman & Larkham, 2014b; Scott et al., 2013). With the advent of neighbourhood planning, there is an opportunity space to raise awareness about the practice to communities, which in turn could see a grassroots approach to enabling this concept. Indeed, similar popular approaches have led to urban and social farms being proposed across Greater Manchester, in the likes of inner-city Salford, Stockport, and Oldham, the latter of which is mooted to be the largest of its kind in the UK (Northern Roots, 2020).

However, neighbourhood plans and other grassroots tools should not be purely relied on as a vehicle for establishing social farms, partially due to issues around implementation and, with the former, a pooling of plans in wealthier areas (The Planner, 2016). In this sense, we argue that wider local policies should be shaped to incorporate the need for urban care farms; the rise of food policies and councils offers another opportunity here to enhance the growth of the concept (see Hardman & Larkham, 2014b). We also argue that these top-down approaches are not a guaranteed way to success, yet an interwoven connection between top-down and bottom-up is required for the sustainability of projects (Homsy et al., 2019). These sites can adopt community spirit in a similar manner to other UA projects; community gardening and guerrilla gardening, to establish a sense of community pride, participation, activism, and ultimately support for these projects into the future (Howarth et al., 2020; Suh et al., 2021; Veen et al., 2016).

There has been a steady rise in such bodies in the UK, who focus on pushing forward the urban agricultural movement and associated activities. Due to social farming’s proximity to urban (city) farming, food policies and councils offer another way of leveraging action, enabling the concept to gain traction and recognition in certain areas. Linked to this, more action is needed to highlight

opportunities to existing urban farms around the social farm concept. With many urban (city) farms facing issues around economic sustainability (see Hardman et al., 2018), social farms offer a route to more financial security: enabling urban (city) farms to have more than one offering, beyond food in this sense and incorporating therapy or other activities. Yet contrasting this, many urban farms do not want to be seen as social farms, preferring to be perceived as having a wider societal remit, and without the implications associated with being a social farm (e.g., health, social, and/or educational services).

The key opportunities for enabling urban social farming still resides within the traditional policy sphere. An example of pioneering policy can also be seen in London, with the 2008 London Plan emphasising the need for green roofs in the capital; now more than 10 years since its inception, the green roof area in the city has more than doubled, making London the leader within the UK for the radical practice (Livingroofs, 2019). Brighton and Hove Council have also pioneered practice, this time with regards to urban food growing, through their planning policy guidance around new development; in which planners and developers are urged to review potential for incorporating food growing spaces into new buildings. In this sense, a similar approach could be employed for urban social farming, allowing for the national DEFRA 25 Year Environment Plan's aims of increasing spaces on such projects to be realised in cities alongside the rural context. However, implementation of this plan does not come without corresponding barriers, which the next section explores in further detail.

## 6. Evidence of effectiveness

Although the evidence base surrounding social farming has grown over the past decade, as illustrated in previous sections, there remains a significant lack of evidence derived from robust mixed methodologies, independent quantitative studies, or randomised-controlled trials (RCTs), to effectively demonstrate the holistic health and wellbeing benefits of those who access social farming services (Bragg et al., 2014; Elsey et al., 2014). Failure to triangulate results also proves difficult, through a lack of studies undertaking both qualitative and quantitative data collection in a longitudinal manner, more such studies would enable effective evaluation to occur; *future studies should incorporate standardised validated measures of client outcomes (such as wellbeing, quality of life, self-efficacy, general health, etc.) in order to highlight effectiveness and to allow comparison of care farming with other treatment or care options.* (Bragg et al., 2014, p. 18). Other academics, including Leavell et al. (2019) stresses that there is a lack of understanding surrounding the effectiveness of Social Prescriptions on high-risk populations, specifically across monitoring over long periods of time and how technological or social innovations could impact development of this care opportunity. Whilst Robinson and Breed (2019) call for greater realisation of how greater potential could be realised; through both reactive (health care) and proactive (health promotion) opportunities, alongside further understanding of the mutually symbiotic relationships, between human and nature to be realised.

Research also shows that populations accessing social farms in the UK remains low compared with other European countries, such as the Netherlands, Norway, and Belgium (Bragg et al., 2014; Hassink & Dijk, 2006). One of the key reasons for this is due to the majority of social farms in the UK not operating at capacity, or the lack of access (as suggested previously), although this is set to change under-proposed plans set out by the "Growing Care Farming" project (GCF) (Social Farms and Gardens, 2019), and expansion of the field. The GCF project is a £1.4 million project commissioned as part of a wider programme by the Department for Education: The Children and Nature programme (Natural England, 2017). The GCF project aims to build capacity and scale of the social farming sector, as well as increase the number of children and adults accessing social farms and subsequently benefiting from social farm services (Natural England, 2019; Social Farms and Gardens, 2019). As the GCF project develops, this would be a key opportunity for organisations involved in the delivery of health and wellbeing services to target and engage with a wider demographic of the population who may benefit from accessing social farms. However, we understand that there are recent concerns around budget cuts for this programme, linked to the impact of the pandemic. This is direct contrast with the current system as the populations studied within these spaces can fall into research silos (age, mental capacity, pre-existing medical issue, etc.),

resulting in data being skewed to consider specific health conditions effect due to these practices. Therefore, this fails to encapsulate the overall opinions and effects resulting directly from the attendance at social farming facilities

### 7. External barriers to social farm access

The most significant barrier to individuals accessing social farms is funding; both at an organisational level, through limited places within the social farm, alongside personal financial restrictions through limited available expenditure. Whilst there is limited support for the social prescribing ecosystem, other barriers associated with lack of awareness from professionals, and reluctance of the public has created significant challenges (Asquith, 2017). Moreover, a lack of both public and farming/agricultural-sector awareness and understanding of how green care and farming can interlink has been found to be another barrier to social farming, “one of the biggest challenges to the green care sector is making the public and farmers understand what green care is and what role farming can play.” (Asquith, 2017, p. 7). Therefore, we suggest greater campaigning surrounding benefits of these spaces, alongside an overhaul in funding allocation for evidencing the consequence of accessing such projects. Currently, exploratory funding is provided on a short-term basis—therefore failing to fully assess the full benefits of attendance at social farms over longer periods of time. Research also requires a cross-disciplinary and quant/qualitative research design to enable a holistic understanding of impact. This is highlighted by Elsey et al. (2018):

*“There is a general trend of evidence to suggest that care farming may be effective for some service user groups; however, this evidence is limited. Small study sizes, evaluations involving mixed service user groups, the use of multiple and sometimes unvalidated outcome measures, short follow-up periods and absence of missing key outcomes that fit with theory have all hampered the development of a more robust evidence base. However, we now have a set of theory-based logic models that offer a framework for research evaluations, and with recommendations in place to address the current research inadequacies there is an opportunity to vastly improve the evidence base for care farming.” (pg.25).*

### 8. Beyond the social farm: progression and further opportunities

To progress there needs to be distinct recognition for what our environments provide for health and wellbeing. There is recognition of the importance of individual progression at social farm programme has come to an end. There is evidence that within the UK and further afield, alternative work opportunities are increasingly becoming of greater focus, with Asquith (2017), suggesting that further diversification needs to occur. This aligns with those in Holland who have developed “green maintenance contracts” (Asquith, 2017, p. 17), but currently this movement requires greater independence, by providing reliable streams of income, diverging from consistently relying on grants and external funding. External barriers also exist from lacking cohesive supportive networks between policymakers, project leaders and funding bodies, which make these projects a reality—making progression difficult for new and current projects. This connected with lack of funding for paid employment within the sector and limited numbers of volunteers is causing projects to become stretched beyond appropriate means, as volunteers are failing to pick up slack in which paid funding placements would allow.

However, urban farming is rapidly growing in popularity across the globe, providing an ideal environment from which social farming could be incorporated into this development or further advancing its acceptance. This coupled with the increased alliance with global climate citizenship, such as the growing “Extinction Rebellion” movement could provide the foundation for future generations to establish a stronger climate justice movement. With urban farming forming a strong grass-rooted approach for “greening” cities to reduce the mass concrete creation of cities around the globe.

### 9. Conclusion

This viewpoint piece has highlighted the disjointed approach to social farming across the UK, with most sites located out of reach of the populations that require them the most. Emphasis is paid to the many barriers that exist, identified through academic studies, funding restrictions, and

confused definitions across the multitude of stakeholders within this field. Stakeholders need to discuss appropriate methods to approach future development, and effective planning tools are required to overcome the existing barriers and subsequently enable development of these spaces within an urban context.

### Highlights

- We map the current social farms and reveal the need for more urban models
- We review the benefits of large-scale social farming and the potential to upscale
- We reflect on the barriers and opportunities with social prescribing.
- The findings show how an interdisciplinary approach can lead to a better understanding of social farming

### Citation information

Cite this article as: Enabling Urban Social Farming: the need for radical green infrastructure in the city, Louise M. Mitchell, Lawrence Houston, Michael Hardman, Michelle L. Howarth & Penny A. Cook, *Cogent Social Sciences* (2021), 7: 1976481.

### Note

1. Data derived from Social Farms & Gardens website: <https://www.farmgarden.org.uk/how-we-can-help/find-care-farming-services-near-you>. Source: Office for National Statistics licenced under the Open Government Licence v3.0. Contains OS data © Crown copyright, 2017. Contains LPS Intellectual Property © Crown copyright and database right (2017). This information is licenced under the terms of the Open Government Licence ([www.nationalarchives.gov.uk/doc/open-government-licence/version/3](http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3)). Using Open 2011 Area Classification for Super Output Areas: Supergroups. Contains OS data © Crown copyright and database right [2019] Accessed 20.10.2019.

### Acknowledgements

The first author would like to thank The University Alliance Doctoral Training Alliance (DTA) for providing afunded doctoral studentship .

Thanks, are also paid to Dr Richard Armitage, for the guidance provided when generating spatial mapping for this piece.

### Funding

This paper forms commentary as part of the lead authors PhD research focus, with funding awarded by The University Alliance Doctoral Training Alliance (DTA).

### Author details

Louise M. Mitchell<sup>1</sup>  
 E-mail: [L.Mitchell8@edu.salford.ac.uk](mailto:L.Mitchell8@edu.salford.ac.uk)  
 ORCID ID: <http://orcid.org/0000-0001-8611-0806>  
 Lawrence Houston<sup>2</sup>  
 ORCID ID: <http://orcid.org/0000-0002-9659-512X>  
 Michael Hardman<sup>1</sup>  
 ORCID ID: <http://orcid.org/0000-0002-4282-0766>  
 Michelle L. Howarth<sup>3</sup>  
 ORCID ID: <http://orcid.org/0000-0003-4521-024X>  
 Penny A. Cook<sup>3</sup>  
 ORCID ID: <http://orcid.org/0000-0001-6435-8050>

<sup>1</sup> School of Science, Engineering and Environment, The University of Salford, Manchester, M5 4WT, UK.

<sup>2</sup> Oncology Research Team, East Lancashire Hospitals NHS Trust, Blackburn, UK.

<sup>3</sup> School of Health and Society, The University of Salford, Manchester M5 4WT, UK.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

### References

- Asquith, R. (2017). *The role UK agriculture can play in delivering social care*. The Nuffield Farming Scholarships Trust Southill Farmhouse, Staple Fitzpaine, Taunton. <https://www.nuffieldscholar.org/reports/gb/2016/role-uk-agriculture-can-play-delivering-social-care>
- Bowen, K., & Lynch, Y. (2017). The public health benefits of green infrastructure: The potential of economic framing for enhanced decision-making. *Current Opinion in Environmental Sustainability*, 25, 90–95. <https://doi.org/10.1016/j.cosust.2017.08.003>
- Bragg, R. (2020). *Growing Care Farming: [Review of Growing Care Farming: Annual Survey 2020] (SF&G). For Social Farms and Gardens*. <https://www.farmgarden.org.uk/gcf/scale-of-sector>
- Bragg, R., Egginton-Metters, I., Elsey, H., & Wood, C. (2014). *Care farming: Defining the 'offer' in England*. Natural England Commissioned Reports, Number 155. Natural England. <http://publications.naturalengland.org.uk/publication/6186330996342784>
- Bu, F., Steptoe, A., Mak, H., & Fancourt, D. (2021). Time use and mental health in UK adults during an 11-week COVID-19 lockdown: A panel analysis. *The British Journal of Psychiatry*, 1–6. <https://doi.org/10.1192/bjp.2021.44>
- Buck, D. (2016). *Gardens and health: Implications for policy and practice*. The Kings Fund and National Gardens Scheme. <https://www.kingsfund.org.uk/publications/gardens-and-health>
- Calton, T., & Spandler, H. (2009). Minimal-medication approaches to treating schizophrenia. *Advances in Psychiatric Treatment*, 15(3), 209–217. <https://doi.org/10.1192/apt.bp.107.004028>
- Cameron, R., Blanuša, T., Taylor, J., Salisbury, A., Halstead, A., Henricot, B., & Thompson, K. (2012). The domestic garden – Its contribution to urban green infrastructure. *Urban Forestry and Urban Greening*, 11(2), 129–137. <https://doi.org/10.1016/j.ufug.2012.01.002>
- Care Farming UK (2015). *Research & Publications*. <https://www.farmgarden.org.uk/>
- Care Farming UK. (2017). *Care Farming in the UK and Ireland: Annual Survey 2016/17 [Review of Care Farming in the UK and Ireland: Annual Survey 2016/17]*. <https://www.farmgarden.org.uk/gcf/scale-of-sector/care>
- Connolly, C., Keil, R., & Ali, S. H. (2021). Extended urbanisation and the spatialities of infectious disease: Demographic change, infrastructure and governance. *Urban Studies*, 58(2), 245–263. <https://doi.org/10.1177/0042098020910873>
- Corburn, J. (2004). Confronting the challenges in reconnecting urban planning and public health. *American Journal of Public Health*, 94(4), 541–546. <https://doi.org/10.2105/AJPH.94.4.541>
- De Bruin, S., Oosting, S., van der Zijpp, A., Enders-Slegers, M., & Schols, J. (2010). The concept of green care

- farms for older people with dementia: An integrative framework. *Dementia*, 9, (1), 79–128. <https://doi.org/10.1177/1471301209354023>
- de Krom, M., M., M., & Dessein, J. (2013). Multifunctionality and care farming: Contested discourses and practices in Flanders. *Wageningen Journal of Life Sciences (NJAS)*, 64–65(Sept13), 17 – 24. <https://doi.org/10.1016/j.njas.2012.09.002>.
- Department for Environment, Food & Rural Affairs (DEFRA). (2018). *A Green Future: Our 25 Year Plan to Improve the Environment*. <https://assets.publishing.service.gov.uk>
- EEA (European Environment Agency) (n.d.) *What is green infrastructure?* <https://www.eea.europa.eu/themes/sustainability-transitions/urban-environment/urban-green-infrastructure/what-is-green-infrastructure>
- Else, H., Agyepong, I., Huque, R., Quayyem, Z., Baral, S., Ebenso, B., Kharel, C., Shawon, R. A., Onwujekwe, O., Uzochukwu, B., Nonvignon, J., Aryeetey, G. C., Kane, S., Ensor, T., & Mirzoev, T. (2019). Rethinking health systems in the context of urbanisation: Challenges from four rapidly urbanising low-income and middle-income countries. *BMJ Global Health*, 4(3), e001501. <https://doi.org/10.1136/bmjgh-2019-001501>
- Else, H., Bragg, R., Elings, M., Cade, J., Brennan, E., Farragher, C., Tubeuf, T., Gold, S., Shickle, R., Wickramasekera, D., Richardson, N., & Murray, J. (2014). Understanding the impacts of care farms on health and well-being of disadvantaged populations: A protocol of the Evaluating Community Orders (ECO) pilot study. *BMJ Open*, 4, (10), e006536. <https://doi.org/10.1136/bmjopen-2014-006536>
- Else, H., Farragher, T., Tubeuf, S., Bragg, R., Elings, M., Brennan, C., Gold, R., Shickle, D., Wickramasekera, N., Richardson, Z., Cade, J., & Murray, J. (2018). Assessing the impact of care farms on quality of life and offending: A pilot study among probation service users in England. *BMJ Open*, 80, 192–196. <https://doi.org/10.1136/bmjopen-2017-019296>
- European Commission. (2012). *Worldwide urban population growth*. [https://ec.europa.eu/knowledge4policy/foresight/topic/continuing-urbanisation/worldwide-urban-population-growth\\_en](https://ec.europa.eu/knowledge4policy/foresight/topic/continuing-urbanisation/worldwide-urban-population-growth_en)
- García-Llorente, M., Rubio-Olivar, R., & Gutierrez-Briceño, I. (2018). Farming for Life Quality and Sustainability: A Literature Review of Green Care Research Trends in Europe. *International Journal of Environmental Research and Public Health*, 15 (Special Issue)(6). Special Issue Green Environment, Green Operations and Sustainability. <https://doi.org/10.3390/ijerph15061282>
- Gesler, W., Bell, M., Curtis, S., Hubbard, P., & Francis, S. (2004). Therapy by design: evaluating the UK hospital building program. *Health & Place*, 101, 117–128. [https://doi.org/10.1016/s1353-8292\(03\)00052-2](https://doi.org/10.1016/s1353-8292(03)00052-2)
- Gianferrara, E., & Boshoff, J. (2018). *Health, wealth, and happiness – The multiple benefits of green infrastructure*. INTERREG Europe PERFECT: Expert Paper 1. INTERREG Europe PERFECT. <https://www.permaculture.org.uk/books/health-wealth-and-happiness-multiple-benefits-green-infrastructure>
- Gorman, R. (2017). Therapeutic landscapes and non-human animals: The roles and contested positions of animals within care farming assemblages. *Social & Cultural Geography*, 18(3), 315–335. <https://doi.org/10.1080/14649365.2016.1180424>
- Grinde, B., & Patil, G. G. (2009). Biophilia: Does visual contact with nature impact on health and well-being? *International Journal of Environmental Research and Public Health*, 6(9), 2332–2343. <https://doi.org/10.3390/ijerph6092332>
- Guzman-Castillo, M., Ahmadi-Abhari, S., Badosz, P., Capewell, S., Steptoe, A., Singh-Manoux, A., Kivimaki, M., Shipley, M. J., Brunner, E. J., & O'Flaherty, M. (2017). Forecasted trends in disability and life expectancy in England and Wales up to 2025: a modelling study. *The Lancet Public Health*, 2(7), e307–e313. [https://doi.org/10.1016/s2468-2667\(17\)30091-9](https://doi.org/10.1016/s2468-2667(17)30091-9)
- Hardman, M., & Larkham, P. (2014a). *Informal Urban Agriculture: The Secret Lives of Guerilla Gardening*. ISBN: 978-3-319-09533-2. Springer International Publishing.
- Hardman, M., & Larkham, P. (2014b). The rise of the 'food charter': A mechanism to increase urban agriculture. *Land Use Policy*, 39(July 2014), 400–402. <https://doi.org/10.1016/j.landusepol.2014.02.022>
- Hardman M., St Clair R., Adams D., Armitage R., Barry V., Larkham P., Sherriff G. (2018). Urban agriculture: Evaluating informal and formal practices. *North West Geographer*, 18(1), 1–10. <http://usir.salford.ac.uk/id/eprint/46164/>
- Hassink, J., & Dijk. (2006). *Farming for Health. Green-Care Farming across Europe and the United States of America*. ISBN 978-1-4020-4540-0. Springer Netherlands.
- Hassink, J., Elings, M., Zweekhorst, M., van den Nieuwenhuizen, N., & Smit, A. Care farms in the Netherlands: Attractive empowerment-oriented and strengths-based practices in the community. (2010). *Health and Place*, 16(3), 423–430. 13538292. <https://doi.org/10.1016/j.healthplace.2009.10.016>
- Hassink, J., Hulsink, W., & Grin, J. (2014). Farming with care: The evolution of care farming in the Netherlands. *NJAS - Wageningen Journal of Life Sciences*, 68(1), 1–11. <https://doi.org/10.1016/j.njas.2013.11.001>
- Haubenhof, D., Elings, M., Hassink, J., & Bragg, R. (2010). The Development of Green Care in Western European Countries. *Explore (New York, N.Y.)*, 6(2), 106–111. <https://doi.org/10.1016/j.explore.2009.12.002>
- Hemingway, A., Elish-Hill, C., & Norton, E., . A. (2016). What does care farming provide for clients? The views of care farm staff. *Wageningen Journal of Life Sciences (NJAS)*, 79(1), 23–29. <https://doi.org/10.1016/j.njas.2016.09.001>
- Hine, R., Peacock, J., & Pretty, J. (2008). *Care farming in the UK: Evidence and Opportunities*. Report for the National Care Farming Initiative (UK). <https://www.farmgarden.org.uk/gcf/scale-of-sector>
- Hoare, E., Jacka, F., & Berk, M. (2019). The impact of urbanization on mood disorders: An update of recent evidence. *Current Opinion in Psychiatry*, 32(3), 198–203. <https://doi.org/10.1097/YCO.0000000000000487>
- Homsy, G., Liu, Z., & Warner, M. (2019). Multilevel Governance: Framing the Integration of Top-Down and Bottom-Up Policymaking. *International Journal of Public Administration*, 42(7), 572–582. <https://doi.org/10.1080/01900692.2018.1491597>
- Horton, C. (2021). *Blooms of hope: The gardening groups delivering smiles during lockdown*. The Guardian. <https://www.theguardian.com/society/2021/jan/27/blooms-of-hope-the-gardening-groups-delivering-smiles-during-lockdown>
- Howarth, M., Griffiths, A., Da Silva, A., & Green, R. (2020). Social prescribing: A 'natural' community-based solution. *British Journal of Community Nursing*, 25(6), 294–298. <https://doi.org/10.12968/bjcn.2020.25.6.294>
- Howarth, M., Lawler, C., & Da Silva, A. (2021). Creating a transformative space for change: A qualitative



- evaluation of the RHS Wellbeing Programme for people with long term conditions. *Health & Place*, 71 (September 2021), 102654. <https://doi.org/10.1016/j.healthplace.2021.102654>
- Insert Forest Research (n.d.) *What is greenspace/green infrastructure (GI)? Resources*. <https://www.forestrysearch.gov.uk/tools-and-resources/fthr/urban-regeneration-and-greenspace-partnership/greenspace-in-practice/what-is-greenspacegreen-infrastructure-gi/>
- Leavell, M. A., Leiferman, J. A., Gascon, M., Braddick, F., Gonzalez, J. C., & Lit, J. S. (2019). Nature-Based Social Prescribing in Urban Settings to Improve Social Connectedness and Mental Well-being: A Review. *Current Environmental Health Reports*, 6, 297–308. <https://doi.org/10.1007/s40572-019-00251-7>
- Lecic-Tosevski, D. (2019). Is urban living good for mental health? *Current Opinion in Psychiatry*, 32(3), 204–209. <https://doi.org/10.1097/YCO.0000000000000489>
- Leck, C., Evans, N., & Upton, D. (2014). Agriculture – Who cares? An investigation of ‘care farming’ in the UK. *Journal of Rural Studies*, 34(April 2014), 313–325. <https://doi.org/10.1016/j.jrurstud.2014.01.012>
- Lee, A., & Maheswaren, R. (2011). The health benefits of urban green spaces: A review of the evidence. *Journal of Public Health*, 33(2), 212–222. <https://doi.org/10.1093/pubmed/fdq068>
- Lenzi, A. (2019). Why Urbanisation and health? *Acta Biomedica*, 90(2), 181–183. <https://doi.org/10.23750/abm.v90i2.8354>
- Li, X., Wang, C., Zhang, G., Xiao, L., & Dixon, J. (2012). Urbanisation and human health in China: Spatial features and a systemic perspective. *Environmental Science and Pollution Research*, 19(5), 1375–1384. <https://doi.org/10.1007/s11356-011-0718-7>
- Lin, B. B., Philpott, S. M., Jha, S., & Liere, H. (2017). Urban agriculture as a productive green infrastructure for environmental and social well-being. In P. Tan, C. Jim (Eds.), *Greening Cities. Advances in 21st Century Human Settlements*. Singapore: Springer. [https://doi.org/10.1007/978-981-10-4113-6\\_8](https://doi.org/10.1007/978-981-10-4113-6_8)
- Livingroofs (2019) *Living roofs and walls: From policy to practice*. <https://livingroofs.org/wp-content/uploads/2019/04/LONDON-LIVING-ROOFS-WALLS-REPORT-2019.pdf>
- Maas, J., Verheij, R. A., De Vries, S., Spreeuwenberg, P., Schellevis, F. G., & Groenewegen, P. P. (2009). Morbidity is related to a green living environment. *Journal of Epidemiology & Community Health*, 63(12), 967–973. <http://dx.doi.org/10.1136/jech.2008.079038>
- Mahase, E. (2020). Covid-19: Charity cuts could put the NHS under even more pressure. *BMJ*, 370, m3261. <https://doi.org/10.1136/bmj.m3261>
- McKee, M., Dunnell, K., Anderson, M., Brayne, C., Charlesworth, A., Johnston-Webber, C., Knapp, M., McGuire, A., Newton, J., Taylor, D., & Watt, R. G. (2021). The changing health needs of the UK population. *The Lancet*, 397(10288), 1979–1991. [https://doi.org/10.1016/S0140-6736\(21\)00229-4](https://doi.org/10.1016/S0140-6736(21)00229-4)
- McMichael, A. J. (2000). The urban environment and health in a world of increasing globalization: Issues for developing countries. *Bulletin of the World Health Organization*, 78(9), 1117–1126. <https://pubmed.ncbi.nlm.nih.gov/11019460/>
- Mell, I. (2018). Financing the future of green infrastructure planning: Alternatives and opportunities in the UK. *Landscape Research*, 43(6), 751–768. <https://doi.org/10.1080/01426397.2017.1390079>
- Mitchell, R., & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *The Lancet*, 372 (9650), 1655–1660. [https://doi.org/10.1016/S0140-6736\(08\)61689-X](https://doi.org/10.1016/S0140-6736(08)61689-X)
- Natural England (2017). *Natural England Educating children on farming and nature*. <https://naturalengland.blog.gov.uk/2017/11/15/educating-children-farming-and-nature/>
- Natural England (2019). *Launching the Growing Care Farming Project*. <https://naturalengland.blog.gov.uk/2019/05/30/launching-the-growing-care-farming-project/>
- Neiderud, C. J. (2015). How Urbanization Affects the Epidemiology of Emerging Infectious Diseases. *Infection Ecology & Epidemiology* 5(27060). <https://doi.org/10.3402/iee.v5.27060>
- NHSE (2019a). *What is personalised care?* <https://www.england.nhs.uk/personalisedcare/what-is-personalised-care/>
- NHSE (2019b). *The NHS Long Term Plan*. <https://www.longtermplan.nhs.uk/publication/nhs-long-term-plan/>
- NHSE (2019c). *Personal budgets and direct payments*. <https://www.nhs.uk/conditions/social-care-and-support-guide/money-work-and-benefits/personal-budgets/>
- NHSE (n.d.) *Social prescribing – Frequently asked questions*. <https://www.england.nhs.uk/personalisedcare/social-prescribing/faqs/#what-is-the-social-prescribing-link-worker-role>
- Nicolosi, A., Laganà, V. R., Di Gregorio, D., & Privitera, D. (2021). Social Farming in the Virtuous System of the Circular Economy. An Exploratory Research. *Sustainability*, 13(2), 989. <https://doi.org/10.3390/su13020989>
- Northern Roots. (2020) *Oldham's Urban Farm and Eco-Park*. <http://northern-roots.uk/>
- Pedersen, I., Nordaunet, T., Martinsen, E. W., Berget, B., & Braastad, B. O. (2011). Farm Animal-Assisted Intervention: Relationship between Work and Contact with Farm Animals and Change in Depression, Anxiety, and Self-Efficacy Among Persons with Clinical Depression. *Issues in Mental Health Nursing*, 32(8), 493–500. <https://doi.org/10.3109/01612840.2011.566982>
- Perrott, G. S., & Holland, D. F. (2005). *Population trends and problems of public health 1940. The Milbank Quarterly*, 83(4), 569–608. <https://doi.org/10.1111/j.1468-0009.2005.00393.x>
- Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S., McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: A longitudinal probability sample survey of the UK population. *The Lancet*, 7 (10), 883–892. [https://doi.org/10.1016/S2215-0366\(20\)30308-4](https://doi.org/10.1016/S2215-0366(20)30308-4)
- Pölling, B., Prados, M., Torquati, B., Giacchè, G., Recasens, X., Paffarini, C., Alfranca, O., & Lorleberg, W. (2017). Business models in urban farming: A comparative analysis of case studies from Spain, Italy and Germany. *Moravian Geographical Reports*, 25(3), 166–180. <https://doi.org/10.1515/mgr-2017-0015>
- PossAbilities (n.d.) *Cherwell Farm & Garden. PossAbilities*. <https://possabilities.org.uk/>
- Robinson, J., & Breed, M. (2019). Green Prescriptions and Their Co-Benefits: Integrative Strategies for Public and Environmental Health. *Challenges*, 10(1), 1. <https://doi.org/10.3390/challe10010009>
- Russell, Z., Beattie, L., & Heaney, D. (2021). Spaces of well-being: Social crofting in rural Scotland. *Journal of Rural Studies*, 86(August 2021), 145–154. <https://doi.org/10.1016/j.jrurstud.2021.05.007>
- Salomon, R. E., Salomon, A. D., & Beeber, L. S. (2018). Green care as psychosocial intervention for



- depressive symptoms: What might be the key ingredients? *Journal of the American Psychiatric Nurses Association*, 24(3), 199–208. <https://doi.org/10.1177/1078390317723710>
- Scott, A. J., Carter, C. E., Larkham, P., Reed, M., Morton, N., Waters, R., Adams, D., Collier, D., Crean, C., Curzon, R., Forster, R., Gibbs, P., Grayson, N., Hardman, M., Hearle, A., Jarvis, D., Kennet, M., Leach, K., Middleton, M., ... Coles, R. (2013). Disintegrated development at the rural urban fringe: Re-Connecting spatial planning theory and practice, *Progress in Planning*, 83, 1 – 52. <https://doi.org/10.1016/j.progress.2012.09.001>
- Seddon, N., Smith, A., Smith, P., Key, I., Chausson, A., Girardin, C., House, J., Srivastava, S., & Turner, B. (2021). Getting the message right on nature-based solutions to climate change. *Global Change Biology*, 27(8), 1518–1546. <https://doi.org/10.1111/gcb.15513>
- Social Farms and Gardens (2019). *An overview – Growing Well Together*. <https://www.farmgarden.org.uk/our-work>
- Social Farms and Gardens (2021). *What is the scale of care farming in the UK?* <https://www.farmgarden.org.uk/knowledge-base/article/what-scale-care-farming-uk>
- Social Farms and Gardens (n.d.). *Care Farming* <https://www.farmgarden.org.uk/our-work>
- Suh, J., Auberson, L., & Ede, S. (2021). Connected backyard gardening as a platform for suburban community building in Adelaide, Australia. *Community Development*, 1–18. <https://doi.org/10.1080/15575330.2021.1936103>
- Szreter, S. (2004). Health by association? Social capital, social theory, and the political economy of public health. *International Journal of Epidemiology*, 33(4), 650–667. <https://doi.org/10.1093/ije/dyh013>
- The Planner (2016). *The good, the bad and the ugly of neighbourhood plans*. <https://www.theplanner.co.uk/features/the-good-the-bad-and-the-ugly-of-neighbourhood-plans>
- Thompson, R. (2018). Gardening for health: A regular dose of gardening. *Clinical Medicine*, 18(3), 201–205. <https://doi.org/10.7861/clinmedicine.18-3-201> June 2018
- UK Government (2018a). *Social Prescribing schemes to be funded by the Health and Wellbeing Fund: 2018*. <https://www.gov.uk/government/publications/social-prescribing-schemes-to-be-funded-by-the-health-and-wellbeing-fund-2018>
- UK Government (2018b). *VCSE health and wellbeing funding 2019 to 2020: How to apply*. <https://www.gov.uk/government/publications/vcse-health-and-wellbeing-fund-2019-to-2020-how-to-apply>
- Van Den Bosch, M., & Sang, A. O. (2017). Urban natural environments as nature-based solutions for improved public health – A systematic review of reviews. *Environmental Research*, 158(373), 373–384. <https://doi.org/10.1016/j.envres.2017.05.040>
- Veen, E., Bock, B., Van Den Berg, W., Visser, A., & Wiskerke, J. (2016). Community gardening and social cohesion: Different designs, different motivations. *Local Environment*, 21(10), 1271–1287. <https://doi.org/10.1080/13549839.2015.1101433>
- Whitmee, S., Haines, A., Beyrer, C., Boltz, F., Capon, A. G., de Souza Dias, B. F., ... Yach, D. (2015). Safeguarding human health in the Anthropocene epoch: Report of The Rockefeller Foundation–Lancet Commission on planetary health. *The Lancet*, 386(10007), 1973–2028. [https://doi.org/10.1016/S0140-6736\(15\)60901-1](https://doi.org/10.1016/S0140-6736(15)60901-1)
- WHO. (2010). Urbanization and health. *Bulletin of the World Health Organization (BLT)*, 88(4), 241–320. <https://www.who.int/bulletin/volumes/88/4/10-010410/en/>
- Willow Tree Farming. (2019). *Care Farm*. <https://www.wilowtreefarming.co.uk/care-farm>



© 2021 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format.

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



***Cogent Social Sciences* (ISSN: 2331-1886) is published by Cogent OA, part of Taylor & Francis Group.**

**Publishing with Cogent OA ensures:**

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

**Submit your manuscript to a Cogent OA journal at [www.CogentOA.com](http://www.CogentOA.com)**

