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| <b>Institution: University of Salford</b>   |   |  |
| <b>Unit of Assessment: 7</b>  |   |  |
| <b>Title of case study: Mainstreaming urban agriculture: bringing the benefits of food growing to cities</b>  |   |  |
| <b>Period when the underpinning research was undertaken: September 2014 – December 2020</b>   |   |  |
| <b>Details of staff conducting the underpinning research from the submitting unit:</b>  |   |  |
| <b>Name(s):</b>   | <b>Role(s) (e.g. job title):</b>                    | <b>Period(s) employed by submitting HEI:</b> |
| Dr Michael Hardman  | Senior Lecturer in Urban Geography                  | September 2012 – Present                     |
| Dr Richard Armitage   | Senior Lecturer in Geographical Information Systems | August 2003 – Present                        |
| <b>Period when the claimed impact occurred: September 2014 – December 2020</b>  |   |  |
| <b>Is this case study continued from a case study submitted in 2014? N</b>  |   |  |
| <b>1. Summary of the impact</b><br><br><p>Urban Agriculture, the practice of cultivating and producing food in cities, is growing in importance in terms of sustainability. The practice offers substantial social, economic and environmental benefits for communities, such as job creation, improving mental health and greening neighbourhoods. However, there is a knowledge gap regarding sustainable models, models for upscaling and best practices to implement Urban Agriculture. Researchers at Salford have pioneered the implementation of upscaled Urban Agriculture, leading to creation of the largest urban farm in the UK and a wide range of other assets. Our research has also highlighted the value of the concept in decision-making processes and supported policy change to enable wider-scale application of the practice. In doing so, we have directly enabled GBP2,500,000 in funding for the practice so far and secured Government commitment for a further GBP8,000,000 to mainstream the concept in the UK. Salford's research has been instrumental in creating jobs, shaping environments, influencing policy and effecting behaviour change, which has enabled the Urban Agriculture concept to flourish at scale.</p>  |   |  |
| <b>2. Underpinning research</b><br><br><p>Whilst Urban Agriculture has been active in the UK for many years, mainly through allotment gardening, larger-scale examples of the practice are in their infancy. Salford's multidisciplinary team of researchers (Hardman and Armitage in UoA7, as well as Dr Michelle Howarth (UoA3), Prof. Alison Brettell (UoA34), Dr Graeme Sherriff (UoA13)) has demonstrated that upscaled and mainstreamed Urban Agriculture can have significant impact on communities; acting both as a mechanism for improving the economy and the environment and as a tool for social cohesion.</p> <p><b>Upscaling urban farming practice</b><br/>       From 2014 to 2020, Dr Hardman's team was commissioned by charities, housing groups and Government departments to explore the potential for upscaled Urban Agriculture. In particular:</p> <p><b>Northern Roots</b><br/>       From 2017 to 2020, Hardman was commissioned by Oldham Council to explore opportunities for bringing food production into the borough. Salford's team conducted multidisciplinary research around the potential for upscaled urban farming, comprising interviews with key actors, economic modelling, soil science and ecological data and this ultimately influenced the formal plan for Northern Roots. Of particular note, research findings showed i) the lack of sustainable</p> |   |  |

models for Urban Agriculture and the need for a multifunctional space to promote resilience [3.1]; ii) the immense potential of upscaled urban farming, particularly for job creation and health impacts in deprived areas such as Oldham [3.2].

#### ***Pendleton Urban Farm***

From 2016 to 2017, Hardman was commissioned by the Pendleton Cooperative to undertake research into large-scale urban farming in Salford. Research focused on creating a typology of urban farming and engagement with existing schemes at an international level, revealing the large array of urban farming forms. Findings showed the perilous nature of urban farming in the area and the need to consider other forms of Urban Agriculture, such as community gardening [3.1]. Furthermore, the work highlighted the need to invest in a spectrum of activities, enabling the larger form of Urban Agriculture to benefit from informal, community and other forms of the practice [3.1]. The research also illustrated the benefits of guerrilla gardening and the social, environmental and health outputs of encouraging the practice [3.1].

#### ***Wythenshawe upscaled Urban Agriculture***

From 2014 to 2017, Hardman was commissioned by Wythenshawe Community Housing Group to undertake research into the impact of Urban Agriculture as part of their GBP1,000,000 Big Lottery Communities Living Sustainably project. The research showed the substantial economic, environmental and social benefits of Urban Agriculture in Wythenshawe, but also the fragile nature of the practice, largely due to a lack of funding, which created competition between actors [3.3]. Benefits ranged from the health impacts, such as increased consumption of healthy produce, to enhancement of the natural environment [3.3]. Salford's research also highlighted the need for permanent growing spaces as opposed to purely temporary models and mixed the two forms to ensure maximum benefits for the communities [3.3].

#### **Tools for enabling Urban Agriculture**

As well as influencing practice, the team has shaped national, regional and local policy around the concept of Urban Agriculture. In particular:

##### ***National urban care farming***

The therapeutic use of farming practices is known as care farming. Social Farms and Gardens, the UK's national charity for the practice, commissioned Howarth and Hardman to undertake research to inform a new code of practice for care farms in 2017. With urban care farming on the rise in the UK, the funders were keen to formalise the practice and its reputation, particularly amongst social prescribers. Through a series of workshops and interviews across the country, the team created a new quality assurance framework. This framework covered components required for a care farm to a recommendation for an inspection element, ensuring that spaces conformed with agreed practice guidelines to provide reassurance for prescribers [3.4].

##### ***Greater Manchester food policy***

Hardman, commissioned by Manchester Public Health and Food Sync, conducted research to assess gaps in Greater Manchester's food provision alongside the potential for high-tech Urban Agriculture at scale. Findings showed the need to invest in conventional Urban Agricultural spaces due to financial uncertainty around high-tech food growing and success of schemes such as Incredible Edible [3.5]. Follow-on research, exploring the Greater Manchester food scene and health benefits, influenced the strategic objectives of the board and food policy within Manchester and Oldham [3.6].

### **3. References to the research**

**3.1. Hardman, M.,** Chipungu, L., Hangwelani, M., Larkham, P.J., Scott, A.J. and **Armitage, R.P.** (2018) Guerrilla gardening and green activism: Rethinking the informal urban growing movement, *Landscape and Urban Planning*, 170, pp. 6-14.  
<https://doi.org/10.1016/j.landurbplan.2017.08.015> (REF2)

**3.2. Hardman, M.,** Hynes, J. (2020) *Northern Roots Business Modelling Report*, Oldham: Oldham Council (copy available on request)

**3.3. St Clair, R., Hardman, M., Armitage, R.P.** and Sheriff, G.S. (2020) Urban Agriculture in shared spaces: The difficulties with collaboration in an age of austerity, *Urban Studies*, 57(2), pp. 350-365. <https://doi.org/10.1177/0042098019832486>

**3.4. Howarth, M., Gibbons, A., Brett, A. and Hardman, M.** (2017) *Care Farming Code of Practice Report*, Social Farms & Gardens (copy available on request)

**3.5. Hardman, M.,** Adams, M., Baker, M. and Beesley, L. (2019) Food for all? Critically evaluating the role of the Incredible Edible movement in the UK. In: Certoma, C., Noori, S. and Sondermann, M. (Eds) *Urban Gardening and the Struggle for Social and Spatial Justice*, Manchester: Manchester University Press. ISBN: 978-1-5261-2609-2. Available at: <http://usir.salford.ac.uk/id/eprint/48679/>

**3.6. Howarth, M. L., Brett, A. J., Hardman, M.** and Maden, M. (2020) What is the evidence for the impact of gardens and gardening on health and wellbeing: a scoping review and evidence-based logic model to guide healthcare strategy decision making on the use of gardening approaches as a social prescription, *BMJ Open*, 10(7), pp. 1-16. <http://dx.doi.org/10.1136/bmjopen-2020-036923> (REF2)

References **3.1 – 3.5** have been peer-reviewed. Reports **3.2** and **3.4** were vetted by academic peers and funding bodies. Funding was obtained through charities, Government departments and other organisations, totalling GBP190,560 (via Oldham Council; Manchester City Council; Wythenshawe Community Housing Group; Pendleton Cooperative; Social Farms & Gardens; Mosscafe St Vincent). Academic partners included Northumbria University, Manchester Metropolitan University, James Hutton Institute, University of Liverpool and the University of Manchester.

#### 4. Details of the impact

Urban Agriculture can help to transform cities by acting as a catalyst for social interactions, economic activity and environmental change. Historically, Urban Agriculture has been small-scale and often overlooked within policy and decision-making circles. Salford's research at a national, regional and local level has led to the mainstreaming of the concept.

##### 4.1. Upscaling farming practice to create environmental and social change

Salford's research has influenced the creation of more Urban Agriculture, by enabling Government investment of **GBP10,500,000** in local authority activities [5.1, 5.2, 5.3]. Our research [3.2, 3.4] has also directly led to the creation of large-scale Urban Agriculture projects and programmes, such as the [text removed for publication] **160-acre Northern Roots scheme**. At a national level, work with Social Farms & Gardens has driven growth in urban care farming, a form of Urban Agriculture [3.4, 5.2], generating significant environmental and social change.

##### **Northern Roots**

Salford's findings led to the permission for, and development of, the Northern Roots space: The Project Director at Northern Roots confirms that '*Dr Hardman and colleagues have been instrumental in scoping and shaping Northern Roots from its inception in 2017 until the present day*' [5.1]. This has **fundamentally changed Oldham, enhancing eco-tourism and tackling deprivation**, whilst also acting as a **sustainability hub at a regional, national and international level** [5.4 p. 39]. As a result of Salford's research, urban farming was central to the development plan and included a multifunctional approach to the eco-park [3.1, 3.2, 5.1, 5.4, 5.5], with other activities adding financial support to the urban farm asset [3.2, 5.4, 5.5]. The **GBP8,000,000 award** is enabling Northern Roots to **increase cumulative biodiversity by 27%**

across Oldham; create 10ha of new trees; capture >18,000t carbon; produce 300kWp of green energy; prescribe 300 people per annum for nature-based activities; reduce mental health issues and social isolation; and create 80 jobs, 40 new businesses, 45 social enterprises, 28 traineeships/apprenticeships and approximately 150 volunteering opportunities per annum [5.1].

Oldham Council alone has invested [text removed for publication] in Northern Roots and as a result of Salford's research the project was provided additional funding as part of the GBP1,800,000 award in Greater Manchester, with [text removed for publication] jobs created by 2020 [5.1, 5.3]. In May 2020 planning permission for phase 1 of the anchor project was given to develop a **GBP6,000,000 eco-centre** able to **process 600t of green waste** and act as a base for social enterprises and an education hub [5.4, 5.5]. Alongside job creation and environmental changes, **10 new volunteering schemes with approximately [text removed for publication] participants** have started, including a new bee farm initiative which trains residents in beekeeping through funded places [5.1, 5.5]. Salford's research was central to the wider Oldham application to the UK Government GBP3.2 billion Towns Fund, with an allocation of **GBP41,000,000 in capital funding to regenerate the borough** [5.1]. The wider implications of the research have seen Oldham review its green borough strategy, implement a new Food Strategy plan, and **fundamentally changed the focus of regeneration of one of England's most deprived towns** [5.2, 5.4].

#### ***Pendleton Urban Farm***

Hardman's research on urban farming [3.1] informed the model of growing spaces to be used in the **GBP650,000,000 Pendleton Masterplan** to transform one of the most deprived areas in the UK, **employing local residents and maximising social value** as a result [5.6]. Findings highlighted the need for more everyday forms of Urban Agriculture, such as allotments and community gardens, which were subsequently implemented within the Masterplan [5.6]. Associate Director, Planit-IE and lead landscape architect on the Pendleton regeneration, confirmed that Salford's work '*enabled support for the Masterplan and incorporation of Urban Agriculture, particularly larger-scale models [and] enabled an informal approach to urban growing in the area. This added evidence for the creation of a 'guerrilla orchard' in the centre of the community*' [5.6].

### **4.2. Improving the health & wellbeing of communities through Urban Agriculture**

#### ***Wythenshawe upscaled Urban Agriculture***

Salford's research [3.3] informed the types of activities requiring investment to maximise change and identified the models of Urban Agriculture to be used [5.7, 5.8]. This resulted in evidence of **behaviour change in the community of 75,000 Wythenshawe residents**, with the Programme Manager at Real Food Wythenshawe confirming that Salford's research had guided '*the types of Urban Agriculture for investment in the area, which in turn has led to healthier communities through improving eating habits and wellbeing*' [5.7]. A National Lottery evaluation demonstrated that, following this, more residents were eating their 5-a-day, health improved due to more growing activities, and there was an **increase from 40% to 86.7% of residents having a good level of wellbeing** due to interactions with the schemes [5.8]. **Further funding of [text removed for publication]** was received in response to Salford's research to recreate the Garden City plan for Wythenshawe, **enhancing green infrastructure** and further upscaling Urban Agriculture, leading to the **creation of [text removed for publication] jobs and large-scale volunteering schemes** across the area [5.7, 5.8].

### **4.3. Creating tools and policies to support Urban Agriculture**

#### ***Growing urban care farming***

The team's research has directly led to new national, regional and local policy support for Urban Agriculture. At the national level, Salford's funded work with Social Farms & Gardens has created a **new national code of practice**, enabling the [text removed for publication] **Defra/UK Government Growing Care Farm project** [5.2]. This has led to the **expansion of**



**urban care farming** and the **fulfilment of commitments in the Defra 25 Year Environment Plan**. The code of practice, generated through research exploring stakeholder views in the sector, **enhanced the reputation of care farming** and **led to increased investment [3.4, 5.2]**. Approximately **80 sites in the UK** have so far signed up to the code, including a significant number of urban farms, and the Executive Director, Social Farms & Gardens asserts that *'feedback has shown that the code has resulted in **more financially secure spaces** whilst also **enabling social prescribing to rise in use, impacting on the mental health and wellbeing of populations**' [5.2]*. Further Government investment has since been made into care and urban farming from Natural England and other bodies [5.2].

#### **Greater Manchester food policy**

At a regional level, Salford's work has led to **significant food policy change in Oldham**: The Chief Executive Officer at Food Sync confirmed that *'the University's work on Northern Roots has resulted in the scheme being central to the new Oldham Food Strategy [...] Urban Agriculture features heavily in this new policy, linking to the national food policy and wider regional action in this environment'* [5.3, 5.9]. Salford's research has also resulted in the creation of a **new senior food board** to be rolled out across all Manchester Health and Care Commissioning and Manchester City Council structures [5.10]. This has led to **significant investment in Urban Agricultural practice on a wider level**, with Manchester's Public Health Commissioner adding more investment into the Growing Manchester scheme. This now supports **88 growing groups** and engages approximately **1,000 people in the city region** [5.3].

#### **5. Sources to corroborate the impact**

- 5.1.** Testimonial: Northern Roots (November 2020), on Government investment, shaping of the project and development plan and subsequent benefits to the region (4.1)
- 5.2.** Testimonial: Social Farms & Gardens (December 2020), on Government investment, driving the growth of urban care farming and supporting regeneration (4.1) and creating a new code of practice and attracting further investment (4.3)
- 5.3.** Testimonial: Food Sync (December 2020), on Government investment (4.1) and contribution to food strategy (4.3)
- 5.4.** Northern Roots Masterplan 2020, detailing the creation of a sustainability hub and contribution to regeneration (4.1)
- 5.5.** Northern Roots Benefits Realisation Plan 2020, detailing contribution to urban farming, development of an eco-centre and training opportunities (4.1)
- 5.6.** Testimonial: Planit-IE (January 2021), on enabling support for the Masterplan and incorporation of Urban Agriculture (4.1)
- 5.7.** Testimonial: Real Food Wythenshawe (December 2020), on benefits to Wythenshawe residents in terms of health & wellbeing and creation of jobs and volunteering opportunities (4.2)
- 5.8.** Real Food Wythenshawe Evaluation Report 2017, detailing benefits to Wythenshawe residents in terms of health & wellbeing and creation of jobs and volunteering opportunities (4.2)
- 5.9.** Oldham Food Strategy, Food Sync (September 2020), detailing inclusion of Urban Agriculture within the strategy (4.3)
- 5.10.** Report: *'Food in the City: A Review of the Manchester Food Board'*, Food Sync (June 2019), confirming creation of a new food board to be rolled out across Manchester (4.3)