Broiler battles: Contested intensive poultry unit developments in a policy void

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ABSTRACT

Intensive livestock production in the UK is spatially concentrated in certain counties where its proliferation has triggered increasing controversy over multiple impacts and externalities. Planning authorities have struggled to handle the increasing contestation within a policy void and weakened institutional context, under the influence of the longstanding agricultural hegemony which normalises intensive farming. In the first significant UK study of such planning contestations this paper presents data on the rapid growth of the poultry industry in Herefordshire and Shropshire and how this triggered conflict during the 2010s between the agri-industrial sector and increasing numbers of objectors. Poultry farmer motivations are explored and a typology of farming situations is suggested. The paper reveals how a new public of objectors mobilised to campaign against intensive livestock developments on multiple environmental, economic, health and quality of life grounds. Tracing the power relations within and between the groups of actors reveals multiple uncertainties over impacts, particularly cumulative water and air pollution and a lack of trust in both technocratic planning processes and politicised decision making. The research suggests the planning authorities should address the policy void, acknowledge the uncertainties and take a more open, proactive and strategic approach to locating intensive livestock operations.

1. Introduction

Intensive livestock farming tends to remain hidden metaphorically and physically. Most people don’t want to know how meat is raised. The moral questions raised tend to be shunted into society’s collective unconsciousness (Evans and Miele, 2012; Jackson, 2010; Safran Foer, 2009; Weis, 2013). Meat production facilities have often been ‘sequestered’ in ‘remote’ areas (Chiles, 2016) partly to conceal the processes so that consumers can continue to avoid thinking about it. It is also in the interests of the intensive livestock industry to keep its presence and impacts low profile. In many countries the avoidance behaviour extends to the policy arena and few planning or environmental policies are established to control where new intensive livestock operations can be sited. For many people it is only when intensive livestock farming arrives on their doorstep, almost literally, in the form of a planning application that they must face the issue. This is when contestation and controversy often emerge as people realise the negative impacts of the industry and decide to fight it.

Numerous communities in the English counties of Herefordshire and Shropshire were faced with such proposals for large intensive poultry units (IPUs) during the 2010s. Lowe and Ward (2009) characterised Herefordshire and Shropshire as ‘deep rural’ and meeting popular perceptions of traditional English countryside. They described the counties as having a sense of tranquillity, with low population densities being relatively remote from large cities, but popular for rural tourism. When multiple planning applications for IPUs were lodged with local authorities there was considerable controversy, both in terms of written objections during the consultation period, but also expressed in the pages of the local (and occasionally national) newspapers:

Hundreds of objections to Market Drayton poultry units (Shropshire Star 19.5.12)
Protesters mass to fight ‘terrible’ chicken farm (Hereford Times 11.10.13)
Industrial chicken sheds given OK despite fears over smell (Hereford Times 15.5.14)
Herefordshire’s idyllic Golden Valley threatened by plans to build huge broiler chicken sheds (The Independent 22.5.15)

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Poultry is not a new industry in the area, so how had IPUs become so controversial and contentious? In Shropshire between 2009 and 12 there were four planning applications which attracted a total of 579 written objections. In Herefordshire the controversy emerged a little later. Here eight cases between 2013 and 15 generated 1433 objections. And as more IPUs were approved and built (Fig. 1) the levels of objection and controversy in local media increased.

This article presents the results of research undertaken in Herefordshire and Shropshire between 2016 and 20, exploring the IPU contestations and how they emerged. The research was inspired by theoretical insights from both Actor Network Theory (ANT) and Pragmatism and uses controversy as a starting point to understanding how the contested situation has come to be, with a view to also identifying possibilities for a way forward. The relations within the planning contestations reveal the concerns of the multiple actors and the dynamics within the planning arena and government institutions responsible for guiding decision making.

A brief overview of the UK poultry industry sets the research in context and the literature on IPUs is explored, revealing the scarcity of UK research on planning contestations about intensive livestock farming developments. The research methods are outlined, before the planning application data is presented. The article then explores the motivations behind farmers’ decisions to develop IPUs and suggests a typology of IPU farming situations found in this part of the UK. The objectors’ perspectives and their concerns about IPUs are discussed. ANT foregrounds controversy and uncertainties within situations and urges that attention be paid to multiple voices and entangled power relations. The description of the polarised networks of relations amongst the actors within the planning arena reveals how the contested situation has emerged and the consequences of allowing a policy void to persist despite a proliferation of intensive farming developments. A Pragmatic lens adds a practical, future-oriented sensibility drawing attention to what actions might provide solutions to imbalanced power relations.

2. Controversy, contestation and policy voids

It is important to examine the issues around modern systems of raising livestock, particularly at a time when the mainstream agricultural industry arguments that there are no alternatives to continued ‘sustainable intensification’ are increasingly being challenged by calls for a global reduction in meat eating (Royal Society of Arts, 2018; Willett et al., 2019). Claims that intensive systems are most efficient have long been challenged (e.g., Clunies Ross and Hildyard, 1992). Weis (2013, 2007) described negative impacts of intensive livestock units as the ‘ecological hoofprint’ of agriculture and identified six categories of impact: land, water, atmosphere, public health, inter-species relations and degradation of work. He accused the World Trade Organisation of entrenching the dislocation between small farmers and the transnational corporations which control agricultural inputs and prices but externalize environmental costs. Weis highlighted the illusions that surround cheap meat, how narrowly problems are often framed, externalities are ignored and how the industry uses technological ‘overrides’ to address the inherent issues which arise in intensive systems.

Growing contestation and resistance to continued developments can reveal much about the externalities of industrial agriculture and the systems which allow it to proliferate. Marsden characterised the situation as one of ‘contested sustainabilities’:

‘the global ecological and economic externalities have come home to roost and as such we are likely to witness a redefinition of the countryside as a contested way of trying to cope and resolve some of these new global challenges.’ (Marsden, 2017:21)

Controversy and contestation open up issues to scrutiny and questioning. Controversy leads to more debate, amongst more people and wider, better consideration of all aspects of a problem. Callon saw controversy as a way of exposing a complicated and hybrid issue to identify what is known and what is not known: identifying the ‘zones of ignorance or uncertainty’: ‘controversy allows an inventory to be made of the different dimensions of what is at stake in a project’ (Callon et al., 2001:30). In a planning context controversy is likely to identify additional perspectives or information, drawing a wider range of actors into a situation. Concerned lay people may identify new issues and contribute new knowledge. Controversies enable exploration of what Callon calls ‘overflows’ or unexpected consequences generated by scientific or technological development, such as the environmental pollution and health impacts from IPUs.

Latour too suggested ‘feeding off controversies’ and watching what happens rather than making assumptions about group interests or individual actions (Latour, 2005:52). He recommended focusing on ‘matters of concern’ rather than ‘matters of fact’, noting that supposed ‘facts’ may be disputed by the actors. He said a better understanding will be reached by focusing on people’s interpretations of the situation and potential risks, how actors are identified into certain groupings and how actions play out in reality. Puig de la Bellacasa (2011) argued that ‘cares’ should be added to concerns. She points out the differences between the statements: ‘I am concerned’ and ‘I care’.

‘The first denotes worry and thoughtfulness about an issue as well as the fact of belonging to those “affected” by it; the second adds a strong sense of attachment and commitment to something.’ (Puig de la Bellacasa, 2011:89)

To care has stronger ethical and affective qualities. It can also connotate worry for others, perhaps those who may be at risk of harm but who are less able to voice their concerns, including non-humans (perhaps local wildlife or the broiler chickens). The role of a researcher is thus to explore all the actors’ interests and values; what they care about, what is at stake and what futures they are looking to. The struggles over contested narratives and ways of doing things reveal
the particular distinctive relations of a locality (Murdoch, 2006; Jones, 2020).

Controversies also improve democracy by allowing different framings of the arguments to be aired and investigated, as opposed to closing down discussion and containing issues (Donaldson et al., 2013). Marres (2005) argued that it is precisely the complexity of issues such as impacts of modern technological developments which ‘sparks a new public’ into being and motivates concerned people to get involved in the political process. Marres (2007) drew on the Pragmatist Dewey’s views that as science and technology progressed there should be more public involvement in politics around such issues, especially where no one was addressing public concerns or when issues are likely to transcend procedural settings. The continued intensification of meat production processes is exactly this type of issue. Marres argued that there is a need to democratise the process of framing the issues so that the public’s concerns are heard. Thus, researchers need to focus on how issues are defined and articulated and the effectiveness of participation processes.

In effect the new public of objectors has identified that the intensive livestock industry, being defined as agriculture, has been escaping scrutiny and that planning and environmental authorities have struggled to handle the multiple uncertainties over its externalities when making decisions. A Chatham House report (Bailey et al., 2014:7) identified a ‘livestock policy void’ in relation to the industry’s environmental impacts but the void is wider, encompassing planning legislation as well (Marsden, 2017). Complex intensive development proposals are assessed against the vague concepts of ‘localism’ and ‘sustainable development’ contained in the hugely slumped down 2018 National Planning Policy Framework (Ministry of Housing Communities and Local Government, 2018). Allmendinger (2016:16) critiqued this neoliberal approach to UK planning whereby the ‘reduced state’ tries to displace or mask conflict behind pro-growth sustainability rhetoric. Similarly, Hajer (2003) described an ‘institutional void’ where a weakened state cannot address such complex problems and other actors may intervene to influence policy making or decision taking.

Established agri-industrial networks act to defend and expand their operations but resistance from local communities has been growing and gaining some purchase. The blended relational-pragmatic theoretical approach suits such a contested and multi-faceted situation. Exploring the relations between actor networks involved will help understand the competing perspectives, dynamics and rationalities being performed. Incorporating a pragmatic eye to future action enables consideration of better ways of doing things (Jones, 2020).

3. The UK poultry industry

Chicken and egg consumption has been growing in the UK and globally since the 1950s, as part of the general ‘meatification’ of diets (Weis, 2007). UN Food and Agriculture Organisation (FAO, 2020) figures for global production of poultry meat show an increase from 9 m to 122 m tonnes between 1961 and 2017, and an increase in egg production from 15 m to 87 m tonnes. Technological innovations such as refrigerated transport, frozen chicken and air chill technology facilitated this growth (Dixon, 2002). Chicken became more popular than other meat in most countries around the turn of the century. It is seen as a healthy, easy and cheap option with few cultural taboos. Chicken makes up 42% of meat consumption in the UK where the amount eaten per year has increased from 30 kg per head in 2000 to 36 kg in 2017. Production has increased by a third since 2000 and reached 1 billion chickens a year in 2017, making the UK 75% self-sufficient (Agricultural and Horticultural Development Board, 2018). Globally the figure increased from 40 to 68 billion chickens a year between 2000 and 2018 (FAO, 2020). Poultry industry publications predict demand will continue growing, at least in the short term. Lymberry (2017:84) termed these trends the ‘chickenisation of the planet’.

‘Conventional’ IPU units produce 96% of broiler (meat) chickens raised in the UK. Broilers have been bred to grow larger, mature faster, using less feed (PEW, 2013). Birds are effectively still juveniles when slaughtered at 35–45 days old. In order to supply the increasing demand poultry farms have transformed in nature, size and operation. UK IPU broiler sheds housed an average of 25,000 birds in the 1980s and 90s, 40,000 during the 2000s and now reach capacities of 50–55,000 birds. Some UK farms house 500–750,000 birds at a time and raise eight ‘crops’ a year. Figs. 2 and 3 illustrate the scale of development in before and after satellite images of a site in North Shropshire. The new sheds are 113 m long and 25 m wide, much larger than the set of old poultry sheds, bottom left, which are believed to still be in operation. The buildings on the left in the new development are a biodigester or Anaerobic Digestion (AD) unit with circular, domed digester and waste tank. The brown rectangular shape on the right is a large attenuation pond for holding dirty water.

The industry is vertically integrated with the poultry processor company owning hatcheries, some IPUs, the transportation, feed mills, and the slaughter and processing plants which produce shelf-ready products for supermarkets.

‘From chicken breeding to grocery store packaging, the 21st-century broiler chicken business is possibly the most industrialized sector in live-stock agriculture.’ (PEW, 2013:1)

The larger companies have multiple processing plants and are part of multinational agribusiness companies; what Hendrickson et al. (2017:38) called ‘global behemoths’, which now dominate markets for seeds, feed-crops, pesticides, fertilisers, genetics, livestock, processing and manufacturing. The processor contracts with farmers to supply chickens but the birds remain in the company’s ownership throughout. In the UK there are now three main poultry processing corporations; 2Sisters, Moy Park and Avara (formed from the merger of Faccenda and Cargill in 2018). Company websites reveal these three collectively process 16–17 million chickens a week. Another eight processors collectively produce a further 4 million birds a week taking the total to about 20 million a week. This research has focused primarily on broiler (meat) IPUs but similar issues surround the proliferation of egg units, free-range or not.

The UK broiler industry is spatially concentrated as supplier farms normally need to be within an hour’s drive of the processing plant. Chickens are transported live and long journeys in lorries increase mortality rates. In 2017 Compassion in World Farming compiled figures from the environmental permits required by poultry farms with over 40,000 birds (Fig. 4). Herefordshire and Shropshire were the two top UK counties, with at least 17 and 13 million broilers respectively at any one time. IPU controversies have emerged in these locations with high concentrations of IPUs, while awareness of the situation in the rest of the country remains low.

4. Intensive livestock farming contestations

Awareness of the global environmental impacts of livestock agribusiness was raised with the publication of the FAO’s 2006 Livestock’s Long Shadow report:

‘The livestock sector emerges as one of the top two or three most significant contributors to the most serious environmental problems, at every scale from local to global. The findings of this report suggest that it should be a major policy focus when dealing with problems of land degradation, climate change and air pollution, water shortage and water pollution and loss of biodiversity.’ (Steinfeld et al., 2006:xx)

Yet despite this, almost no academic research has been carried out into contestations around UK intensive livestock developments since (Symes and Marsden, 1985). There are scientific papers examining specific issues such as ammonia emissions (Guthrie et al., 2018; Jones et al., 2013; Naseem and King, 2018), anti-microbial resistance (Economou and Gousia, 2015; Woolhouse et al., 2015) or water pollution
(Jordan et al., 2012) and agricultural industry research on issues such as the poultry supply chain (e.g. Manning et al., 2007). There has also been work around animal welfare issues and meat consumption (e.g. Buller and Morris, 2003; Buller and Roe, 2014; Evans and Miele, 2012; Miele, 2011). However, contestations around planning and impacts on local communities have not attracted much attention in the UK geography or planning literature in recent decades. Intensive livestock farming operations are more usually referenced in food, agriculture and rural academic texts such as Morgan et al. (2006), Lang and Heasman (2015) and Marsden (2017) as part of the broader corporately controlled agribusiness system. Their environmental and health impacts are mentioned but without much detail.

One exception is a commentary by Holloway and Bear (2011) which explored a proposed ‘superdairy’ for 8000 cows at Nocton in Lincolnshire. The ultimately unsuccessful proposals drew considerable opposition largely around the sheer scale of the proposed development and how the technologies proposed would impact on the cows’ natural behaviours and welfare. Objectors viewed such mechanisation as a step too far in the intensification of livestock farming.

Evans (2013) researched planning contestations over intensive strawberry polytunnel developments, particularly in Herefordshire’s Wye Valley, and found that the sudden arrival of such ‘neo-productivist agricultural technology’ triggered local protests:

‘Industrialised agricultural ventures are technology-intensive and large in size which, (...) comes as something of a ‘culture shock’ to those who have constructed a rural idyll.’ (Evans, 2013:70).

Concerns were mainly about the visual impact of tunnels on landscape quality and character: the reflectivity of plastic sheeting, expanses of metal frames, plus additional traffic, dust, pesticides, poor disposal of plastic sheeting and foreign workers. Evans warned:

‘future disputes over the conduct of neo-productivist agriculture are set to be highly acrimonious. This demands greater attention to the relationships between bundles of issues that researchers tend to treat discretely, such as those between the industrialisation of the food chain and meeting of consumer demands, environmental protection, and the changing demographic composition of the countryside.’ (p67)
biodiversity and ecosystem services costs. They called for more research related costs, they estimated these included the hidden external costs to society from the existing UK food system. Becoming harder to ignore, Fitzpatrick et al. (2019) drew attention to the industry is not as extensive as in North America. But the issues are assumption may be that the impacts are less extreme in the UK as the Watts, 1997; Furuseth, 1997; Imhoff, 2010; Mackenzie and Krogman, 2005; Novek, 2003; Ramsey et al., 2013; Sharp and Tucker, 2005). Government officials tended to prioritise economic development over local people’s quality of life. Mackenzie and Krogman (2005) recommended a more strategic process to identify where CAFOs could be sited, rather than a reactive, case by case permitting system. However, in areas where controls were introduced, such as moratoria in parts of Manitoba (Ramsey et al., 2013), production has tended simply to shift to different areas.

A key theme of the North American literature is how contract poultry farmers are trapped in exploitative financial contracts with the processor (Emel and Neo, 2015; HBO, 2015; Neo and Emel, 2017; PEW, 2013). The growers must meet precise standards but also carry all the risk. This issue of relatively poor farmers being caught in an exploitative treadmill system does not emerge from the European literature (e.g. Tamásy, 2013; van Buuren et al., 2014) or recent research in Australia (Butt and Taylor, 2017; Taylor et al., 2017) and there are scarce accounts of the UK situation.

The planning system is one of the few forums in which opposition to broader rural change can be contested. Disputes over IPU proposals ‘(re) introduces the political’ to planning arenas as they draw in a wider range of issues beyond those normally considered (Butt and Taylor, 2017:2). Indeed Taylor et al. (2017) suggested the competition between intensive agriculture and amenity is not just over land use, but also over representations of rural place and rurality and what sort of future rural landscape is desirable. This research begins to address such questions in a UK context.

5. Methods

The research used a multi-method approach to study the issues and follow the actors involved (Madsen and Adriansen, 2004). The intersecting methods enabled a multidimensional exploration of this complicated and multi-faceted situation (Mason, 2006). The initial stage involved compiling a database of IPUs across Herefordshire and Shropshire from online planning application records held by each county council. Details of older IPUs were sourced from environmental permitting records, supplemented by local knowledge, fragmentary old planning records and from studying online satellite imagery. Levels of controversy were identified from tracing the number of objections (and supporting letters) submitted during the planning consultation period. For a representative sample of the most contested cases a simple categorisation and count of issues raised was carried out, supplemented by content analysis using NVivo software. A similar count and content analysis of coverage in the main local newspaper in each county was undertaken using their online search features to identify articles and letters. It was possible to follow the trajectory of how cases caught public attention (Flyvbjerg, 1998; Leino and Laine, 2011), what concerned people most and how awareness of the more general proliferation of IPUs increased over time.

A wide range of actors involved in the situation were interviewed in a total of 48 interviews. Some interviews involved two colleagues from the

Fig. 4. UK poultry unit permits by county (Wasley et al., 2017).

It has been journalists and campaigners who have researched intensive livestock farming in the UK and raised concerns (Compassion in World Farming, 2016; CPRE, n.d.; Lawrence, 2016, 2013; Levitt, 2019; Monbiot, 2015; Soil Association, 2015; Wasley, 2018; Wasley and Davies, 2017). Lymbery and Oakeshott, 2015 exposed what they called the ‘true cost of cheap meat’ and its associated health and environmental impacts. Lymbery (2017) also argued that although pig and poultry production are not subsidised, the public subsidises feed crops and also the clean-up costs of pollution. He characterised the UK Government’s support for ‘sustainable intensification’ of agriculture as industrial farming continuing ‘business as usual’ with a little added ‘greenwash’ (see also Garnett, 2015; Levidow, 2015). He disputed the argument that intensive livestock operations are needed to feed the growing global population, arguing that we already grow enough food to feed the world twice over, but much is wasted and much does not reach those most in need.

The lack of recent academic scrutiny of UK intensive livestock developments is puzzling. It may be that there is limited funding for such topics or they may be viewed as obscure or unpopular. Woods (2011) described a ‘reticence’ and ‘wariness’ amongst rural geographers about returning to topics such as farming, planning and conservation that characterised the early years of the subdiscipline. It may also be that intensive farming in North America has been well studied (Boyd and Watts, 1997; Furuseth, 1997; Imhoff, 2010; Mackenzie and Krogman, 2005; Novek, 2003; Ramsey et al., 2013; Stoddard, 2015). Perhaps UK academics felt that the subject had relatively little extra to offer. The assumption may be that the impacts are less extreme in the UK as the industry is not as extensive as in North America. But the issues are becoming harder to ignore. Fitzpatrick et al. (2019) drew attention to the hidden external costs to society from the existing UK food system. They estimated these included £1 billion food production health related costs, £37 billion natural capital degradation costs and £7 billion biodiversity and ecosystem services costs. They called for more research into impacts of intensive production systems on human wellbeing, society and culture.

The North American literature on CAFOs (Confined Animals Feeding Operations) documented substantial evidence of detrimental impacts of industrialised livestock farming on communities’ quality of life (Carolan, 2016; Lobao and Stoffenah, 2008). There are several national and regional US organisations that campaign about intensive poultry farming (Garcés, 2012; PEW, 2013, 2011) and multiple campaigning books published in the US (e.g. Kirby, 2010; Leonard, 2014; Midkiff, 2004; Schlosser, 2002; Singer and Mason, 2006). Analyses of planning contestations around CAFOs in North America found increasing levels of controversy, especially around water pollution and other environmental risks; lack of transparency and trust in the process; and that CAFO developments do not sit happily in areas with high levels of newer residents or tourists (Constance and Bomnano, 1999; Mackenzie and Krogman, 2005; Novek, 2003; Ramsey et al., 2013; Sharp and Tucker, 2005).
same organisation or spouses of interviewees and the total number of individuals came to 59. Interviewees included farmers and farming bodies (9); local authority staff and decision makers (13); staff at environmental bodies (10); planning consultants and farming land agents (6); objectors and local campaign groups (11); other local businesses and organisations (10). In addition, 28 meetings and events were observed including planning committees (4), parish councils (2), campaign groups (10), the River Wye catchment Nutrient Management Board (addressing water pollution issues) (6) and environmental seminars/workshops (6). This article presents the data from the IPU audit and media analysis, supplemented by findings from interviews and observations which will be published in more detail elsewhere.

6. IPU developments in Herefordshire and Shropshire

Herefordshire and Shropshire companies were some of the earliest poultry businesses in the UK. In Shropshire J.P. Wood emerged out of game and poultry dealing families in the nineteenth century and in Herefordshire the Sun Valley co-operative company was established between existing poultry farmers in 1960. Both companies were later acquired and expanded by larger multinationals (Woods by Unilever and Sun Valley by Cargill Meats Europe, part of the Cargill commodity multinational). In Shropshire, the main poultry processing plant was relocated elsewhere in 1990 and poultry farmers now mostly supply processing plants in neighbouring counties. The two Cargill plants in Hereford remain and have been periodically expanded. Cargill now processes 2 million birds a week or 100 million a year. In 2018 Cargill Meats Europe merged with another major processor Faccenda to form a multinational. The processor reported that there was intense interest from local farmers to become suppliers and build new IPUs or additional sheds, which resulted in a relatively sudden increase in the number of planning applications being submitted. One land agent felt it was this surge in applications to fulfil the new contract which ‘created a monster’ and triggered such levels of controversy within a short time frame. Another agent who dealt with a number of the applications reflected:

‘there was just far too many and it wasn’t managed properly; what they (Cargill) agreed to do for Tesco created a bit of a PR disaster (…) I think all the problems we’ve got in this part of the world were all created by putting far too many in at the same time, rather than gradually. (…) It was as soon as they did that hit of wanting a million birds a week in two years – to get a million birds a week you need 7 million on the ground and it caused a PR disaster really.’

Figs. 8 and 9 show the cumulative trends in sheds built across the two counties and the slow and steady increases of the 2000s accelerating into a steeper curve in the period 2010–2014. In the twenty years since 1999 the number of sheds has increased in Herefordshire by 75% and in Shropshire by 115%. If Herefordshire had around 200 sheds in 1990 the collective increase will have been from around 300 sheds in 1990 to 1150 today, a nearly fourfold increase. Importantly, all the newer sheds are also much larger than the older ones (Fig. 3) so the growth in numbers of birds will have been significantly more; increasing from 7 to 8 million in 1990 to approximately 38 million in 2020. The impact of increased contestation slowing the approval rates of applications from around 2016 can also be seen in all these figures: some cases were delayed in the planning system for several years.

The Herefordshire peak in 2014 was almost certainly caused by a £35 million development increasing capacity at the Cargill plant in Hereford (The Poultry Site, 2013). It appears that the way this was implemented and the speed at which new farms were recruited lies at the root of much of the controversy and contestation. The company required 90 additional IPU sheds within a few years to fulfil a new contract with Tesco supermarket. The processor reported that there was intense interest from local farmers to become suppliers and build new IPUs or additional sheds, which resulted in a relatively sudden increase in the number of planning applications being submitted. One land agent felt it was this surge in applications to fulfil the new contract which ‘created a monster’ and triggered such levels of controversy within a short time frame. Another agent who dealt with a number of the applications reflected:

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Figs. 9 and 10 show the planning application data mapped to demonstrate the proliferation and intensification of IPUs between 2000 and 2017. The different colours represent the different types of poultry production and the size of the ‘blobs’ represents how many sheds there are in each location. In both counties applications were predominantly for broiler production. Only occasional egg, turkey or breeding units were proposed, although there has been an increasing trend for free-range egg units in recent years, mirrored in neighbouring Powys where there have been 300 successful applications for free-range egg
Fig. 6. Poultry sheds approved in Shropshire 1991–2020.

Fig. 7. Poultry sheds approved in Herefordshire 2000–2020.

Fig. 8. Total poultry units in Shropshire and Herefordshire over time.
units in the upland landscape of Mid Wales in the last 10 years. There has been significant growth in both north and south Shropshire, despite the Area of Outstanding Natural Beauty designation which covers most of the south of the county and the many Sites of Special Scientific Interest around the Meres and Mosses in north Shropshire.

In Herefordshire the only area unaffected to date is the Golden Valley, along the border with Wales and the Brecon Beacons National Park, although there was one controversial application there which was refused three times.

7. Farming perspectives

The research explored the actor networks involved in the planning contestations, their motivations and values. This section explores why farmers decide to move into or expand poultry operations and how their motivations are framed in the arguments which then emerge. Every planning application is unique because each locality is different, as are the applicants, their background, financial position and objectives, but some common themes can be identified. A typology of poultry farm situations is suggested, illustrating the variability.

Developing a broiler IPU is a major investment. Even acquiring planning permission is expensive, costing the applicant £50,000—75,000. There are application fees, environmental permit fees (for sites over 40,000 birds), costs of the land agent required to coordinate the whole process and fees for individual reports to support the application such as architect’s drawings, drainage plans, landscape, odour, noise, ammonia, ecology and traffic impact reports. One agent commented:

Fig. 9. Distribution of poultry units across Shropshire 2000 and 2017.

Fig. 10. Distribution of poultry units across Herefordshire 2000 and 2017.
'Broilers there's a big capital entry cost. (...) Most of the broiler customers are bigger farming businesses, or we get a lot of big estates.'

The building costs were estimated by interviewees to be in the region of £2.5 million for a four shed broiler unit or £1.1 million for a 32,000 bird free-range egg unit. If the planning application meets resistance, then there will be costs for additional reports and work by their agent, particularly if permission is refused and the applicant takes the case to a planning appeal (which most do in these circumstances). So what motivates farmers and landowners to make such an investment? Poultry has proved to be the most profitable UK farming operation in recent years. The average annual income from poultry was £112,000 between 2014/15 and 2016/17 (National Audit Office, 2019). Of this, subsidised direct payments were just £9000. This is almost twice the average income of even the closest other farm sector and all other types of agriculture (other than horticulture) receive much higher subsidies. Research sources suggested that larger, established IPUs generate profits of around one million pounds annually. One land agent commented:

'Several people went into broilers 15 or 20 years ago and then in about the last eight years it just took off. There were grants available from some of the processors, incentives and some people looking ahead at potential changes in subsidy, volatility in other farming enterprise, thought, 'Well, broilers looks fabulous. Let's get into it!' I've never spoken to anybody that's gone into poultry and regretted it.'

Several people said most farmers would be able to pay off their initial investment in 10–15 years; more quickly if they had renewable energy facilities alongside. Poultry business income often includes renewable energy schemes such as biomass boilers and solar panels to heat the sheds and AD biodigestors using the poultry manure, all of which received public subsidies through the UK Government’s Renewable Heat Incentive scheme. Interviewees perceived it would provide a good return on investment if you could afford the upfront costs. There were frequent references to the long-term viability and sustainability of the farm or resilience of the business. A farmer explained:

'because there's no money in Hereford cattle, there's no money in traditional sheep. (...) horticulture and poultry are the two unsubsidised sectors. They have been enormously taken up in Herefordshire specifically, which is why we have polytunnels and why we have chicken houses.'

These two sectors, which have both generated local controversy (Evans, 2013), are seen as the only two profitable enterprises. The income from poultry is predictable with a set contract and regular payments per crop cycle. One farmer stressed that this gave poultry farmers more 'certainty'.

'The poultry farms, because they do pay and they're consistent, they've saved a lot of family farms, absolutely saved them without a doubt. You got 100-acre farms, 150-acre small farms, struggle, struggle with beef and sheep, but they put two or three chicken houses on that farm and you've suddenly got a viable farm.'

In most cases it is an additional enterprise on the farm, sometimes for the next generation of the family to manage; in effect a business expansion, not merely survival. Another suggestion was that poultry was a good option for arable enterprises with soil fertility problems and declining yields as the manure would help improve soil structure. Others suggested that poultry farms were easier to manage than traditional farming. One environmental sector interviewee discussing upland free-range egg operations commented:

'One of those units on a sheep farm, that's £100,000 a year straight off. And no more chasing up the bloody slopes for some stupid woolly animal that won't come down!'

There were references to being able to run the highly automated broiler operations from an office, checking on the birds via web-cam and computerised monitoring systems linked to mobile phones. The bird catching, shed cleaning and re-stocking is all handled either by the processor or a contractor and the heating, food and water supplies are automated. IPUs do not generate many new jobs on the farm; a four shed broiler unit is commonly said to support about 1.5 jobs.

In contrast, free-range egg units are supporting possibly otherwise unviable marginal farms, often in upland areas. Here the motivation was described by one land agent as simply 'Desperation'. The egg business helps subsidise small beef and sheep farms. Broiler farms are also often diversification enterprises but much more substantial in scale, as an agent described:

'with broilers it is just a business investment; (...) you don't get 200 acre sheep farmers investing in broilers. Broilers is big investment, big returns.'

The research has demonstrated that farms go into poultry (both meat and eggs) seeking a predictable, stable and substantial income. However, they vary considerably in terms of location, size, landscape, family situation and objectives. A typology of poultry farms is proposed (Table 1), which has yet to be tested in other areas.

Table 1

<table>
<thead>
<tr>
<th>Types of poultry operation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Older, large, well-established broiler operations</td>
<td></td>
</tr>
<tr>
<td>2. Upland hill farms seeking to diversify, usually into free-range egg units</td>
<td></td>
</tr>
<tr>
<td>3. Large mixed farms diversifying into poultry to help support other farm enterprises</td>
<td></td>
</tr>
<tr>
<td>4. Large estates developing poultry as a new venture</td>
<td></td>
</tr>
<tr>
<td>5. Speculative land purchases for new poultry operations</td>
<td></td>
</tr>
</tbody>
</table>
A. Caffyn

One farmer who had received few objections to his IPU commented: ‘I think some people tend to just try to steamroller it through. It’s the worst thing you can do.’ Some put objections down to jealousy about the profit farmers and landowners may make from multiple developments, agricultural and housing, on their land. One agent said the farmer’s track record was important:

‘If they’re cavalier people that build stuff and make a mess, and don’t show any respect to the local people and the roads, etc. They’re going to get a bumpier ride. Certain people seem to attract… resistance.’

Trust, motivations, tactics and reputation may all play a part in levels of contestation, as well as the make-up and dynamics of the local community.

Type 4 IPUs are similar to type 3 but on large estates which have decided to invest in a poultry operation. Here dynamics among actor networks are different. The IPU is likely to be a business investment, run by a tenant, well away from the estate owner’s own residence and parkland. This sort of landed estate situation may generate only limited contestation as many local people may not be in a position to object, being tenants and/or workers on the estate, or in some way obligated to the landowners. One objector explained:

‘a lot of the properties are still tenanted and there’s people who work on the estate (...) they own 90 houses. So anybody who lives in a house or has any connection to the estate in any way wouldn’t object or say anything.’

The research also identified a fifth type in several recent planning applications, where the applicants have bought relatively small parcels of land speculatively, aiming to set up a new poultry unit. One farmer had built new IPUs in multiple locations across at least four counties. As type 5 proposals are perceived as primarily one individual or company making significant financial gain at the expense of local people and environments, such proposals generated considerable opposition, particularly if the applicant had few links to the area.

Objectors have recently speculated that in several cases farmers are planning application said ‘The biodigester is the elephant in the room’. Another local business said:

“Our whole understanding of it is they’ve got the chicken farm to create chicken poo to go in the biodigester. (...) I just feel like they’re doing it as a money generating thing. It’s not about the chickens, it’s about this biodigester and it just doesn’t feel quite right to me.”

Environmental permit data reveals there are about 30 AD unit across the two counties, plus over ten licensed ‘mobile spreading units’. AD units generate digestate which, like the poultry manure itself, can be a valuable fertiliser but is more concentrated and potentially toxic. There are also contestations about energy crops such as maize grown to mix with the manure in the AD units. Maize causes more soil runoff than other crops and hence more sediment and phosphate pollution in the rivers. In addition, food crops are displaced. Fig. 12 illustrates this where a new five shed IPU in North Herefordshire, with tall biomass boiler building and an AD unit, just seen on the right, is surrounded by manure heaps and maize crops.

The situations for which planning applications are submitted have been shown to vary considerably. One trend is for the sheds to be built at a distance from the farmhouse and original farm buildings, in some cases in a location some miles away. In these situations, a planning application for a poultry manager’s house on site has often followed a year or two later. Planning discourses around the units tend to emphasise the need for food security, the diversification and survival of family farms and the economic benefits to the local economy. However, financial profit lies beneath all the motivations. As one farming sector interviewee said: ‘the golden goose is broilers’.

8. Objector perspectives

The research also explored the multiple concerns raised by people who lodged objections to planning applications for IPUs. Near neighbours often focused on smell, noise, light pollution and whether their views were affected; while those living a little further away were more likely to worry about traffic impacts and safety, water and air pollution and views from local rights of way. Members of campaign groups often mobilised to each research a specific topic to harness data for their objections. Once people explored the details of the application further they became aware of a much wider range of issues. Some objectors described how their sense of outrage grew over time. The issues vary from one case to another depending on the location, nature of the landscape, road access etc. Table 2 presents an analysis of objections to three proposed IPUs, totalling 290 written submissions. The percentages show how most objections raised multiple issues.

The comparison demonstrates the wide range of concerns and how smell, traffic, visual impacts, pollution and negative impacts on tourism were common concerns. There may have been a widening of awareness about potential impacts between the Site A application in 2014 and the other two applications in 2017/18, but details of the sites influence the concerns. For example, Site B is close to a river designated a Special Area of Conservation where there is a declining population of rare freshwater pearl mussels which is why biodiversity became a key concern. This location is also on smaller, quieter roads which may be why noise was more of an issue. Site C is right on the boundary of the Shropshire Hills Area of Outstanding Natural Beauty so many objections mentioned this and there was also a particular concern about the impact on the 40–50 listed heritage buildings in the parish. Air pollution (both ammonia emissions and particulate matter) was often linked to health concerns and impacts for people with respiratory conditions. There were also occasional mentions of concerns about disease risks or the spread of antimicrobial resistance from the IPUs. Animal welfare concerns are not a material planning issue, although objectors sometimes put a reference into their objection to register that they were against industrial farming in principle.
Objection issues for three IPU planning applications.

Table 2

<table>
<thead>
<tr>
<th>Objection topic</th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smell/odour impacts</td>
<td>57</td>
<td>68%</td>
<td>54</td>
</tr>
<tr>
<td>Traffic impacts – volume, noise and safety</td>
<td>50</td>
<td>59%</td>
<td>67</td>
</tr>
<tr>
<td>Visual impacts on the landscape and views</td>
<td>36</td>
<td>43%</td>
<td>41</td>
</tr>
<tr>
<td>Water, drainage, pollution of local rivers</td>
<td>30</td>
<td>36%</td>
<td>25</td>
</tr>
<tr>
<td>Impacts on the local tourism economy</td>
<td>22</td>
<td>26%</td>
<td>56</td>
</tr>
<tr>
<td>Noise impacts</td>
<td>17</td>
<td>20%</td>
<td>69</td>
</tr>
<tr>
<td>Proximity to residential properties</td>
<td>14</td>
<td>17%</td>
<td>4</td>
</tr>
<tr>
<td>Proliferation of intensive poultry units</td>
<td>12</td>
<td>14%</td>
<td>16</td>
</tr>
<tr>
<td>Air pollution, dust and ammonia impacts</td>
<td>10</td>
<td>12%</td>
<td>17</td>
</tr>
<tr>
<td>Impacts on property values</td>
<td>10</td>
<td>12%</td>
<td>3</td>
</tr>
<tr>
<td>Animal welfare concerns</td>
<td>7</td>
<td>8%</td>
<td>5</td>
</tr>
<tr>
<td>The scale of the development</td>
<td>5</td>
<td>6%</td>
<td>32</td>
</tr>
<tr>
<td>The financial gain of one individual farmer</td>
<td>2</td>
<td>2%</td>
<td>16</td>
</tr>
<tr>
<td>Light pollution</td>
<td>2</td>
<td>2%</td>
<td>17</td>
</tr>
<tr>
<td>Lack of jobs created</td>
<td>2</td>
<td>2%</td>
<td>21</td>
</tr>
<tr>
<td>Location away from farmstead</td>
<td>18</td>
<td>14%</td>
<td>14</td>
</tr>
<tr>
<td>Negative social impacts for locals</td>
<td>22</td>
<td>17%</td>
<td>20</td>
</tr>
<tr>
<td>Waste and manure management</td>
<td>17</td>
<td>13%</td>
<td>12</td>
</tr>
<tr>
<td>Visual impacts from rights of way</td>
<td>18</td>
<td>14%</td>
<td>7</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>42</td>
<td>32%</td>
<td>13</td>
</tr>
<tr>
<td>Impacts on heritage assets/setting</td>
<td>1</td>
<td>1%</td>
<td>12</td>
</tr>
<tr>
<td>Impacts on Area of Outstanding</td>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Natural Beauty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total objections</td>
<td>84</td>
<td>133</td>
<td>64</td>
</tr>
</tbody>
</table>

Some communities had been fighting a proposed IPU over 4–5 years and felt emotionally battered by the process. They critiqued the applicants’ claims that the UK ‘needs’ more chicken supplies and argued that few additional local jobs would be created. Some objectors asserted that the proposals were unsustainable in many ways, such as the use of soy in the poultry feed which is usually imported from South America and is suspected of being grown in vulnerable environments. Other objectors said they wouldn’t be against such intensive farming units if they were located in more ‘appropriate’ or ‘industrial’ locations.

Objectors also often complained about the planning process, including faulty procedures, inaccurate documentation, poor decisions and concerns about how planning conditions would be monitored in future. There were accusations that planning officers or politicians had been unduly influenced or bribed. Objectors felt a sense of injustice and frustration that the development was permitted without compensation to the community. There is no community payback with industrial agriculture applications; unlike wind farms, solar farms or electricity pylons where sometimes there’s a community fund established, or housing developments where Section 106 or Community Infrastructure Levy payments fund community facilities. Also as agricultural installations, no business rates are paid on IPUs. In summary, individuals had multiple concerns; for themselves, their family, their health and their finances, but also for the community, other people and local businesses, plus concerns about procedures, democracy and justice.

Objectors often widened their networks to enrol more objectors, organisations and professional planning expertise to assemble their case. The levels of objection necessitated more detailed and better quality planning application documentation. Planning authorities were improving their processes and scrutiny of evidence over time, for example more frequently bringing in outside expertise to assess specialist reports such as on odour or noise impacts. Environmental organisations and government ecologists raised concerns over cumulative impacts of ammonia laden air pollution and excess nutrients in river water. In several cases objectors commissioned or researched their own reports to challenge the applicant’s construction of knowledge about the likely impacts in the locality. On occasion campaign groups and individuals challenged the way planning decisions were made through the judicial review process. There is no third party right of appeal in the UK; only the planning process can be challenged this way, not the decision. The fact that there have been at least nine judicial reviews across the area since 2014 demonstrates how contestations have escalated. The fact that objectors won several of the cases, or the Council ceded the case before it was heard, is evidence of the increasing knowledge, skills, financial resources and persistence of the objectors and proof of procedural errors by the authorities. One farming sector interviewee with UK-wide experience called Herefordshire and Shropshire the ‘problem zones’;

‘Because this is where all the issues are. (…) Out of the schemes that we do, the ones that have problems are in this part of the world. They’re in Herefordshire or Shropshire. All the applications I’ve had go to judicial review have all been in Shropshire or Herefordshire. No other county in the UK.’

Campaign groups focused on individual IPU applications, but over time there was more collaboration between groups, sharing information, contacts and advice. In 2019 campaigners joined up across the English-
Wales border to produce detailed maps of IPUs across three counties, coordinated by the Campaign to Protect Rural Wales (Fig. 13). The maps were seen as a way to make the issue more visible, highlight the cumulative impacts across a wide area and to step up lobbying activities.

9. Networks and relations

The research explored relationships within and between actor networks involved in the planning contestations. The farming and landowning sector is strong and well networked. Poultry is a specialised subsector but tends to be viewed as part of the mainstream farming culture which is supported by supplier companies, business bodies and an active and vocal farming lobby led by the National Farmers Union and Country Landowners Association which both have a strong presence in the area and are embedded in local governance systems. There is effectively an agricultural hegemony which acts to facilitate agribusiness interests and to discourage or neutralise voices of challenge. The attitude that ‘farming is what these counties are all about’ is strongly felt throughout much of the rural community.

Intensive livestock farming is normalised by these farming networks. Common narratives implied that there is no alternative for farmers but to choose intensive methods in order to provide the cheap, healthy and locally grown protein the UK’s increasing population needs. The farming lobby insisted any pollution from IPUs would be controlled via the environmental permitting process. They labelled objectors incomers and NIMBYs (Not In My Back Yard) who were ignorant of the countryside and how it worked (Devine-Wright, 2009; Wolinski, 2006). In recent years farmers have often encouraged their networks to mobilise in support of their planning applications. Not all farmers support intensive poultry farming; some don’t consider IPUs farming at all. However, few are willing to disrupt relations within the farming community and go on the record against a development.

The local processor company plays a significant role in the farming sector networks. In Herefordshire perceptions were heavily influenced

![Fig. 13. IPUs across Herefordshire, Shropshire and Powys, CPRW Brecon and Radnorshire (www.brecon-and-radnor-cprw.wales/?page_id=1513).](Image)
by Cargill’s external relation activities: its charitable work, sponsorship of community activities and sports, regularly covered in the Hereford Times (referred to colloquially by some locals as the Cargill Times). Objectors were aware they faced an uphill battle: ‘The thing behind all of this, you’ve got to think of the money, and the economics and the power of Cargill.’ Many people described how the company had ‘shifted gear’ in the last ten years. Perceptions of Cargill had shifted from a local company ‘tootling on for decades’, as one interviewee put it, to now a major corporation with global reach and expansion strategy. One government interviewee explained:

‘I think maybe there’s a change of perception that it has become an industry, rather than farmers down the road with their chicken sheds. (…) but it suddenly has become something other maybe.’

The increased contestation levels may partly reflect this sense of a shift from a generally tolerated farming operation into this ‘something other’ that local communities were not willing to put up with any longer. In the past there had been limited challenge to the agricultural hegemony and the impacts of increasingly intensive farming. Several interviewees puzzled about how little criticism there is of farming locally, how its needs are prioritised and how other important sectors such as tourism (economically more important in both counties than agriculture) were treated very differently and often ignored.

Groups of objectors have emerged as ‘new publics’ contesting these complex situations (Marres, 2005). They have wide-ranging matters of concern, especially around the uncertain externalities or ‘overflows’ which IPUs generate. Many individuals experience a broadening of their concerns from the particular locality to wider national or global issues around climate change or biodiversity loss (Beebeejaun, 2019). Local residents are often alarmed at the proposed rapid and dramatic change; they may feel anxious, ‘exposed’ and vulnerable (Alaimo, 2016). Beck (1986) described how citizens can suffer a double shock of both hearing news about a particular risk, such as an IPU, but also not having control over how the dangers it entails may be assessed. Alaimo saw the resistance of objectors as an entanglement of ethics and politics with both a personal and a public dimension. A key question objectors are asking is ‘what is good and for whom?’ Objectors are concerned about how the IPUs will affect them personally and affect things, places, humans and non-humans they care about (Puig de la Bellacasa, 2011), but also about who benefits and how it is decided.

Many people speculated that there must have been discussions between Herefordshire Council and Cargill about the implications of expanding the Hereford processing plant and the requirement for an additional 90 or more poultry sheds to supply it. Several sources confirmed senior officers and politicians had given tacit approval and would be fully aware of the large number of planning applications which would inevitably follow. Several people pointed out that the planning application fees paid by farmers are an important income stream for the council.

It may be that politicians or officers deliberately facilitated applications by ensuring a policy void; omitting any policies on intensive livestock farming in the county development plans. These ‘Core Strategies’ are the primary policy guiding planning decisions (Herefordshire Council, 2015; Shropshire Council, 2011). In the plans farming in general is not linked to potential negative impacts such as air quality, traffic generation, heritage impacts etc. other than brief mentions of water quality issues. Authorities are aware that two thirds of nutrient pollution in local rivers comes from agriculture (e.g. Environment Agency and Natural England, 2020) and yet planning policy documents only discuss water quality in terms of sewage treatment or industrial pollution. There is just one reference to poultry units in the Shropshire plan and none in Herefordshire. Many interviewees mentioned the policy void or vacuum. A local councillor said:

‘we have a specific planning vacuum in our own policies, for cumulative impact, impact on the natural environment, as well as the road infrastructure. We have to rely on what words there are in the Core Strategy which are pretty loose and pretty positive around diversification or employment and economic growth and rural economy.’

In this sort of situation a local authority may choose to develop supplementary planning guidance (SPG) to fill the vacuum and give officers and councillors (and applicants) more advice about what would be acceptable where. Herefordshire Council did exactly that when faced with similar contestation over polytunnel developments (Evans, 2013). There had been discussions about producing a SPG for poultry or live-stock units generally and there were several examples from other counties on which a local version could be modelled. However no policy has yet been produced despite numerous actors, including planning officers and land agents, saying it would bring clarity to the process. Several opposition group politicians had actively pursued this route, but delaying tactics from Conservative politicians had enabled the recent tranche of applications to go through the planning process before the policy void might be filled.

Resource issues may have been part of the issue; government figures suggested that planning and development departments in local authorities had experienced cuts of 53% between 2010 and 2017 (National Audit Office, 2018). Councillors making planning decisions were also concerned about legal costs the Council would be required to pay if they rejected a case and the applicant won on appeal (which happened several times). Many actors thought the definition of intensive livestock rearing as agriculture was the underlying problem. They viewed IPUs as industrial but because the definition of agriculture has not been amended since the 1947 and 1990 Planning Acts, the policies which control industrial developments cannot be applied to IPUs, other than through the environmental permitting process. This is despite the scale of such developments and the type of technology used having changed radically. One councillor explained:

‘the industrial policies are very strict and wouldn’t allow any of this development. If these sheds were producing spring coils or something, (…) they wouldn’t be allowed. They’d be encouraged to go to enterprise zones and business parks and locate themselves sustainably, but because this is, in policy terms, deemed to be agriculture that’s a real problem.’

A few communities have recently included IPU policies in Neighbourhood Development Plans which form part of the statutory planning framework once adopted and objectors were hopeful this would make a difference.

However, it appears that Cargill/Avara were successful in recruiting their required additional suppliers before the policy void could be filled. Applications in Herefordshire have slowed somewhat in the last few years although several heavily contested cases remained undetermined after 2–3 years. From 2018 Avara has been seeking new suppliers in the Northamptonshire area to supply the former Faccenda processing plant there. Applications in Shropshire continue, reflecting additional demand from several other processing companies elsewhere.

10. Conclusions

The massive growth in the UK poultry industry over the last 50 years, driven by the enormous increases in chicken consumption and the global reach of the multinational corporations that control the industry, lie behind the local controversies. In Herefordshire and Shropshire periodic expansions at processor companies, particularly Cargill in Hereford, have required increased production on farms. Tracing the planning and media data has demonstrated the growth in IPUs and revealed the trajectory and nature of the accompanying controversy (Callon et al., 2001).

While intensive livestock production continues to be classified in national legislation as agriculture it will tend to escape effective planning control (Butt, 2019). Poultry has been an attractive, profitable form of farm diversification, alongside subsidised investments in renewable
IPUs have lost trust in the planning process. The levels of contestation and populations.

widely, cumulative effects such as on the health of local environments in favour of development and the onus is on the local authority or ob whatever political commitment was made with the dominant actors in a politically charged environment. Local authorities have deliberately failed to take a more strategic view or seek information about liferation and cumulative impacts. They focus on individual cases and have helped all parties. Planning managers and politicians must have thought they could ‘manage the outrage’, as one planning officer described it, and continue to approve most applications. IPU proliferation was normalised and its risks underplayed, in order to deliver sound policy and decisions it is important to identify areas of ignorance and uncertainty as well as scientific knowledge: ‘The recognition of certain uncertainty could be the basis for a different approach.’ (Hajer, 2003:186). He suggested the need to mix scientific and social knowledge in a more interactive and ‘deliberative’ way, including a better understanding of the dimensions actors perceive the problem being addressed. Hajer proposed a more open process involving more stakeholders, drawing on their local knowledge and building trust. The policies agreed should then also be monitored and adjusted as necessary as new knowledge becomes available. These proposals are similar to the dialogic democracy and hybrid forums.

This research has begun to fill the significant gap in the social science literature on UK intensive livestock farming. It has identified new publics of IPU objectors, mobilising to contest proliferating planning applications (Marres, 2005) and how this resistance has become more effective over time, opening up the situation to greater scrutiny and drawing attention to the policy void. A complex set of cares and concerns has been revealed through studying the contestations. They encompass a wider range of factors than Weis’s ‘ecological hoofprint’ (2013), including multiple dimensions of quality of life, impacts on other economic sectors such as tourism and innumerable ‘cares’ of local people.

Opposition has mobilised and local authorities are having to consider whether to act to prevent further escalation of intensive livestock operations, as happened in the US in the late 1990s (Constance and Bonanno, 1999). The local councils in Herefordshire and Shropshire are now having to address the consequences of their tacit support for the poultry industry. In Herefordshire this includes sustained illegal levels of water pollution which triggered a complete planning moratorium across the River Lugg catchment (Herefordshire Council, 2019). The Council is belatedly recognising the connection between the increased scale of the poultry industry and excessive nitrates and phosphates in rivers and started discussions about new Supplementary Planning Guidance in late 2020. Shropshire Council has had to spend considerable resources on issues around ammonia emissions and has incurred large legal bills when ceding several judicial reviews. However, while poultry remains such a profitable investment and the policy void remains unaddressed, the contestations are set to continue and spread.

Weis argued there has been a ‘systemic disarticulation of agriculture from ecosystems, communities and even the authority of nation states’ (Weis, 2007:161). He characterised the situation as ‘the battle for the future of farming’. This research demonstrates how these battles have emerged in two rural counties and how intensive livestock agriculture has become dislocated from local ecologies, communities and weak planning and regulatory regimes. It no longer carries the unquestioning support of local residents and the authorities now need to decide how to deal with the industry’s continued expansion. Do local councils leave the policy void open when redrafting their strategic planning documents or can they take a more proactive approach to consider what is beneficial for their area, environment and local communities? The cumulative impacts of ammonia on habitats and nutrients in rivers are now clearer. The negative impacts on health, quality of life and other economic sectors such as tourism need further research. But all actors need to work together to consider what rural futures are desirable.

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Declarations of interest

none.
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