



Opportunities for achieving landscape scale conservation in England

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ARTICLE INFO

Keywords:

Landscape scale collaboration
Public goods
Ecosystem services
Agri-environmental schemes
Q-methodology

ABSTRACT

The English countryside is set to undergo significant changes in the way it will be managed in the coming year. The incoming Environmental Land Management schemes represents a shift in scale and focus of public goods provisioning, with the Landscape Recovery scheme in particular now geared more in favour of a coordinated landscape scale delivery of these public goods. This also comes at a time when the countryside has been experiencing a diversification within the land management community, which are moving towards an increasingly heterogenous mix of values and motivations for occupying and managing land. This will have implication as to how effective these public goods can be delivered on a landscape scale. Further complicating this is that while the idea of landscape scale collaboration to deliver more meaningful outcomes towards conservation has been widely accepted in scientific circles, uncertainty about how to achieve this in practice remains. This prompts a growing need to better understand how willing these increasingly diverse range of landholders are in collaborating together.

To address this, this paper explores how collaborations consisting of a heterogenous mix of stakeholders might function, and the drivers and interventions required for such collaboration to be sustained in the long term. Utilising Q-methodology, we establish various models of collaboration based around the range perspectives of different stakeholders. Our findings yield five models of collaboration: the “Traditional Farmer”, “Social Farmer”, “Hybrid Collaboration”, “Modern Collaborators” and “Pragmatic Collaborators”. While distinction between the groups are reflected by the aspects of collaboration they placed most importance to, several commonalities in views have emerged as well. This includes the trust required between conservation groups and landholders for effective conservation outcomes, and the opportunity to exchange knowledge and experience in collaborations. Ultimately, the models of collaboration suggest a need for future policies to think more directly about how different landholders might be grouped according to their perspective on collaboration and how they can be incentivised. This will facilitate more effective, and sustained, landholder collaborations that fulfils landscape scale ambitions of upcoming policies.

1. Introduction

The English countryside is set to undergo significant changes in the way it will be managed and occupied in the coming years. Reforms in agri-environmental policies will prove consequential to the farming industry and the countryside as a whole, with the implications of this policy shift not only reflected in the way farmers will be supported but also the scale and focus of conservation ambition in the countryside. The Environmental Land Management Schemes (ELMs) will be key to these ambitions, acting as the central vehicle for delivering these environmental outcomes in the years to come. While the Sustainable Farming Incentive (SFI), being non-competitive and flexible in the variety of

environmental “actions” that participants can take, presents the most accessible of the three schemes in ELMs for farmers and land managers to enrol in – there have been concerns. This includes criticisms that it is not ambitious enough, and that flexibility afforded to participants to pick and choose the actions they would like to take up could lead to limited environmental outcomes given the lack of co-ordination, the right combination of actions and in the right locations (National Audit Office, 2024). On other hand, the other two schemes of the ELMs, the Countryside Stewardship – especially the higher tier – and the Landscape Recovery seem to reflect a more ambitious approach to various extents (DEFRA, 2023a); with these schemes favouring a better coordinated landscape scale delivery of public goods. Although still in the

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<https://doi.org/10.1016/j.jrurstud.2024.103380>

Received 8 November 2023; Received in revised form 7 August 2024; Accepted 12 August 2024

Available online 16 August 2024

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early stages of development and launch, the ambition and scale of the latter two schemes will entail a greater collaboration of landholders and land managers, as evident in the Landscape Recovery projects (DEFRA, 2023b).

At the same time, the advent of these new schemes also comes at a juncture when the complexion of the rural land management community has been changing for the past several decades. Prior reports and studies (e.g., Holmes, 2006; Gosnell and Abrams 2011; Lawton et al., 2010; Sudlow, 2020) have observed a land management community that appears to be diversifying away from agriculture towards an increasingly heterogeneous mix of values and motivations for managing and occupying land. Prior studies such as Kam et al. (2019) and Kam and Potter (2024), have observed how these new land managers,¹ especially those not dependent on agriculture for their livelihood, can have an impact on the supply of provisioning services. Moreover, given that ecosystem services are recognised to operate optimally on a landscape scale (Gill et al., 2010), and thus across properties, these new land managers will undoubtedly play a role in determining how these public goods (such as air and water quality, biodiversity conservation, etc.) are delivered in specific landscapes. Arguably, the shift in agri-environmental policies towards a landscape scale ambition, paired with the ongoing changes to the land management community in the countryside, provides an opportune moment to exploit this growing diversity of landholders to engage a wider set of public good providers into landholder collaborations to effectively deliver these services on the desired landscape scale.

The aim of this paper is to explore the opportunities for collaborative conservation² in light of the evolving land management community in England and the new suite of ELMs with an appetite for more coordinated delivery of public goods on a landscape scale. This will entail exploring the different perspectives that relevant stakeholders have around landscape scale collaboration, and examining the interventions required to build effective collaborations between a wide range of rural actors and institutions. Given the broad scope of public goods and environmental outcomes expected to be delivered on a landscape scale, this paper focuses mainly on those that are to be delivered through agricultural land use. Utilising Q-methodology, we establish five models of collaboration grouped according to the range of perspectives that various stakeholders hold. In addition, we highlight the aspects of collaboration that different models place importance to and identify key policy interventions required for such collaborations to function effectively and for them to be sustained in the long term.

The following sections of this paper examine the collaborative efforts of past agri-environmental schemes, document the policy shift towards landscape scale collaborations and highlight the importance of engaging a broad set of landholders into collaborative conservation. The paper then proceeds to explore the changing demographics of landholders in the countryside before presenting the methodology and findings of this research.

1.1. Collaborative conservation under previous agri-environmental schemes

Amongst a range of criticism pointed at the design of previous agri-environmental schemes (e.g., Falconer and Ward, 2000; Kleijn et al., 2006; Harvey, 2004; Henle et al., 2008; Batáry et al., 2011; Gawith and Hodge 2020) has been the scale and focus of its conservation ambition within the English countryside. Traditional agri-environmental schemes

¹ *New land manager* is any type of landholder whose main land use values are more closely aligned with consumption and/or protection and do not derive their main source of income from agriculture.

² *Collaborative conservation* is defined in this paper as the collaborations of landholders to deliver conservation outcomes/public goods on a landscape scale.

have long operated at an individual farm holding scale, with agreements designed to fit the conditions of farms rather than whole landscapes. This has been due to the desire to minimize transaction costs by engaging only with larger landholders – which have traditionally been farmers - as opposed to a higher volume of smaller scale landholders. (Pannell et al., 2006; Pannell and Wilkinson, 2009; Meadows et al., 2014). The strategy of focussing mainly on maximising uptake of these schemes by individual farmers (Morris and Potter, 1995) is also predicated on the idea that an accumulation of individual farm uptake would lead to the desired delivery of outcomes on a landscape scale; ignoring the mismatch of action between farms that could transpire due to inadequate co-ordination (Häfner and Pierr, 2021). For these reasons, there has been a lack of impetus for past agri-environmental schemes to incentivise collaborations between farmers to deliver environmental goods at a landscape scale (Mills et al., 2017; Prager et al., 2012; Franks, 2011).

This has resulted in not only issues with the supply of public goods but the manner in which it is being delivered as well. Hodge observed some time ago (2001) that it is not only vital that the level of public goods being delivered meets societal demands but that they are also produced at a large enough scale to have an impact. This observation has long been concurred within scientific circles, which have noted that the management of land on an individual farm scale is not well matched to the scale at which ecological processes occur, and insufficiently large or connected to support biodiversity (Gill et al., 2010; McKenzie et al., 2013). This has been recognised as one of the factors leading to the limited success of past schemes, given the neglect to which habitat fits into the overall landscape. Consequently, there is growing favour for a much better coordinated landscape scale management to effectively address important issues such as habitat fragmentation (Concepción et al., 2008; Swales, 2009; Lawton et al., 2010; Batáry et al., 2011; McKenzie et al., 2013; Crick et al., 2020). This has been given greater impetus from the knowledge that biodiversity restoration and enhancement on a larger scale of management will yield more effective results than the single farm management style (Mills et al., 2017). This was pushed forward by a seminal report from Lawton et al. (2010), which concluded that there is a need for a more “joined up” ecological network to ensure greater resilience, with landscape scale approaches one of the report’s key recommendations. These recommendations have subsequently been incorporated within agri-environmental policy design, such as DEFRA’s report on “The natural choice: securing the value of nature” in 2011, and also widely supported by academics (e.g., Batáry et al., 2011; Sutherland and Burton, 2011; Oliver and Morecroft, 2014; Riley et al., 2018). Hence, optimisation of the delivery of these ecosystem services requires landscape scale³ intervention through more effective collaborations between landholders (Franks and McGloin, 2007).

1.2. The changing land management community

The growing consensus for stronger collaborations between landholders is occurring alongside an English countryside that is undergoing a transformation over the past several decades. This has seen a general restructuring of the countryside and changing patterns of land use and occupancy. For instance, agricultural businesses have been on the decline in rural areas of England (Ward, 2006). Further evidence of its decline can be seen in the decrease land area of agriculture holdings, which has seen a drop of around 15,000 ha annually from 1983 to 2008, along with land use for agriculture which has dropped even more drastically (Bibby, 2009). There has also been a trend towards the

³ This research defines *landscape scale* as “a contiguous area that is above the farm/local scale which requires management from cross-properties” – a definition amalgamated from prior studies (WWF, 2004; Prager et al., 2012; Baumber et al., 2018).

diversification of incomes on many family farms and a general decline in the numbers of so-called main occupation farms (Marsden, 1999; Lobley and Potter, 2004). Various studies have predicted the continued restructuring of the farming sector, with a steady decrease in dependence on traditional agricultural income sources for many farm households due to diversification and pluriactivity. This has meant that, as Lobley and Potter (2004) observed, that there are increasingly diverse ways to be a farmer in the early 21st century. This ranges from traditional main occupation farmers, who gain most of their household incomes from agriculture and farming enterprises, through to part-time and hobby farmers who may be effectively decoupled from the need to earn an income from farming the land. The continuing reforms to the nature and level of public support, in the wake of Brexit, means that there will be further, possibly more radical, structural changes to come given the expected downscaling of direct payments from the EU Common Agricultural Policy (CAP), and their replacement with payments more directly linked to public goods. This will have implications for the financial viability of many farm businesses (DEFRA, 2021).

At the same time, the increasing demand for land from new land managers with non-farming, lifestyle or investment interests will mean that new types and forms of occupancy will emerge. These individuals have been steadily gaining in importance as holders and managers of rural land in recent years – albeit remain poorly understood (Bohnet et al., 2003). Data from land agency Savills shows that 38% of land purchases in 2021 were from non-farming buyers (Norton et al., 2022). This is also reflected other land market surveys (Supplementary Figs. 1 and 2), which offers further indication of an emerging presence of new land managers in the rural land market over the past couple of decades (Lawton et al., 2010; Sudlow, 2020). Running alongside these private landholders are what appear to be the growing presence of institutional landowners and charitable trusts in the land market, buying land and managing it either at once remove or through direct involvement (Smailes et al., 2014; Gosnell and Abrams, 2011; Curtis and Mendham, 2011).

The new breed of landholders which possess “differing consumption interests” and land use and management goals - often differing significantly from those of main occupation farmers (Lowe et al., 1992; Gill et al., 2010) - provides another avenue of occupancy change, possibly taking over land previously owned or managed by farmers (Heimlich

and Anderson, 1987;Liffmann et al., 2000; Gill et al., 2010; Curtis and Mendham, 2011). Fuelling this change have also been the shift in societal values, with issues related to biodiversity preservation and landscape protection becoming increasingly important (Holmes 2006; Almstedt et al., 2014). This has effectively mobilised conservationists to push for a greater conservation of the countryside, and further drive a growing demand for protection and other uses of the countryside; leading Wilson (2007) to speculate about the growing significance of “non-productivist pathways” in the countryside. Consequently, contemporary rural localities have witnessed the developments of “new patterns of diversity and differentiation” (OECD, 1993 in Marsden, 1999, p. 505), with agriculture and socio-demographic trajectories becoming ever more disassociated. The implications of this are likely to mean increasing amounts of land held by individuals and organisations whose primary motivation may not be agricultural. This diversification in landholder types are captured in Fig. 1 below, from the author’s earlier work (Kam, 2023).

1.3. The challenges ahead

Diversification in landholder types, and the increasing presence of them in the countryside, prompts questions into what implications this might have on recruitment into future agri-environmental schemes that emphasis collaboration. Successful recruitment into ELMs will largely depend on policy makers’ ability to coordinate the enrolment of these diverse set of actors, present and emerging, at a landscape scale. However, there is little available evidence regarding the willingness of various landholders to collaborate together to deliver public goods on a landscape scale in the UK. Hence, while the idea of landscape scale collaboration to deliver more meaningful outcomes towards conservation has been widely accepted in scientific circles, uncertainty about how to achieve this in practice remains. Notably, there is a gap in our understanding of how these various landholders currently, and might in future, respond to collaboration at such a scale (Ferranto et al., 2013). This uncertainty is further fuelled by doubts about the “institutions necessary to generate policies that cross-land under different ownership and/or management” (Franks and Mc Gloin, 2007, p. 487). While a couple of the schemes within ELMs seem to address this, a focus on enrolling individual farmers and their land appears to remain a priority.

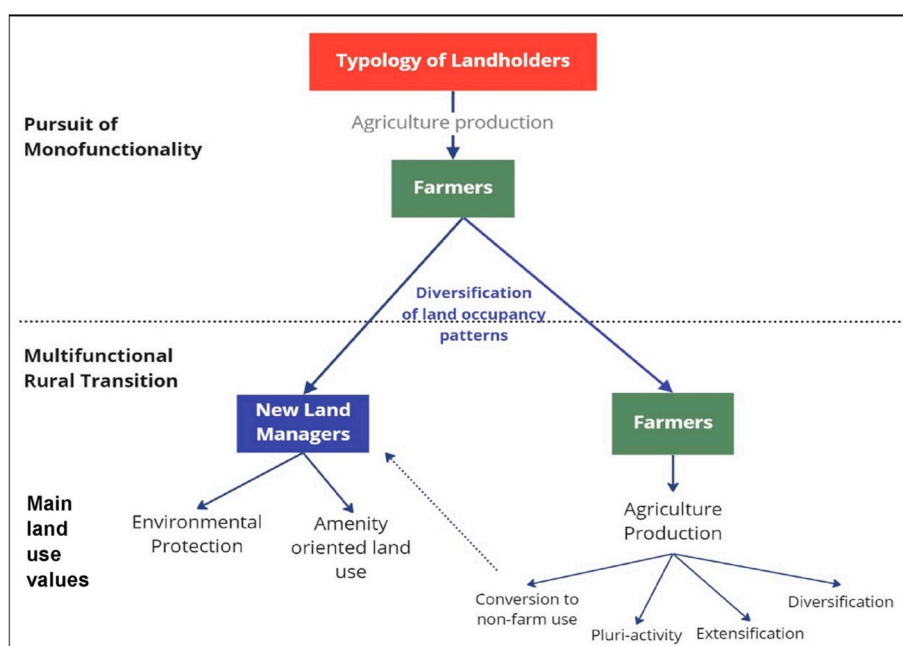


Fig. 1. Typology of landholders in England.

Thus, it remains to be seen how a broadening spectrum of landholders can be effectively integrated into collaborative conservation arrangements, along with the policy tools needed to enhance more effective collaboration - as highlighted and explored in prior studies (e.g., Emery and Franks, 2012; McKenzie et al., 2013; Franks, 2016; Franks et al., 2016; Häfner and Piore, 2021). The growing set of landholder types brings with it several challenges due to the widening range of land use motivations and values. Nonetheless, it also presents an opportunity for policy to engage a much broader set of public good providers, than at present, into collaboration, to realise the full potential of delivering public goods in the countryside. This is due to the scope and scale of public goods expected to be delivered in the countryside. With the former, the scope of public goods delivered through ELMs ranges from habitat restoration, improving water quality, increasing flood and drought resilience, woodland creation and reductions in carbon emission (DEFRA, 2023a). Paired with the scale in which these objectives are expected to be delivered on, especially through Countryside Stewardship and Landscape Recovery, a shift towards delivering public goods on a landscape scale in the coming years means efforts to foster and better incentivise stronger collaborations amongst a variety of landholders and land managers will be imperative for the success of these schemes (Franks and Emery, 2013; Prager et al., 2012).

To address this need, this paper sought the use of Q-methodology to better understand the range of perspectives that different stakeholders have towards collaboration. These perspectives will inform the various models of collaboration established later in the study, which will serve to: a) provide a clearer picture as to how collaborations might function effectively with different landholder types working together; b) identify the interventions needed for these collaborations to work and be sustained over the long term. The following section presents the methods utilised for this research study.

2. Methodology

Q-methodology enables the investigation of the subjectivity involved in any situation, gaining insight into an individual's perspective and opinion while being able to "analyse subjectivity in a structurally and statistically interpretable form" (Barry and Proops, 1999, p. 338; Previte, Pini and Haslam-McKenzie, 2007). The analysis used in this methodology focuses on the configuration of relationship between each participant that is under examination (Watts and Stenner, 2005), meaning that participants with similar perspectives, and which are distinct to other participants, will be grouped together. Within the context of this study, it enables the identification of the different models of collaboration. Q-methodology contains five stages as shown in Fig. 2 below: 1) Identifying a discourse; 2) Attaining the concourse; 3) Establishing the Q-set; 4) Carrying out the Q-sort; 5) Data analysis. The first stage involved the process of identifying a particular discourse to examine (Previte, Pini and Haslam-McKenzie, 2007). In the case of this research, is how various stakeholders can be engaged to deliver public goods via landscape scale collaboration.

The second stage of the Q-method process then involved the undertaking of semi-structured interviews to attain a strong grasp of the concourse, which are the range of perspective that individuals hold on the particular discourse under examination (Previte, Pini and Haslam-McKenzie, 2007). In order to obtain a "cross section of the major stakeholder groups and opinions" (Webler et al., 2009, p.15), this study recruited main occupation farmers, new land managers, estates⁴ along with advisory services and support (farm cluster facilitators, wildlife trusts and AONBs). The purpose was to have the participant pool consist of stakeholders with diverse set of land use motivations - namely consumption, protection or production - along with having experience in

collaborative conservation projects. Ultimately, this research conducted semi-structured interviews with 30 participants (Table 1 below).

2.1. Establishing the Q-set

The statements used for establishing the Q-set (stage 3 of Q-methodology) were derived from the semi-structured interviews conducted in the previous stage. Thematic analysis of these interviews provided the main themes for further investigation in the Q-set (Table 2). One of the main themes involved understanding the role and contributions of different stakeholders in a collaboration, given that a key aim of this paper is to explore how collaboration consisting of a heterogenous mix of stakeholders might function. The second theme explored the perception participants held towards collaboration itself. This included better understanding the barriers which they felt were preventing them from collaborating, or collaborating optimally, and what could be done through policy interventions to remove these barriers. The second theme also focused on the strengths and challenges related to collaboration. Equally important, it provided the basis in which to understand what is needed to sustain these collaborative conservations in the long term, which was the third and final theme. This theme examined how stakeholders perceived success of these collaborations. Prior studies have stressed that the effectiveness of conservation schemes should be measured by their ability to invoke long term changes in conservation attitudes (Coleman et al., 1992; Morris and Potter, 1995). What this requires is to first understand how landholders recognise the "outputs" or "symbols of success" of their conservation work and how these can be sustained in the long term.

A total of 124 statements were initially extracted from the concourse interviews. This was then shortened to the final 48 used for the Q-statements used for the Q-sort (Supplementary Table 1).

2.2. Case study selection and Q-sort

Five case study groups were selected for Q-sort stage of the Q-methodology, in which participants from each group were asked to rank the Q-statements presented to them. For the selection of this case study sites, several criteria were used. Firstly, the presence of different landholder/stakeholder types in most case study groups, in various combinations, were crucial as one of the main objectives of this Q-methodology is to understand how collaborations consisting of variety of landholders and stakeholders can be achieved. This is due to the recognition that different parts of England have experienced the transition to multifunctionality at varying rates and precipitated in diverse combination of landholders (Marsden, 1999). Therefore, it is pertinent to understand the different models of collaborations that could exist in England, and what is needed for them to succeed. To facilitate this examination would require participant who currently are or have previously participated in collaborative projects - the second criteria for this case study selection. Overall, this research sought to have at least one case study site consisting of a wide tapestry of landholders, especially lifestyle/non-farming landholders; another being one which had an environmental organisation as part of the collaboration; a third that is constituted mostly of main occupation farmers; and one that was constituted of policy-makers, academics and other organisations which were/have been involved heavily on the landscape scale collaborations in various capacities. Overall, a total of 36 participants, from the five case study groups, took part in this research study. Fig. 3 below depicts the locations of the case study site, while Supplementary Tables 2-6 provides a profile of each of the case study sites and participant.

Due to the study taking place during the covid pandemic, the Q-sorts were conducted online via the Q-Method Testing and Inquiry Platform (Q-TIP) (shown below in Fig. 4). Given that there were 48 statements, participants were asked to rank these statements from -6 (least agreed) to +6 (most agreed).

Once all 36 participants completed their Q-sort online, the study

⁴ An Estate is defined as a significantly large parcel of land that is generally owned under a single ownership

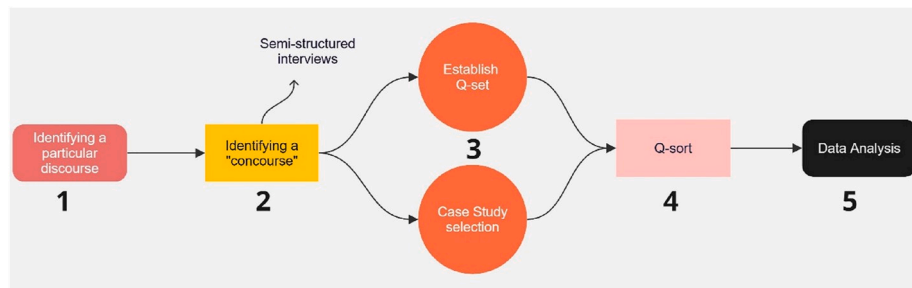


Fig. 2. The five stages of the Q-methodology.

Table 1
Concourse interview participants.

Interviewee	Role	Interviewee	Role
C1	Estate owner	C16	New land manager
C2	New land manager	C17	Main occupation farmer
C3	Farm cluster facilitator	C18	Quantock Hills AONB development officer
C4	Lancashire Wildlife Trust + Farm cluster facilitator	C19	Nature recovery lead Cotswolds AONB
C5	Surrey Wildlife Trust policy and research manager	C20	Main occupation farmer
C6	Estate director	C21	Suffolk Wildlife Trust landscapes manager
C7	Farmer + Farm cluster facilitator	C22	CEO of Westcountry Rivers Trust
C8	Eastern Partnership AONB manager	C23	New land manager
C9	Estate conservation manager	C24	Farm manager for Clinton-Devon Estate
C10	Farm cluster facilitator	C25	Main occupation farmer
C11	Horticulture Campaigns Coordinator Landworkers Alliance	C26	Part of LEAF test and trials
C12	West Country Rivers Trust	C27	Devon Wildlife Trust Director of Nature Recovery
C13	Breckland Farming Wildlife Network co-ordinator	C28	New land manager + farm advisor
C14	Quantock Hills AONB Manager	C29	National Trust lead ranger
C15	New land manager	C30	New land manager

Table 2
Themes and categories for the Q-statements.

Themes	Categories
Role and Contribution of various stakeholders in landscape scale collaboration	<ul style="list-style-type: none"> • Lifestyle/non-farming landholder's role • Conservation organisation's role • Farmer's role • Estate's role • Community organisation's role
Perception towards landscape scale collaboration	<ul style="list-style-type: none"> • Positives of collaboration • Barriers towards collaboration • Policy interventions required to improve collaboration
Perception of success in conservation work and the types of capital generated	<ul style="list-style-type: none"> • Economic capital • Cultural capital • Social capital • How success is perceived

turned to conducting post Q-sort interviews, with 25 participants agreeing to participate further in these interviews. The aim of these interviews was two-fold: The first was to understand why participants

carried out their Q-sort in the manner they did (their interpretation of the statements) and how it affected their overall perspective. The second aim was to obtain any additional items which the participants might have included in their Q-set, or any further comments or insights they would like to provide (Watts and Stenner, 2005). In the case of this research, it was to get a deeper insight into the profile of each participant that was involved in the study.

2.3. Data analysis

The purpose of the data analysis was to group participants with similar perspectives together - highlighting both intra-group similarities and inter-group differences. For the analysis, PQMethod software was used. After the input of data, Centroid analysis and PCA were used to ensure the most appropriate solution (statistically and theoretically) was derived. Ultimately, five factors emerged from the analysis as the most plausible solution. The choice of five factors also satisfied the Eigenvalue test, in which each factor should have an eigenvalue greater than 1.00 are taken to have sufficient "statistical strength and explanatory power". The eigenvalue of the five factors ranged from 2.85 to 4.09. The final rule used to validate that the appropriate number of factors have been chosen was the total variance. Variance explains the "full range of meaning and variability" in the study (Watts and Stenner 2012, pg. 98), with a variance of all factors totalling to around 35–40% considered adequate (Kline, 2014). The chosen five factors added up to 50%. Another important consideration which added further confidence to the selection of five factors proceed is that the number of factors aligned with the number of case study groups in this study. With five case study groups chosen, it stands to reason that there will be five different factors emerging, each with their unique perspective towards collaboration.

Varimax rotation was then used to increase each Q-sort association to one particular factor (Webler et al., 2009). The final analysis produced an output file, in which the Factor Arrays of each statement were analysed (Supplementary Table 7). Statements for each the 5 factor arrays were categorised into 4 different groups (as shown in Table 3 for Factor 1 below). Items given the highest in ranking (in this case a score of +5), items ranked higher in factor X than in any other factor, items ranked lower in factor X than in any other factor, and item given the lowest ranking in this factor (−5).

Discussion of these statement rankings for each group are presented below in the Results section. Tables of these rankings for each group can be found in Supplementary Material.

3. Results

3.1. The five models of collaboration

The five factors - termed the five models of collaboration – that emerged during the analysis are presented below in Table 4. These models are named respectively "Traditional Farmer group", "Social Farmer group", "Hybrid Collaboration group", "Pragmatic Collaborators group" and "Modern Collaborators group". A description of each group

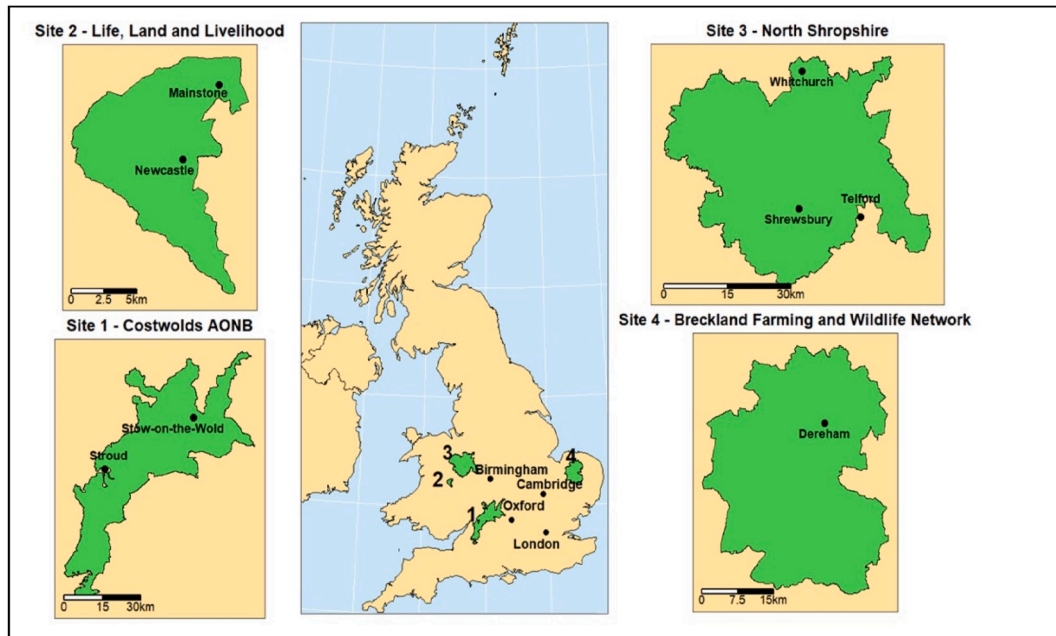


Fig. 3. Case study sites that were selected for this project.

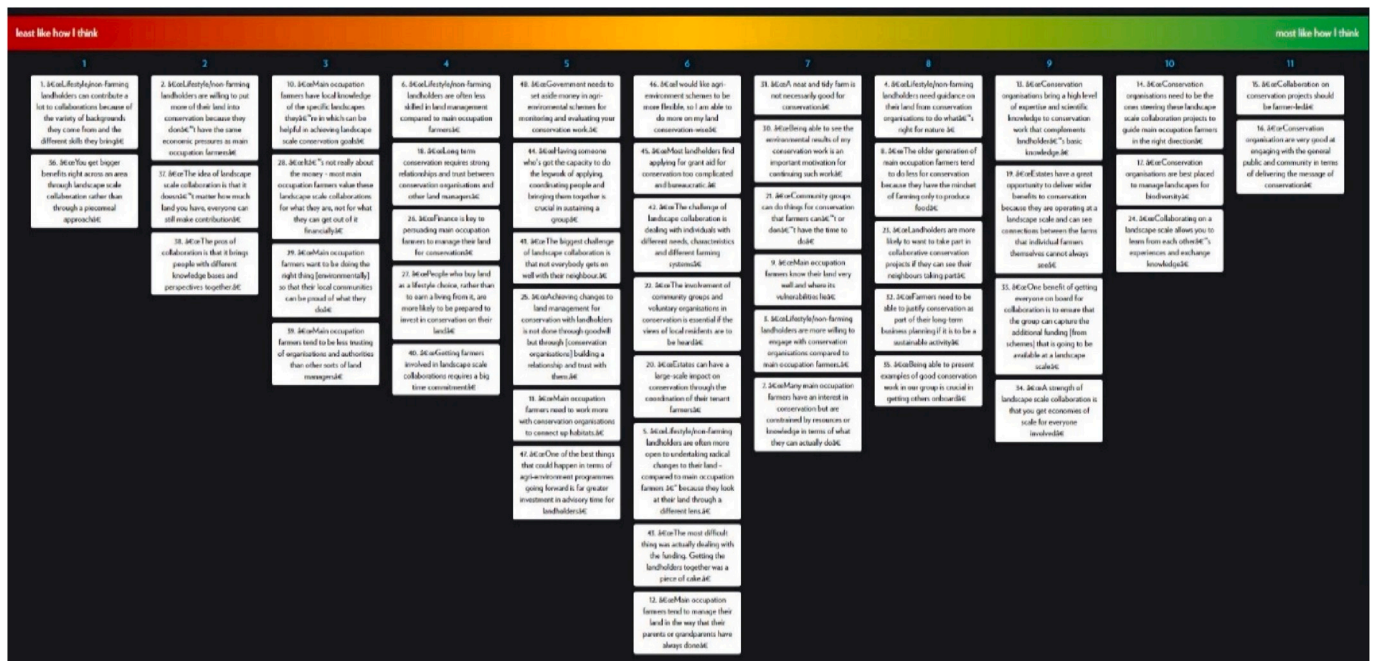


Fig. 4. Screenshot of a sample Q-sort done on Q-TIP platform.

is detailed below.

3.1.1. Traditional farmer group

The Traditional Farmer group consisted mostly of main occupation farmers (participant 15, 19, 24 and 27), along with a nature recovery lead officer for an AONB (participant 31). This group placed high importance on having someone, such as a facilitator or coordinator, who can handle the application of grants, coordination and the bringing together of people in a group (statement 44: +3). This, together with financial incentives (statement 26: +5) and aligning conservation goals with long-term business plans of farmers (statement 32: +4), appear to be the biggest drivers for this group in sustaining collaborative

conservation projects in the long term. On the contrary, participants felt that the complicated and bureaucratic nature of grant applications (statement 45: +1), and the time needed to be invested in such collaborations (statement 40: +1) to be barriers to collaboration. Therefore, there seems to be a need for such collaborations to be able to justify their efforts; with keeping their farm business viable a potential significant motivation (statement 32 + 4) - as would be expected from a group consisting mostly of main occupation farmers. In addition, added flexibility in future schemes to enable more to be done towards conservation (statement 46: +3) seems another significant factor in incentivising this group to enrol. This is in addition to more advisory time (statement 47: +2), which were seen to potentially alleviate limited resources or

Table 3
Statements in categorised into four groups for factor 1. This process was done for each factor.

Items ranked at +5	Ranking
Statement 15, Statement 18	5
Items ranked higher in factor 1 array than in other factor arrays	
Statement 24	4
Statement 30	3
Statement 19, Statement 20	2
Statement 16, Statement 33, Statement 38	1
Statement 25, Statement 34, Statement 39	0
Items ranked lower in factor 1 array than in other factor arrays	
Statement 35	0
Statement 4	-1
Statement 13, Statement 42	-2
Statement 21, Statement 22, Statement 46	-3
Statement 14, Statement 45	-4
Items ranked at -5	
Statement 41, Statement 47	-5

knowledge constraints for this group (statement 7: +4) and could also aid in the building of trust and relationship between organisations, authorities and landholders (statement 39: 0; statement 25: 0). Consensus amongst this group is that the quality of advisory service from conservation and government organisation needs to improve – especially for future schemes. This is attributed to the noted decrease in quality of advice by participants and the observation that advisory services might not always have their (landholders) best interest at heart:

some of the individuals were really quite damning of conservationists in the past is getting the advice right. And one of them said, “you know, sometimes I’ll get the feeling that someone will come visit me that advise me about this thing, it doesn’t do me any good at all, but they can tick their box and claim their funding for doing what they’re doing. And it’s not helping me at all.” And if that’s what’s happening, that’s not helping wildlife either. It’s just a waste of money. Participant 31

In terms of contributions to collaborative conservation by specific landholder types, this group placed less importance on estates to deliver greater impacts for conservation, with the scale they operate on not being seen as significant in contributing to conservation, along with their perceived inability to coordinate tenant farmers (statement 19: 3; statement 20: 3). As for main occupation farmers, while seen as having a deep knowledge of their land (statement 26: +5), their conservation endeavours are constrained by the need to keep their farm business viable (statement 32 + 4). This appears to be one of major reasons for a marked reluctance to make radical changes to the ways in which their land is managed, compared to lifestyle/non-farming landholders, rather than any significantly diverging views on the need for better land management as an objective (statement 5: 2). This corroborates the view that farmers are not solely focused on agriculture production (statement 8: 5), and that they are open to managing their land different than their previous generations (statement 12: 5).

Members of this groups see the role of conservation organisation as catalysts for greater collaboration (statement 47) by building stronger

Table 4
The different models of collaboration and how they are constituted.

Traditional Farmer	Social Farmer	Hybrid Collaboration	Pragmatic Collaborators	Modern Collaborators
<ul style="list-style-type: none"> • 2Main occupation farmers (participants 15 & 19) • Tenant farmer (participant 24) • Part-Time Farmer (participant 27) • AONB nature recovery lead (participant 31) 	<ul style="list-style-type: none"> • 4Main occupation farmers (participants 1, 7, 8 & 30) • Farm Cluster lead (participant 11) 	<ul style="list-style-type: none"> • AONB development officer (Participant 4) • Estate director (Participant 13) • Lifestyle/non-farming land landholder (Participant 16) • Hobby farmer (Participant 23) • Farming business manager (Participant 5) 	<ul style="list-style-type: none"> • DEFRA Policy Advisor (Participant 2) • 2 Academics (Participants 3 and 34) • Hobby farmer (Participant 18) • 2 Main occupation farmers (Participants 26 & 35) 	<ul style="list-style-type: none"> • 3 Main occupation farmers (Participants 12, 17 & 32) • 2 Lifestyle landholders (Participants 14 & 21) • Head of Environment & Sustainability (Participant 20) • Wildlife Trust nature recovery director (Participant 6)

relationships with landholders (statement 25; 39) rather than necessarily as leaders of these collaborations (statement 14: 4; statement 17: 4). Instead, this Traditional Farmer group hold the view that collaborations are better led by farmers themselves (statement 15: +3) – attributing it again to the knowledge and familiarity that farmers have of their local landscape (statement 26). This is not to discount conservation organisation’s involvement conservation efforts on a landscape scale:

I say that the Farmers Clusters model is a very, very good one where you actually put somebody in charge who actually speaks agriculture, understands pressures that are in an area and they can be the interface, your cluster adviser is the interface with the farmers group. It’s crucial that the NGOs, the wildlife trust, the rivers trusts whatever it happens to be, actually feed in the bigger picture, but not always the best people convey it to down to a farmer-level. Participant 24

3.1.2. Social farmer group

Five participants loaded significantly for this group, which includes four main occupation farmers (participant 1, 7, and 30) and one farmer cluster facilitator (participant 11). The Social Farmer group places highest importance on the relationship and trust between landholders and conservation organisations (statement 18: +5), seeing this linkage as being key to increasing landscape connectivity (statement 11: +5). Being able to see the results of their conservation work also plays a huge role in sustaining efforts in the long run (statement 30: +3). Equally, the ability to demonstrate the outputs of conservation work is seen as key in recruiting members for collaboration (statement 35: +3). This is seen to be key in incentivising participation and sustaining a group, more so compared to other aspects such as the presence of group facilitators (statement 5: 2). However, challenges such as recognised difficulties in bringing members of different goals and land management practices together would also need to be overcome (statement 38: 1; statement 42: +1). Overall, the value placed on these social connectivity and networking aspects could also explain the importance placed by members of this group on learning from the experience of members and opportunities to exchange knowledge (statement 24: +4).

Another driver of collaboration for this group is the expected additional funding and economies of scale that collaboration brings with it (statement 33: +1; statement 34: +0), which could explain why participants in this group saw the bigger benefits achieved through collaboration, as opposed to a piecemeal approach (statement 36: +3), and the value of everyone contributing to collaboration regardless of land size (statement 37: +3):

Think equal with any other farmer or landowner, their involvement is to be encouraged and key if they owned land, no matter whether it’s lost land or less land, bring them into the group and get them involved Participant 8

However, one of the barriers for collaboration for the Social Group is that the application process for funding will need to be made more straightforward for landholders (statement 43: 0; statement 45: +1) if collaboration is to be further encouraged in the future. Additionally, effort to foster stronger trust between these parties will be crucial since farmers do not place much trust in organisations and authorities

(statement 39: 5). This has implications as to the influence conservation have over farmers' decisions, and extent, to which they make changes to their land for conservation endeavours (statement 25: 4). Therefore, achieving better connectivity will require trust to be strengthened between these two sets of actors (statement 11: +5). Moreover, conservation organisations are observed by this group to supplement knowledge about the landscape and environment farmers are in (statement 9: 5; statement 10: 0). The same applies for lifestyle/non-farming landholders when it comes to trust placed in conservation organisation (statement 3: 2). This type of landholders will require guidance from conservation organisations as well (statement 4: +2), especially given that farmers and lifestyle/non-farming landholders are seen to have the similar (inadequate) level of skills that are required for land management (statement 9: 5; statement 6: 1). This could be addressed working more with conservation organisations and the desire for them to do so (statement 4; statement 11). In addition, farmers and lifestyle landholders are willing to invest the similar levels of resources into conservation (statement 2: 3; statement 27: 3). Nonetheless, such care must be taken to avoid over-generalisation, with considerations of characteristics of distinct landholders should be taken as well:

It's what the opinion is of the person who owns the land and if they don't have an income coming from that land, then it could be the case that they don't want to do anything because it would cost them money and they're not getting anything from the land. So again, it's very specific. Participant 8

Overall, preference is given by the Social Farmer group for most collaborations to continue to be farmer-led (statement 15: +4), with **Participant 8** noting that *"they're best placed to receive the advice and then give feedback on it and then implement it. And I think it is farmer led. You get much more engagement from farmers as well as less risk in their mind, whether it's perceived or actual risk"*.

3.1.3. Hybrid collaboration group

Five participants loaded significantly for the Hybrid Collaboration group. As the name suggest, Hybrid Collaboration group shares similar traits with the previous two farmer collaboration groups, in that the main aspects of collaboration focussed on is the role and the contribution of farmers (similar to Traditional Farmer group), and the relationship needed to deliver effective collaborations (akin to Social Farmer group).

Much like the Social Farmer group, the benefits of collaboration are recognised by the Hybrid Collaboration group, particularly those derived by exchanging and learning from each other's experiences and knowledge (statement 24: +4). The multitude of perspectives and knowledge bases that members of this group possess (statement 38: +1) was reflected in the wide range of conditions and requirements that members identified in interviews, with the heterogeneity of needs, characteristics or farming systems that members possess not seen as a barrier for collaboration (statement 42: -2). Neither do members of this group believe that getting on with their neighbours is the biggest challenge to such collaborations (statement 41: 5). Additionally, other drivers of collaboration are the perceived added benefits from gaining economies of scale (statement 34: 0) and capturing the additional government funding that collaboration increasingly brings with it (statement 33: +1). This is pertinent given that finance will play a significant factor, especially for main occupation farmers, in the future uptake of conservation measures (statement 26).

The only problem is if that's not going to work financially for them, then it's not going to work, you know, going forward or ... and it is going to be it's going to be difficult to sustain if we don't get the funding mechanisms right through ELMs. Participant 4

I would suggest there's maybe a third of the people will do it anyway, because they have other financial means, you know, they have got other businesses or something ... But the other two-thirds is going to have to be a

financial reward that's sufficient to enable them to perform this act of environmental good practices. Participant 13

Furthermore, applications for these schemes should not act as a barrier given that they do not find the process complicated or bureaucratic (statement 45: 4). Advisory time (statement 47: 5) and flexibility of scheme (statement 46: 3) were also not viewed as important drivers for conservation efforts. The former (statement 47) could be due to past experiences, such as issues related to quality and accessibility that Traditional Farmer group highlighted. This is in addition to main occupation farmers' inadequate trust of these conservation organisations and authorities (statement 39: 0).

In terms of maintaining such collaborations in the long run, being able to see the results of their investments and effort is seen as crucial (statement 30: +3). Findings from interviews with group members suggest that demonstration farms and field visits can be valuable, as can exchanging photographs of their land throughout various periods. These sorts of activities would allow landholders to be able to note and visualise the incremental results of their work, enabling them to better recognise how their efforts have affected changes to their environment. This process has shown to be effective in the past. [Burton \(2012\)](#) had suggested that one possible reason for farmer's appreciation for particular landscape aesthetics is due to farmer's knowledge of the daily practices required for that result. As a result, they form the ability to "interpret and appreciate fully what they are seeing" ([Burton 2012](#), p. 53).

Participants in this group also have a preference for collaboration projects to be led by farmers (statement 15: +5). This seems to be driven by the view that main occupation farmers have a stronger understanding of their land and where vulnerabilities might lie than others (statement 9: +3) and challenges the assumption that conservation organisations should be the default instigators of new projects (statement 14: 4). This could be *"because it's 9 times out of 10 their [farmer's] land. For one, they probably have a better understanding of the land, but also you need to have them on side and unless they're leading it ... they're not going they're more likely to be on side if they're leading it. If they are bossed by the conservation organisations ... then it creates a bad feeling"* **Participant 5**. With that said, more collaboration with conservation organisations is required to achieve better landscape scale connectivity (statement 11: +3). This suggest how the Hybrid Collaboration group see collaborative conservation: conservation organisation do not steer collaborations but work alongside farmer cluster groups to achieve conservation on larger scale – although efforts need to be put into building trust with these landholders (statement 39).

3.1.4. Pragmatic collaborators group

The pragmatic collaborators group in this respect represents a departure from the prior three groups, constituting of a variety of stakeholders which include a policymaker for DEFRA on collaboration and coordination (participant 2), two academics (participant 3 and 34), along with three landholders (participant 18, 26, and 35). It is perhaps the presence of these stakeholders (policy maker and academics) in this group which contributes to the different perspective around collaboration compared to the previous three groups. This is reflected by the extent to which lifestyle/non-farming landholders' contribution to collaborative conservation are recognised more strongly by this group than by any of the others (statement 2, 3, 4 and 6). With that said, it also understands the limitations of their contribution (e.g., statement 6) and the potential solutions to these issues (statement 4 and 44).

Despite the differences, this group also shares certain similarities with the other three groups as well; most notably in the value they place on the role of farmers (statement 9 and 10). In addition to the role of lifestyle/non-farming landholders, the greater benefits brought through a landscape scale approach are well recognised by this group (statement 36: +4); though in order to sustain these collaborations in the long run there is recognition that a gatekeeper may need to be retained in some

way to help facilitate funding applications and coordination of members (statement 44: +3). These are seen as crucial elements for success in any schemes focused on collaboration (Prager et al., 2012) and this has been recognised as important here, especially for main occupation farmers. Furthermore, **Participant 35** added that it is not only the presence of support and coordination, in the form of farm cluster facilitators or advisors, but also for these facilitators to “*be able to set up circumstances in which people can actually talk together and have a discussion ... Having a facilitator who encourages people to talk even if they disagree with each other.*” As such, this appears to be a key driver for collaborative conservation.

In addition to this, the ability to present examples of good conservation work is essential for getting new members onboard (statement 35: +3). This could also explain why monitoring and evaluation are seen as crucial as well, with the government needing to invest more into monitoring for these upcoming schemes (statement 48: +1). The advantage of collaboration means that there are cost-effective methods of monitoring and gathering data as a group (Prager et al., 2012). Moreover, the collective gathering and evaluation of their conservation work would enable collaboration groups to identify and recognise similar indicators of success; thus increasing cultural and symbolic capital of these indicators.

Aside from intrinsic motivations, the inflexibility (statement 46: 1) and effort needed to apply for schemes – compared to the amount of money provided by these schemes – could explain why finance is not a significant influencing factor (statement 28: 0):

farmers who want to do more for conservation, they don't actually need to rely on the environment schemes ... They could do stuff on their land that is very environmentally friendly and never bother with the environmental scheme because they don't want to, follow the restrictions or do the paperwork or the whatever they need to do for ... essentially not getting a lot of money. Or it may just not be worth their time to spend to put the application together with what they're getting. And they may want to do things slightly differently anyway ... **Participant 3**

Therefore, the need for conservation to be justified as part of farmer's long-term business planning (statement 32: 0) seems less important given that intrinsic motivation plays a bigger role in wanting to undertake conservation activities on their land.

In terms of roles and contributions to collaboration, members of this group give less emphasis to conservation organisations as leaders and instigators of new projects (statement 14: 4). During interviews, members argued that conservation groups often fail to fully understand local context and are often not strongly motivated to work with main occupation farmers (statement 11: 3). However, organisations are thought to be needed in a support capacity:

I have a feeling that many farmers regard central organisation and centralised organisations as blinkered and not fully understand local needs and therefore tend to reject central directives. And I think farmers are far more likely to cooperate and produce landscape scale collaboration, where they're able to generate their own ideas and come up with their own plans and then approach the organisations and say, "This is what we want to do. Can you help us?" rather than organisations directing from the centre ... They should offer offer support and advice, and [be] collaborative but not directive. **Participant 18**

This emphasise the idea that collaborations should be farmer led (statement 15: +2), owing to main occupation farmer's deep knowledge about their land (statement 9: +5), and the specific landscapes it is in (statement 10: +5). With that said, consideration must be given to all landholders, especially since collaboration on a landscape scale brings more benefits than an individual approach (statement 36).

Another aspect to be invested in is the trust and relationship between organisation, authorities and landholder (statement 39: 5). This will be central in influencing landholders to make changes to their land for conservation (statement 25: 0) and is currently one of the barriers

between conservation organisations and farmers working together. On the other hand, lifestyle/non-farming landholders are more willing to engage with conservation organisations (statement 3: +2), due to lifestyle/non-farming landholders not possessing the same level of skills and knowledge as farmers (statement 6: +4) and being more open to drawing on their specialist knowledge and skill sets (statement 4: +2). This will be an important aspect since conservation efforts take a while to take effect, and thus there needs to be guidance to ensure that conservation is sustained long-term, as noted by **Participant 18**:

There's a thing about long term planning, a long term conservation that's really important. Because things we do now may not actually bring benefit for another 10 or 20 years, really, and it's a slow ... it's a starting of a change rather than completing a change.

This could be due to different economic circumstances, as lifestyle/non-farming landholders are willing to allocate more of their land for conservation (statement 2: +3). **Participant 2** points out, “*because they've got more money and they're not relying on that land to make money through business - just as long as it does not cost them*”.

3.1.5. The modern collaborators group

The Modern Collaborators are the most diverse of the five groups, consisting of two large scale main occupation farmers (participants 17 and 32), two lifestyle landholders owning around 11–12 acres of land (participants 14 and 21), a new tenant farmer with extensive experience working for conservation trust (participant 12), a Head of Environment and Sustainability (participant 20), and a director of nature recovery for a wildlife trust (participant 6). This group, much like the Pragmatic Collaborators group, reflects an emerging model of collaboration we are likely to see in the future as land occupancy patterns change and diversify; providing a snapshot of how a mix of old and new agents of collaboration are able to work together in the coming years.

While the Modern Collaborators recognise signs of good conservation work (statement 31: +4), members typically do not see demonstration effects as an important driver for continuing such work (statement 30: +1). Hence, this could explain why they do not see it as effective way of getting others onboard collaboration (statement 35: 0; statement 23: 1). Another reason could be due to the lack of interaction amongst landholders, as **Participant 6** suggests “*when you're working at scale, the majority of relationships are between advisor and landowner. Collaborations between landowners can be quite challenging ... because they might not be within their social circles*”. This potentially indicates the increased importance of advisors and facilitators in the future with regards to bringing landholders together for collaboration – especially for groups such as Modern Collaborators which consist of a diverse set of actors. However, the current perspective of this group is that the presence of a facilitator does not appear to be significant in maintaining a group (statement 44: 1). This could be due to these new land managers being newer to collaborations, compared to other more longstanding rural actors, that they have not been afforded the same amount of experience in dealing with the challenges and issues that collaboration brings. This is evidenced in the finding that the difficulties and challenges of facilitation were not given high importance by this group (statement 40: 3; statement 43: 5). Nonetheless, strong relationships and trust-building between landholders and conservation groups are identified as important pre-conditions for future success in conservation (statement 25: 0). Achieving this, members of this group argue, will require advisors to “*understand what the drivers are, what the skill sets are, the levels of knowledge and understanding and everything's bespoke and different, depending on what circumstance you're in*” (**participant 6**).

Viewed from the perspective of this group, lifestyle/non-farming landholders are likely to be more willing conservationists than the main occupation farmers they are beginning to displace in some locations (statement 2: +3). This, along with the different perspectives such people bring to the way land should and can be managed, might explain their greater flexibility in undertaking more radical changes to their land

(statement 5: +5). In essence, the variation in how these conservation practices are adopted is influenced by whether they derive their main source of income from their land – with Groth et al. (2017) observing a difference in how farmers and non-farmers implement and undertake different conservation practices. However, lifestyle/non-farming landholders are also seen to be generally less skilled (statement 6: +4) and have different levels of knowledge when it comes to land use (Mills et al., 2017) than main occupation farmers, suggesting a need for them to seek more guidance from conservation organisations when it comes to conservation endeavours (statement 4: +2). Such guidance in the form of advisors have been useful in the past in achieving success (participant 14) and reiterates the need for trust between landholders and conservation groups in order for conservation efforts to be effective:

I know from my work with landholders ... When the farmers were in the ESA scheme which stopped several years, or are stopping, one of the things [participant 35] they say really, really helps them with is having a local person, an advisor who they can call on at any time, who they knew and could trust, who they have out at the farm to walk with the farmers and show them the problems and the issues. And that was one of the biggest reasons that the ESA was a success around here because there was good, local, easy to get advice farm advice Participant 14

In addition, Participant 17 suggest that there needs to be co-ordination in terms of advice given from different organisations, observing that there sometimes could be a mismatch between the objective of landholder and the organisation:

It's quite difficult for one advisory body to come up with all the answers, but obviously they've all got a role to play in new collaboration, but ... what might suit one adviser may not totally suit another in terms of, although they may still be a very good thing environmentally, everyone's got a different take on what they want to see done.

With that said, the role of conservation organisations in managing landscapes for biodiversity was ranked highest by this group (compared to the other groups) (statement 17: 2), possibly due to the perception that conservation organisations can supplement landholder knowledge by mobilising their own expertise and specialised knowledge in relation to conservation land management (statement 13: +3) – although as mentioned in other groups, more consideration into how these advice from different conservation organisations can be co-ordinated will be crucial. Nonetheless, conservation organisations, rather than farmers, are seen by this group as the stakeholders who should take the lead in collaborations (statement 14: +3; statement 15: 5). This is particularly pertinent for “big NGOs who own a lot of land, who can tie that in with one or two landholders locally” (Participant 12), given the scale of these collaborations. Given this, our findings indicate a consensus within this group that farmers need to collaborate more with conservation organisations in achieving better landscape connectivity (statement 11: +4), and conservation organisations in turn, need to put more effort into engaging with the public with regards to conservation (statement 16: 1).

4. Discussion

4.1. Overall observations and recommendations

Having discussed the distinct perspectives around collaboration that each group holds, it also worth noting the several commonalities that are shared amongst the five groups (Table 5). This provides several key intervention points that policies can use to broadly engage and incentivise landholders into collaboration – supplementing the more targeted points of interventions mentioned in the previous section.

4.1.1. Interaction between landholders and conservation organisations

To varying degrees, the trust and relationship between these two stakeholders are seen as a significant factor in conservation efforts in the

Table 5

– The statements which all five groups had a degree of agreement with (+1 and above). TF- Traditional Farmers, SF- Social Farmer, HC- Hybrid Collaboration, PC - Pragmatic Collaborators, MC – Modern Collaborators.

No.	Statement	TF	SF	HC	PC	MC
18	Long term conservation requires strong relationships and trust between conservation organisations and other land managers	+2	+5	+5	+4	+1
24	Collaborating on a landscape scale allows you to learn from each other's experiences and exchange knowledge	+1	+4	+4	+3	+2
30	Being able to see the environmental results of my conservation work is an important motivation for continuing such work	+1	+3	+3	+2	+1

long run by all five groups (statement 18, Table 5). This is further evident in a previous study with Emtage and Herbohn (2012), who observe that trust between authorities and landholders to be a crucial aspect in influencing the change in land management practices of landholders in Australia. However, several issues highlighted earlier appear to be barriers to building stronger connections between the two parties, with the lack of trust due to different agendas and the decrease in quality and accessibility of advisory services being cited as areas of concern. This decline in advisory support and general hand holding, particularly from government agencies such as Natural England, was widely noted.

A clear message from the research is that more investment in advisory services is needed, both as part of the reskilling of farmers that will be needed but also in order to help applicants more effectively navigate a complex ELMs application and verification process. Equally important is the need for advice to be better tailored to the land management goals of individuals and the various models of collaboration presented above. Both components are needed if farmers and new land managers are going to be able to transition to the post-CAP landscape. This is particularly true in the case of farmers who derive their main source of income from agriculture and for whom ensuring their farm business remains viable through this transition will be a priority (statement 32). Moreover, it can alleviate issues that prior studies have found from the lack of engagement between landholders, such as landholders acting on misinformation, information that is poorly timed (Buman, 2007), or even incorrect knowledge (Redmon et al., 2004). Previous studies have also found that the lack of proper advice, or even the absence of communication between the parties, can lead to land management strategies not being adopted in the right manner (Kam et al., 2020). Conversely, increased interactions between landholders and advisory services can lead to more opportunities for landscape scale conservation (Baumber et al., 2018). This is particularly pertinent given the scope and scale (temporal and spatial) of public goods that are expected to be delivered under ELMs, especially with the Landscape Recovery Scheme, which aims to achieve large scale habitat and species restoration along with improvement of water quality and adaptation to climate change (cite). Thus, this might in some cases require collaborations to adopt a more multifunctional land use management approach to deliver on multiple fronts, which will entail not only increased interactions but interactions with a multitude of different advisory services and agencies.

Furthermore, increased accessibility to advice can also enable landholders to draw on “scientific and practical land management knowledge” (Petzelka et al., 2013). Cortés-Capano et al. (2021) study on the preferences of landholders on private land conservation schemes also found training and technical support to be two significant drivers for participation. Hence, stronger engagement by conservation organisations can lead towards a generation of social capital between the two parties, leading to greater trust and improved land management practices.

Shifting towards a more “payment by results” approach could also

potentially intensify this need for good advice and effective support. With landholders no longer guided by the prescription-based (“payment by action”) schemes of the past, the specialised knowledge and expertise that conservation groups possess (statement 13) - which is recognised by Modern Collaborators and Social Farmer groups, and by previous studies such as Hodge (2001) – will become an important resource that some landholders will be need to draw on as they plan to enter future schemes emphasising collaboration. This applies particularly to lifestyle/non-farming landholders, given that the Social Farmer, Modern and Pragmatic collaborator groups acknowledge the need for these landholders to engage more with conservation organisations (statement 4); due in part that some groups have recognised that lifestyle/non-farming are less skilled than main occupation farmers (statement 6). With that said, more consideration should be paid to ensure advice from various conservation organisations/advisory services are co-ordinated and integrated. This could be attributed to the specialisation different conservation organisations have; and thus, having specific conservation objectives. Given the growing focus on conservation efforts on a landscape scale via collaboration, efforts to ensure objectives and advice around conservation align - amongst all stakeholders involved - would be crucial. Integrated advice would therefore allow landholders to deliver conservation goals on their land, and collectively as a collaborative group, more effectively.

4.1.2. *Creating opportunities for exchanging knowledge and seeing outputs of conservation work*

The two other statements which all groups agree on (to various extents) is that collaboration enables the exchange of knowledge and learning from other members of the group (statement 24), and that being able to see the results of their conservation work acts as an important motivator (statement 30). The latter statement, it has been acknowledged by prior studies such as Burton et al. (2008), that while signs of good farming are well-established and easily recognisable in the farming community, determining the outcomes of conservation efforts requires a different approach.

Interviews with study participants provided insights into ways collaborative agents could enhance their ability to recognise and assess the outcomes of conservation projects. One example provided was encouraging landholders to take fixed point photography of their conservation work - enabling them to document what their conservation work has produced and how it has progressed over time. It also allows for landholders to recognise visual symbols/cues of their conservation efforts and what works best for their land. Additionally, the benefits of farm walks were also noted amongst study participants as well. This again allows landholders to be able to recognise how their conservation efforts is linked to a particular environmental outcome. Moreover, it could also provide opportunities for local communities to establish local rules and indigenous knowledge (Burton et al., 2008) – given that various landscapes have potentially different symbols of what conservation success looks like – and opportunities for landholders to exchange ideas and knowledge, and learn from each other during these walks. The authors further add that such an approach generates further social capital, and fosters a more “co-ordinated approach to agri-environmental schemes”. This will most likely apply not only between landholders but between landholders and conservation groups as well. This will be due to the stated importance of the relationship and trust that needs to be established between these two stakeholders, and that conservation groups will likely contribute to the creation of these indigenous knowledge due to their specialisation and knowledge. Therefore, a more collaborative approach between these stakeholders on the creation of indigenous knowledge, and increased awareness of these indicators, will see the increasing generation of “symbolic capital” of these conservation indicators. This will likely increase as more landholders recognise similar indicators of good conservation work, and the skill and resources needed to achieve it, hence placing more value towards these indicators.

5. Conclusion

With agri-environmental policies in the UK set to undergo significant changes, especially with regards to the scale and ambition of its conservation goals, key questions remain around how policy can effectively incentivise landholder collaboration on a landscape scale. In particular, understanding the preferences of a wide range of landholders towards collaboration, and how such collaborations might function and sustain in the long term, presents challenges to policy. To address these challenges, this paper sought the use of Q-methodology to attain a stronger grasp of the range of perceptions around collaboration in order to understand better how collaboration consisting of a heterogenous mix of stakeholders might operate. Five models of collaboration were established from this study, with the diverse range of groupings emerging from the findings reflecting the increasingly diverse range of actors and stakeholders engaged in contemporary conservation practice in the UK. These models represent a window into how collaboration might evolve over time, with Traditional Farmer and Social Farmer groups representing traditional models of collaborations, while Hybrid, Pragmatic and Modern Collaboration groups offer a glimpse into how future collaboration models could look. As such, these groups provide a snapshot of how landscapes with a growing diversification of landholders might in future might function with different configurations of actors.

In analysing the difference amongst the five groups, it is worth reflecting on the extent to which the groups have been constituted determine, or at least help shape, their attitudes towards collaborative conservation as a national project. While the Traditional and Social farmer groups, with their predominance of main occupation farmers, recognise the benefits of collaboration, its challenges and what is required to for collaborations to operate, they also emphasise the financial and administrative hurdles that would need to be overcome to actually deliver this. In contrast, the Pragmatic and Modern Collaborator groups, consisting of a variety of different stakeholders, focus mainly on the role and contribution of lifestyle/non-farming landholders and conservation organisations as catalysts for larger collaborative initiatives, being more sanguine about the challenges of collaboration per se. This suggest a need for policy to think more directly about how landholders might be clustered or grouped according to their perspective on collaboration and how they can be incentivised accordingly. In addition, the several commonalities in perception amongst the different models also provides policy with ways to broadly engage and incentivise collaboration amongst these different landholders.

CRediT authorship contribution statement

Hermann Kam: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jrurstud.2024.103380>.

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