The practice of falconry and aviculture and the role of wild take

Interviews with practicing falconers and non-falconers as part of Natural England's review of 'wild take' licensing.

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Executive summary

In early 2022, with support from Defra, Natural England (NE) launched a review to inform the development of a specific wild take policy for falconry and aviculture based on the latest evidence, stakeholder insights and expert views. The purpose being to enable NE to streamline its assessment of future licence applications and make decisions that are robust, transparent, and based on the most up-to-date evidence available.

Following on from a public call for evidence launched in September 2022, a sample of individual falconer and non-falconers respondents was identified and approached for interview. A semi-structured qualitative interview design was adopted. Interviews took place via mobile phone, Microsoft Teams and in one case via email and written response due to a hearing impairment. Interviews lasted between 60-90 minutes and were audio recorded and transcribed in full. Template Analysis, a form of thematic analysis which is a technique for thematically organising and analysing qualitative data was used to analyse the interview data.

The purpose of this component of the review of evidence around wild take was to explore attitudes and views of falconers and non-falconers in more detail and depth than the call for evidence allowed, as well as to raise other issues participants perceived pertinent to the review. The analysis presented in this report is not intended to be representative of the entire falconry community and the findings should be triangulated and read in conjunction with the other research evidence collected during the review process rather than taken in isolation.

Key findings

Falconry practice and behaviours

- Most falconer interviewees had formative childhood experiences with birds of prey, leading to their subsequent involvement in and passion for falconry. Falconers discussed how being outside flying birds created a strong connection to nature and how it was the overall immersive experience that they gained from being in nature, rather than any specific component part of falconry, that they valued the most. Non-falconers also discussed their passion for seeing birds of prey in the wild.
- Recreating the natural hunting behaviours that birds of prey would normally engage in when in the wild was seen as a core aspect of falconry practice. The definition of falconry most closely adhered to was using a trained bird of prey to take wild quarry.

Captive breeding, genetics, and bird behaviour

- Most falconer interviewees considered there to be little to no tangible difference in the performance, behaviour or appearance of captive-bred and wild-origin birds when trained for use in falconry.
- Falconers tended to view bird lineage and behavioural traits as more important than bird genetics. Both falconers and non-falconers suggested that there is no such thing as a ‘pure’ British peregrine, with non-falconers suggesting that this is a commercial ‘marketing ploy’. Falconers suggested that birds of British lineage can be readily sourced from current captive stocks.
- Falconer interviewees considered behavioural differences between birds to be a mixture of nature and nurture, and that the falconer’s role is to get the most out of whatever birds they fly. If birds are taken from the wild as fledglings and trained for use in falconry, most falconers considered that there will be little difference in their behaviour compared with their captive-bred counterparts.
- Concerns were raised that historical mismanagement of captive-breeding stocks – notably poor record-keeping and lack of coordinated studbooks – may lead to genetic issues in future if not addressed. The growing focus on the breeding of non-native or hybrid birds could also pose issues in terms of future supply.

Wildlife crime and illegal trade

- Falconers considered that prices play a key role in incentivising illegal wild take and are driven by supply and demand. They suggested that the small scale of the captive breeding industry in previous decades caused a huge increase in prices for the most in-demand species, which inevitably incentivised illegal activity, as did soaring demand from Arab falconers for British-origin raptors. Some falconers consider that prices are now dropping and that less crime is now occurring. Non-falconers still raised considerable concerns and discussed illegal wild take and trade in terms of wider continued persecution of birds of prey and lack of resources to police it.

Views on falconry, wild take and licensing

- Most falconer interviewees had little to no personal interest in obtaining a licence. A small subset expressed a nostalgic desire to partake in the cultural experience of wild take as practiced historically and the associated ‘intangible emotional connection’ forged between falconer, falcon, and the wider environment. However, many were concerned about the reputational damage to falconry that it could cause. Non- falconers said there was no justification for wild take for falconry.
- Captive bred birds were identified as a satisfactory alternative solution by the majority of falconer interviewees as well as by non-falconers.
- Another alternative to experiencing wild take discussed by some falconer and non-falconer interviewees was for falconers to take part in the rehabilitation and subsequent release of injured wild birds.
- A third alternative discussed by both falconers and non-falconers was the use of wild-disabled birds to introduce genetic diversity into the captive-breeding population if required. However, interviewees noted difficulties in doing this under current legislation.

Contents

1. Introduction

Wild birds are protected under the Wildlife and Countryside Act 1981, which also provides exemptions for licences to be issued for a range of purposes provided certain criteria are met. Natural England (NE) is the public body given responsibility for determining applications to take birds of prey from the wild for falconry and avicultural purposes in England, on behalf of the relevant Secretary of State.

Wild take has a long history but ceased in England in the 1980s due to conservation concerns. Since then, captive-bred birds have been used instead. In recent years, there has been renewed interest in wild take from some falconers, leading to licence applications to NE.

All applications are assessed in line with the applicable legislation, case law, and relevant government policies. If the assessment is not robust and a licence is granted, it will be vulnerable to legal challenge and the decision may be overturned, and likewise if a licence is not granted. In assessing applications, some of the key questions under applicable legislation and case law are:

a. **Is the application for a permitted purpose as specified under the Wildlife and Countryside Act 1981?**

b. **Is there no other satisfactory solution?** Note that case law makes it clear that this does not require the alternative solution to be exactly equivalent, and that it may involve a degree of inconvenience or require those concerned to adapt their practices.

c. **Would the licence be on a selective basis, in respect of a small number of birds, and compatible with the conservation of the species.**

In early 2022, with support from Defra, NE launched this review to inform the development of a specific policy based on the latest evidence, stakeholder insights and expert views, and to enable NE to streamline its assessment of future licence applications and make decisions that are robust, transparent, and based on the most up-to-date evidence available.

Following on from a public call for evidence launched in September 2022, a sample of the individual falconers and non-falconers who had completed the call for evidence survey and

indicated in their responses that they were willing to be interviewed as part of a follow up were selected via a stratified purposive design and approached for interview. As well as discussion of wild take, the interviews covered a range of topics linked to the practice of falconry and aviculture and birds of prey more broadly that provide context to the discussion of wild take. The report includes a methodology chapter, an analysis chapter, a conclusions chapter and bibliography and appendices.

2. Methodology

This chapter describes the methodological approach used for the research. It discusses the rationale for the approach by situating it within a framework to allow assessment of its rigour and quality. To enable such assessment, it includes information on the design, sample, process, analysis and ethics relevant to the research.

2.1 Design

The purpose of this component of the information gathering process for the review of evidence around wild take was to be able to explore attitudes and views of falconers and non-falconers in more detail and depth than the call for evidence allowed. To achieve this a semi-structured qualitative interview design was adopted. This design was chosen as it enables flexibility in data gathering (e.g., technology, location) that can help increase participation as well as offering flexibility in subsequent data analysis that enables information to be obtained on issues identified in advance as important to the topic of wild take (deductive analysis) but also allows new issues of relevance to emerge from conversation with those who have interest in and or knowledge of the topic (inductive analysis). Qualitative semi-structured interviews are recognised and a vital tool within social science research that generally take the form of a two-way conversation, with discussion and follow-up questions on each point.

2.2 Quality criteria and assessment of methodology

When using qualitative rather than quantitative research methods it is important to clarify what criteria can be used for judging the quality of qualitative research. This is so that those less familiar with qualitative research can assess the quality of both the outputs and

the processes that led to the generation of the outputs (Guba & Lincoln, 1994). While criteria for judging the quality of quantitative research are more widely known, such as reliability, validity (internal and external) and generalisability, it is widely acknowledged that it is problematic to apply them to qualitative approaches (Lincoln and Guba, 1985). For example, while reliability (whether the result is replicable) and validity (whether the means of measurement are accurate and whether they are actually measuring what they are intended to measure) may be useful in providing checks and balances for quantitative methods, they sit uncomfortably in qualitative research which is concerned with more experiential questions about power and influence, context and understanding (Winter, 2000). Similarly, the formal quantitative criteria of generalizability are generally unhelpful and not applicable for qualitative research (Tracy, 2010). This is because statistical generalizations require random representational samples using data that is isolated from any particular context or situation. In contrast, qualitative research engages in-depth studies that generally produce historically and culturally situated knowledge. Accordingly, qualitative research is not designed to be representative but to elicit a range of in-depth and situated views.

Debates about what quality criteria should be applied to qualitative research are contentious (Seale, 1999) and have generated an extensive range of concepts illustrating the creative complexity of qualitative methodologies (Tracy, 2010). While consensus may not have been reached in the same way that it has been for quantitative research (Golafshani, 2003) the work of Lincoln and Guba (1985) is widely accepted as foundational. They suggest the concepts of dependability (instead of reliability) credibility (instead of validity), transferability (instead of generalisability) and confirmability (as a replacement of positivistic notions of neutrality/objectivity) (Lincoln and Guba 1985, p.314).

What determines the dependability, credibility, transferability, and confirmability of qualitative research has likewise been debated (e.g., Lincoln, 1995). Broadly speaking, the dependability of a research project can be assessed by the provision of auditing procedures and maintaining a ‘decision-trail’ whereby the researcher’s decisions are clear and transparent, meaning an independent researcher can understand what has been done and why and if necessary, carry out the research in the same way with potentially comparable findings. In the current report this decision trail is provided within the design, sample, process and analysis sections of this chapter.

The credibility criteria of quality can be demonstrated through a process of sense checking the collection and analysis of data to enable the identification of different views and the way in which the results presented clearly and accurately presents participants' perspectives to address the purpose of the research (Noble and Smith, 2015). The provision of thick description (detailed examples from the data and associated analytical discussion), and generation of deductive and inductive knowledge is important for credibility (Tracey, 2010). Again, the sample, process, and analysis section of this chapter together with the presentation of data in the analysis chapter demonstrates how the current project meets this credibility criteria.

The transferability criteria of quality can be demonstrated through explicit consideration as to whether findings can be applied to other contexts, settings, or groups. In other words, has sufficient detail of the context of the fieldwork been provided for a reader to be able to decide whether the prevailing environment is similar to other situations with which they are familiar and whether the findings can justifiably be applied to these other settings (Shenton, 2004). Transferability criteria are thus a combination of both the researcher demonstrating the credibility of the research (as noted above) combined with the reader's understanding and interpretation of the research findings and relevance to their knowledge of other settings and contexts. This criterion of quality is thus in the eye of the beholder (reader) to consider and reflect on when reading the interview report.

Finally, the confirmability criteria can be demonstrated through acknowledging that the methods undertaken, and findings generated are intrinsically linked to the researcher's philosophical position, experiences, and perspectives. As Moon et al., (2019) explain, the philosophical position of the researcher frames their theoretical perspective and forms the rationale for the chosen research methods. Therefore, by making explicit why the current research sought to give opportunity for people to expand upon and explore issues raised by the call for evidence survey and how this informed the design of this interview study including the choice to use semi-structured interviews, this project has already provided one means through which to demonstrate the confirmability of this research. The use of template analysis and four researchers to develop it and the analysis presented in this report together with the provision of the template itself as a guide for others helps meet this confirmability criteria.

2.3 Sample

In both quantitative and qualitative studies, researchers must decide the number of participants to select (i.e., sample size) and how to select these sample members (i.e., sampling scheme) (Onwuegbuzie & Collins, 2007). In quantitative studies, power calculations are frequently used to determine in advance which sample size (N) is necessary to demonstrate effects of a certain magnitude from an intervention (Ryan, 2013).

However, as discussed, qualitative research differs ontologically and epistemologically from quantitative research and no similar standards to power calculations for assessment of sample size exist (Malterud, Siersma and Guassora, 2016). There are no agreed rules of thumb for how many respondents should be selected. The objective is to understand the range of views on a particular topic, and to provide deeper insights into social phenomena. Sampling within qualitative research therefore requires different means of assessment for adequacy of size.

While there is broad agreement that determining qualitative sample size a priori is inherently problematic (Sim et al., 2018), there is debate about what the means of assessment for adequacy of sample size should be (Blaikie, 2020). Linking to the credibility and confirmability criteria of quality in qualitative research discussed above, it is important to situate the sampling criteria used in this project in relation to the specific purpose of the project. This supports sampling methods within which sufficiency of sample size is assessed by depth and relevance of data to the questions being addressed, and correspondingly to a focus on a sample that consists of participants who are best situated to provide information about the research topic (O'Reilly & Parker, 2013).

Information power indicates that the more information the sample holds, relevant for the actual study, the lower the number of participants is needed. Malterud, Siersma and Guassora (2016) suggest that the size of a sample with sufficient information power depends on:

- the aim of the study (with the more focused the aim the smaller the sample needed),
- sample specificity (the greater the specificity of experiences, knowledge, or properties among the participants included in the sample the smaller the size needed),

- use of established theory (a study supported by specific theories for planning and analysis requires a smaller sample),
- quality of dialogue (a study with strong and clear communication between researcher and participants requires fewer participants to offer sufficient information power), and
- analysis strategy (a project seeking in-depth analysis of narratives from a few, selected participants would require smaller sample for sufficient information power).

Applying these parameters to this project, the research had clearly specified aims as well as a high level of sample specificity, sampling only from those who had already completed the call for evidence survey and indicated that they would be willing to participate in follow up interviews. Furthermore, the researcher undertaking the semi-structured interviews had extensive experience and expertise in the use of the method, and the interview questions were reviewed by another social science colleague before interviews commenced strengthening the quality of dialogue. Finally, the analytical strategy adopted (discussed in more detail below) was selected for its suitability for enabling in-depth analysis of narratives from a few, selected participants.

The total sample of participants potentially available to be interviewed as indicated by their response to the call for evidence was reviewed by the first author. This resulted in a total sample available for interview of 28 falconers and 19 non falconers. To aid selection, these individuals were then mapped back against their responses to questions in the call for evidence so that a clear understanding of who these individuals were (demographics) and what their views were in relation to key topics in the call for evidence could be identified. This resulted in three subgroups being formed for falconers, those who would be interested in a licence for wild take (n=18), those unsure (n=5) and those who wouldn't be (n=5).

For non-falconers this mapping process resulted in two groups, those that thought it was (n=3) or wasn't (n=16) acceptable to take birds from the wild for the purposes of falconry (those that were unsure n=0). Non falconers were further grouped by those that responded to the question in the call for evidence that they did (n=7) or did not (n=6) oppose the practice of using trained birds of prey to hunt and kill other wild animals or were unsure (n=6).

Individuals that mapped the breadth of these views were then randomly picked and approached via email for interview. However, this approach often did not lead to a reply

despite multiple follow up emails. This meant that the list of interviewees who hadn't previously been randomly selected from with the groups identified were then approached. This process was followed throughout the period that interviews were being conducted and resulted in 9 falconers (three of who were interested in a licence, 2 who were unsure, and 4 who were not interested) being interviewed. For non-falconers it resulted in three interviews (one with someone who thought it unacceptable to take birds from the wild and also opposed the practice of using trained birds for falconry, one who thought it unacceptable to take birds from the wild but was unsure whether they opposed the practice of using trained birds for falconry, and one who thought it unacceptable to take birds from the wild but did not oppose the process of using trained birds for falconry purposes). Using information power as the guiding principle for recruitment and sample size it was deemed that this number provided sufficient information power for the analysis. In the analysis, quotes from falconers are prefixed with the letters FI (falconer interviewee) and non-falconers with the letters NFI (non-falconer interviewee).

2.4 Process

The dependability of qualitative research projects can be assessed by the provision of auditing procedures or a 'decision-trail' in which the researcher's decisions are made clear and transparent. This section will describe the processes involved in the design and conduct of the research.

The interview questions were developed by the first author considering the emergent findings from the call for evidence. These questions were then reviewed and commented on by the other three authors as well as independently reviewed by another social scientist in NE. This resulted in a number of thematically developed open questions (see Appendix 1). One of the authors contacted those identified through the sampling method discussed above via email to invite them to interview. They managed the diary of the lead author and booked in times and dates to conduct the interviews (November 2022 to January 2023).

Interviews were recorded in full (with interviewees permission, see Ethics, 2.6) via Dictaphone. Audio recordings were uploaded to the transcription software site Otter.AI where they were transcribed in full into Word documents. Each audio and Word transcript was read and listened to simultaneously to check for accuracy and any errors identified and amended to create full transcripts. The transcripts were read again and any names or identifying descriptions of people, organisations or places were removed and replaced with

XX. This was done to ensure anonymity and confidentiality. Each transcript was then sent to the relevant interviewee so that they had a written record of the interview. These transcripts formed the basis of the analysis.

2.5 Analysis

In demonstrating the credibility criteria of quality for qualitative research, the choice of technique for analysis and the transparent discussion of the development of the analysis is important to enable readers to see how the lines of inquiry have led to particular conclusions (Nowell et al., 2017). The process of collective sense checking the collection and analysis of data between the four authors, the provision of thick description and concrete detail within the analysis, as well as explication of deductive and inductive knowledge are therefore all important. A method of analysis was required that allowed for both deductive and inductive analysis (Roberts, Dowell, & Nie, 2019). This is so focus could be given to both a priori themes defined in advance of the analysis, and themes that developed during the analysis process itself which were judged relevant to capturing participants' experiences and the context informing those experiences that help shed light on falconry, aviculture and wild take.

Template Analysis, sometime called codebook thematic analysis was chosen as the most appropriate method of analysis (Brooks et al., 2015). It was chosen as it sits somewhere in between positivist orientated approaches to qualitative research and interpretivist ones (Braun and Clarke, 2019) and is therefore well suited to project needs. It also allows for a collaborative approach to qualitative analysis, enabling sense checking between researchers as well as the provision of thick description and both deductive a priori coding, and inductive coding.

Template Analysis is a form of thematic analysis which is a technique for thematically organising and analysing qualitative data. According to Brooks and King (2012) the essence of Template Analysis is that the researcher produces a list of codes (their 'template') representing issues identified in the textual data. The template is organised in a way which represents the relationship between codes and themes, as defined by the researcher while also providing an audit trial for others to refer to when assessing the outputs of the research thereby demonstrating its credibility and dependability. Template Analysis preserves the contextual, subjective nature of the data and lends itself to the deductive and inductive creation of a codebook (see Appendix 4). Template Analysis has

been shown to enable more systematic coding of a dataset than approaches that are more specifically linked to an individual's own interpretive processes and interaction with the data (Brooks et al., 2015).

Like other forms of thematic analysis (e.g., reflexive thematic analysis, Braun and Clarke, 2006), Template Analysis sets out key procedural steps (6 steps in total) for researchers to follow (Brooks et al., 2015). This procedural guide also provides greater clarity to readers about the process through which the analysis was carried adding to the credibility and dependability of the research. The procedural steps, which have been adapted slightly to reflect the specifics of this project, are set out below in figure 1. These steps were shared between the four researchers on the project to follow and the different stages of the analysis involved collaboration between the three researchers.

	The six steps of template analysis
Step 1	Data Familiarisation
Step 2	Carry out preliminary coding of the data
Step 3	Generating emerging themes
Step 4	Define an initial coding template
Step 5	Apply the initial template to further data and modify as necessary
Step 6	Finalise the template and apply it to the full data set. Review

Figure 1. The six steps of template analysis

In line with O'Connor and Joffe (2020) the process first involved the independent coding of a small amount of data (three interviews) by each of the research team before a meeting was arranged and the codes and data discussed to allow informal comparison of codes and initial themes to be explored and developed. This led to the development of an initial codebook, which was reapplied by each author to the initial three interviews as well as an additional two. The codebook and the data captured by it were reviewed and discussed between the research team to further refine the codebook before it was applied by the author to the remaining larger set of data. The code book included a miscellaneous theme

to allow data that didn't appear to fit within the codebook to be captured and raised with the rest of the team. New themes were then created to capture this data, or existing themes were reviewed and refined to incorporate it.

This iterative (re-)development of the codebook and the subsequent coding structure is a vitally important part of Template Analysis (Brook and King, 2012). Within this process, it was also important to recognise when to stop refining the code book and coding data. As with Brooks and King (2015) pragmatic decisions about when the analysis had met the needs of the research project (allowing the purpose of the project to be addressed) and about resource availability determined this. When presenting the results the number of interviewees who had data coded to the particular theme or subtheme is indicated in the theme heading by either FI n= or NFI n=.

2.6 Ethics

The interviews conducted as part of the falconry wild take evidence review adheres to the five key ethical principles identified within the GSR Professional Guidance Ethical Assurance for Social Research in Government document.

1. **Sound research methods and appropriate dissemination and utilisation of the findings.** Ensuring the research meets a clear organisational need, doesn't place any unnecessary burden on respondents, and is based on sound methods that ensure evidence is robust, usable and accessible.
2. **Participation based on valid informed consent** – it is clearly voluntary, and participants have sufficient information to decide whether to take part.
3. **Enabling participation** through method and sample design, with consideration given to likely barriers to participation and reasonable steps taken to address these.
4. **Avoidance of personal and social harm** including avoidance of undue stress.
5. **Non-disclosure of identity and personal information** ensuring confidentiality and data protection and that participants are not identified or identifiable in research outputs.

The research proposal, the interview questions and an information and consent sheet were developed for the research and reviewed by all authors and another NE social

scientist. An ethics checklist was completed and reviewed by NE's ethics committee secretariat (see Appendix 2).

Interviewees were provided with an information and consent sheet in advance of the interviews (see Appendix 3) and asked to read and either return a signed copy or confirm via email that having read about the study and its ethical guidelines they were happy to participate. At the beginning of each interview, participants were taken through the information and consent form and asked to verbally provide consent. They were given the opportunity to ask any clarification questions before the interviews commenced. Only once this consent had been noted did interviews begin.

Interviews were recorded via Dictaphone or Microsoft teams and then transcribed in full using the digital transcription software Otter.AI. The audio recordings, together with the written transcripts were saved onto a dedicated Share Point Online Site that had access restricted to the four members of the research team. The information and consent sheet provided to participants confirmed that all audio recordings and records that identify individuals (their alpha numeric codes) will be deleted within one year or by the end of January 2024.

All interviewees were then assigned an alphanumeric code to help make their identities anonymous e.g., FI1, NF1. Names and identifying details of participants or others were removed and replaced with XX XX in the text.

2.5 Limitations of the method

It is important to reflect on the limitations of the method employed, and any potential implications that this has for conclusions that can be drawn from the evidence. First, although the researchers are not part of the team that will decide on the licensing framework and options developed for wild take, their affiliation with NE and the review of evidence may have influenced respondents' openness with or views shared about wild take.

Second, given that interviewees had also previously responded to the call for evidence, the sample is limited to those who have proactively sought to engage in the review process. Those interviewed are therefore likely to be among those who are most interested in wild take (support for or opposition too). Furthermore, while a random

sampling framework was developed to try to enable interviews with participants with a range of different views on key topics from the call for evidence, an element of pragmatism and purposive sampling was also necessary due to time constraints and lack of response to emails for interviews. A degree of caution must therefore be taken in concluding that all of the views expressed are an accurate representation of the wider falconry (and non-falconry) communities as a whole.

3. Analysis

The analysis in this report is composed of six cross-cutting themes and subthemes that build upon topics addressed in the call for evidence, as well as from analysis of interview data. Together, the analysis provides greater context to discussions around wild take within falconry and aviculture. This includes falconry practices and welfare issues, genetics, and behaviour of captive and wild birds; falconry and conservation; crime and illegal trade; wild take in falconry and alternative satisfactory solutions, and licensing policy and conditions relevant to wild take.

Theme 1: Falconry practices and welfare

This theme encompasses a discussion of various aspects related to the practice and experience of falconry and provides context to the issue of the role of wild take within falconry and aviculture. It incorporates interlinked subthemes including childhood experiences with birds of prey, connections to nature, and personal experiences from practicing falconry. It also covers discussion of a range of specific practices and behaviours that falconers describe as important, including how they define falconry and the capabilities needed to be a good falconer. Furthermore, falconer-bird relationships were examined alongside notions of domestication. Following on from this, divisions among falconers regarding falconry and its future are discussed. Falconer interviewees examined which resources they believe are required to practice falconry – including access to land and quarry, and proper husbandry. Welfare was additionally addressed both in terms of the wellbeing of the bird and the facilities needed to foster a safe environment. The issue of bird welfare was also something raised as a concern by non-falconers interviewed. Closely related to this, veterinary care and avian flu are discussed by falconers – the latter potentially acting as a barrier for rehabilitative efforts.

The analysis identified that most falconers interviewed had formulative childhood experiences with birds of prey which led to lifelong passion for, and involvement in falconry. Falconers discussed how being outside flying birds created a strong connection to nature; the overall immersive experience gained from being in nature was the most valued part of falconry. Non falconers also discussed their love of birds and how being able to see them in the wild was important to them.

The analysis showed that the core falconry practice that those falconers interviewed wanted to achieve was the recreation of natural hunting behaviours using trained raptors. Most of the falconers agreed that the definition of falconry that they adhered to was the taking of wild quarry, in its natural environment, with a trained bird of prey.

Analysis also illustrated that the falconers interviewed believed that it takes a significant commitment to develop the skill and knowledge needed to be a good falconer. It also identified that they had some concern that not everyone involved in falconry is as committed or has the same level of capability, which is essential for developing the unique relationship between a falconer and their bird. The analysis identifies how perceptions of this relationship mean that the falconers interviewed explicitly differentiated it from other human-animal relationships. They suggested that falconry birds are not domesticated animals or pets and should not be treated as such.

The analysis also revealed the resource requirements that the falconers interviewed believe are needed to be able to practice falconry. This includes the importance of an appropriate habitat with suitable quarry, as well as having the time and money required to practice falconry. They also identified that finding and gaining access to this suitable land and habitat is becoming increasingly difficult. Access to such resources, and well as maintaining meticulous standards of husbandry, was also identified as essential to maintaining the physiological health and mental wellbeing of the bird. Wellbeing concerns associated with falconry were also discussed by non-falconers with a divide between those that had concerns and those that did not. Veterinary care was also identified as crucial for raptor welfare by the falconers interviewed with some criticising the government’s handling of avian influenza as a critical barrier to such efforts.

1.1: Childhood experiences (FI n=6)

This subtheme focusses on falconer discussions about their formative childhood experiences with birds of prey and nature, and how it led to a lifelong involvement in falconry. For example, one interviewee described how,

> FI6 - I was about 14, I was looking for the first time for information and looking at careers and what you want to do when you when you're older. And I always knew I wanted to do something with animals and to do something to conservation or something outdoors. I hadn't really didn't really know anything about falconry at all up until that point and didn't really have any interest in it. But I was actually looking for work experience and anything to do with animals. And I came across my colleague, who at the time had a couple of hawks in the back garden and he offered to teach me how to fly hawks. And from the moment that I first flew a hawk I thought was the most amazing thing ever in life. And I just knew that that would be in my life somewhere for a very long time.

1.2 Connection to nature (FI n=4)

Building from these childhood experiences, this subtheme examines the relationship that falconers believe falconry creates with the natural world. Interviewees described how being in the natural environment when flying birds helps them to connect with the natural world. For example, an interviewee described how,

> FI5 - I enjoy that interaction with nature, it’s my communication with nature, I become a part of nature and plugged into it. Yeah, there's a communing with nature experience which is generally on my own with a pointing dog and a falcon and set off into a remote place, and the anticipation and excitement of what's about to unfold is the most and that’s not worn out after 40 odd years. It’s still a buzz.

Another interviewee recalled a specific memory when they had been out flying their bird and got to experience something they felt was unique and that they otherwise would not have. They explained that,

> FI8 - I think one of my most cherished memories, not the only one, but one. One of them was sitting with my back up against the base of a tree on quite a nice winter morning. She had taken a rabbit. And it was I think the first one of the season, so I

was letting her feed on the kill, and a wild goshawk came in and was probably less than 10 feet away, looking to see if it could steal her kill. That's the only time that I know that I've seen a wild goshawk. But that was a really, really special moment. So yeah, it's times like those.

1.3 Personal experiences (FI n=6, NFI n=2)

Following on from discussions about falconry and connections with nature, this subtheme captures interviewees personal experiences of falconry across their life. It appears that it is the overall experience falconry creates, rather than any specific component of it, that is most important to falconers. For example, a falconer explained how,

> FI1 - I suppose I'm typical of one of the older falconers that have been through a whole series of emotions where they're starting as a child, catching my first rabbit, I thought it was wonderful, it wasn't about the quality of the flight, it was almost a rite of passage as a hunting falconer. Whereas when you get older, actually it's about the quality of the flight. Actually, catching something is far from being the most important thing. And there's some people that have no desire to catch anything at all, they just get their joy from seeing a bird that can fly away and disappear if it chooses to choosing to come back to them.

Spending time in nature and with a bird that could fly away if it wanted to, was something that appeared to create an overall sense of enjoyment, excitement and anticipation for falconers which was important to their overall experience of falconry. As another falconer described,

> FI8 - it's more kind of spending time in the countryside and watching the bird doing what she does, and hoping that we can come home together, which so far, we've succeeded in doing.

For non-falconer interviewees personal experiences of seeing birds of prey in the wild was also discussed. From their perspective it was seeing these birds in the wild that was important. Birds of prey, particularly peregrines, were seen as charismatic species and their population return after their decline was something to be celebrated. For example,

> NFI1 - I suppose those of us who saw the population you know gone and saw the return. God when you watch them hunt, these are fast flying long distance moving, iconic species.

1.4 Falconry definitions and behaviours (FI n=4)

This subtheme explores the types of behaviours that falconers describe as integral to the practice of falconry, including definitions of falconry and what it involves. While connection to nature and the enjoyment gained from spending time outside with their bird were identified as important, those interviewed explained that fundamentally it was about trying to recreate behaviours that birds would normally engage in when in the wild. Describing this mix of experience, practice, and behaviour, an interviewee explained that,

> FI1 - I've heard people describe it as being a privileged bird watcher, you know, one of the most dramatic things, you know, to be able to recreate, on a daily basis, something that you'd rarely see in the wild. You know, they see beauty and I think for most falconers like me, it's trying to recreate a natural event, so that you get the pleasure of seeing it. Being part of the partnership.

This recreation of natural hunting behaviour was, for the falconers interviewed, the essential component underpinning definitions of falconry. For example, falconry was defined by one interviewee in the following way,

> FI2 - For me, falconry is training and flying a raptor and hunting with it. That is what falconry really has been for hundreds and hundreds of years.

Building on this definition, another interviewee described hunting with a bird as central to the practice of falconry and its definition. They explained that,

> FI7 - Falconry must be, in my view, the pursuit of wild quarry in a wild state. So that means taking birds hunting and that means pursuing wild quarry and giving them the opportunity to express their natural expressions to be themselves to do what they're meant to do.

Finally, another falconer elaborated on these issues by referring to UNESCO to provide a definition of falconry,

> FI6 - I think the key thing to say is that falconry by definition is taking wild quarry, in its natural environment with a true bird of prey. That's the essence of our cultural heritage.

1.5 Falconer capabilities (FI n=5)

This subtheme captures falconers' reflections on the skill and knowledge needed to be a good falconer, and the commitment required to be able to practice falconry in terms of the definition provided above. It also captures a view that not everyone involved in falconry is as committed or has the same level of capability. A falconer explained how they felt many falconers don't fly and hunt with the birds properly, and how this lack of capability also extends to a lack of care for the birds. For example,

> FI3 - The number of people in falconry only 10% only seriously know how to hunt properly, particularly falcons. Slightly more with things like goshawks and sparrowhawks and Harris hawks which aren't a native species they are working on it. But the majority of people don't fly their birds properly, and a good 50% don't know how to look after them either.

Another falconer explained how being able to develop and demonstrate capability is vital for both bird and falconer and, that this takes time. Reflecting on their own learning experience they explained,

> FI2 – When I started falconry, I was told what I was allowed to fly. And I wasn't allowed access to anything else until I proven that I was capable of doing that properly. And I can remember at the time, I was quite young to come to falconry, I was only sort of 15 when I got involved in falconry. I remember chafing at it, you know, desperately wanting to move on and fly, what I consider to be more exciting birds. But that grounding has stood me in good stead for the rest of my life.

The time commitment required to develop capability and competency in falconry was seen as essential. Interviewees explained how falconry wasn't a hobby but rather an all-encompassing way of life that required dedication to acquire capability. For example, a falconer explained how,

> FI9 - It's kind of all-consuming really, to do it properly. And you can't actually, some people these days do dabble in it and just sort of nip in and out but you're never any good at it unless you throw your whole life at it really. It's way more than a hobby. I mean, it's always been considered that because obviously, the more time you put into it, the better results you get, but it's not like a gun that you can stick in a

cupboard for six months and forget all about, these are animals so even and even when you're not doing demonstrations, it takes time every single day.

1.6 Falconer bird relationships (FI n=4)

This subtheme captures views on the connection between a falconer and their bird, how it is developed, and what it means to them. An interviewee described this relationship as a commitment that affected the choice of bird they flew with and how, once this choice was made, the relationship with and responsibility for the bird became paramount to their involvement in falconry. For example, they explained how,

> FI8 - when I got into falconry in a practical sense, I made a kind of commitment to myself, that I would not use a starter bird. I think that practice is deplorable. People who want to start on something easy. And then after a year or two, move it on and move on to what they really want to do. And I will never do that. So, my commitment to my bird is for life. And while she can still actively hunt, that's what we'll do and when she can't I'll give up. So, I have no personal interest in flying any other species, or any other individual bird.

Another falconer discussed this relationship in terms of mutual trust established over time, based on the dynamic that the bird could fly off if it wanted to. It was the bird's ability to return to the wild if desired but choosing to come back that made the relationship special. The commitment and capability required to develop that relationship differentiated it from other human-animal relationships. The interviewee described how,

> FI2 - Falconry really is, it's really unusual, because you effectively are working with a bird that doesn't have the same social cues that we are used to. So, dogs, cats, cows, horses are all mammals, and they all respond to certain key behaviours. Birds of prey don't have that. You cannot chastise a bird of prey you cannot get upset or whatever with it. It's very much, you have to adapt and try and put yourself in that bird's position and work with that bird. And as such, you know, there are great highs the first time you fly a bird free, then it comes back to you is one of the most life affirming things you'll ever do. And we do that every time we go out. Every time we go out and the birds flown free. The bird is entirely capable of flying off into the distance and not coming back. And for me, that's the sort of the purity of falconry, is that, you know, it's not a one-off thing. It's every single time that bird is choosing to come back. And that's, you know, that for me is what it is, the appeal.

1.7 Domestication (FI n=4)

This subtheme examines falconer views on whether birds used in falconry should be treated as any other domestic animal or pet, what this might say about the practice of falconry and the implications for the birds themselves. Falconers interviewed sought to explicitly differentiate birds of prey used in falconry from other domesticated animals. The level of care required, the time needed to practice, the resources required to facilitate practice, and the commitment necessary to support the bird across its lifespan were all topics used to explain the difference between falconry birds and other domesticated animal. As a falconer explained,

> FI2 - You know, they're not a pet. They're not affectionate. They may be occasionally but as a rule, they're not. Falconry is not, it's not pet keeping. We don't, you know, birds don't live in the house with us. They don't socialise with us. And, you know, they require specialist environments, you know, free lofts, where they're safe and sheltered and looked after. And they require a ridiculous amount of time. It would probably be easier to have a child than to keep a bird of prey.

Another falconer explained how they would be concerned if people thought of raptors in the same way, as they would soon realise, they were unable to look after the bird. For example,

> FI6 - keeping a bird of prey is a little bit more complicated than keeping a dog or a cat: you need a complex level of understanding. There are huge costs involved with things like veterinary care as well, because it's not a mainstream area of animal keeping. A lot of people buy birds for relatively cheap money, realise they can't care for it. And then the length of the lifespan of these animals as well, cat or dog, at most, maybe 15 or 16 years. For a large owl, or for an eagle we're talking 70, maybe even 80 years. That's not the case at every single bird. Don't get me wrong. But there are serious implications for having a bird like that not knowing what you're doing. And it's something we see more and more all the time.

1.8 Resources, land and husbandry (FI n=7)

Building on the previous subtheme, this section provides further context to understand why birds used in falconry and the practices undertaken with them are seen as unique. It does so by identifying the resource requirements needed by both the bird and falconer to be

able to practice falconry in the definitional sense described earlier. It describes the importance of matching the bird flown with an appropriate accessible habitat, with suitable quarry, proper husbandry, as well as the resources required to practice falconry. It also identifies increasing difficulties to find and gain access to this suitable land and habitat. The importance of matching the bird someone wants to fly with suitable accessible habitat was noted by an interviewee, who explained that while gaining access to land can be difficult, it is a perquisite to getting a bird for falconry,

> FI5 - Falconry, in its form is flying a trained bird at a natural quarry. And in order to do that, to fulfil that, you need sufficient area of ground so they're not going to the same place every day. And so that the basic component is suitable land that they have legal access to and there's a sustainable harvest of quarry. In other words, an essential component probably, in its simplest form, the person who is practicing should have sufficient space and land to be able to go and exercise their falcon and in this ever-shrinking world, that's far more complicated.

The loss of public land and potential issues this causes falconers was cited by another interviewee, who noted that falconers must pay for access to suitable land. They explained that,

> FI7 - you know, you have to pay. In Britain public lands are all gone. I mean, forget Wales, the public lands you can't breathe on public lands. But private lands, you have to pay I have to pay for my sport. A couple of [thousand] pounds to go grouse hawking for a fortnight. I pay my game keepers on several permissions a couple [hundred] pounds a year. So, you know if you can't afford it, you're in the wrong sport.

Interviewees identified husbandry as an essential element of good falconry practice, requiring a diligent regimen to maintain housing, hygiene, and nutrition to keep a falcon in good health and hunting condition. An interviewee explained,

> FI2: Okay, now, it's one of those things, in all things, some people blunder into these things without really thinking about it. But good falconers weigh up very carefully what birds they will or won't fly, because, realistically, you can't do justice to more than a couple of birds at a time. So you have to think very carefully about not only what species but where it comes from, you know, what kind of husbandry it requires, does it require some heating, you know, dietary, any kind of specialist diet,

there is a myriad of things that influence whether you a) pick what species you would like to fly, or b) take the next step after that and say, well actually I'm going to.

Another interviewee argued that improper care should be reported and publicly reprimanded to ensure high falconry standards are being met and maintained in the falconry community,

> FI7: I don't take prisoners for people carrying out bad rules and bad standards. I believe that the equipment should be exactly what it should be, and not anything that 'will do'. In the days of the days of 'that'll do' when I was a child, these days, you can get anything you need. Overnight, virtually. And there's loads of good advice out there so there's no excuse for bad equipment, and bad housing and bad setups. And I'm one of the biggest critics of that and I tend to take action. I don't do it just heavily handed, I will offer advice and guidance. I will offer that willingly to people who are willing to listen. But I don't take prisoners and I've seen lots of bad public rattling, if you like, with badly placed birds in badly placed areas. And I'll take an umbrage with it, and I've had places closed down by reporting people, and I've got things dealt with.

1.9 Raptor welfare (FI n=4)

This subtheme relates to interviewee perceptions of the impact of avian influenza on the welfare of raptors, the rehabilitation efforts by falconers, as well as the increased pressure on veterinary care. Interviewees discuss the impact avian influenza has had on increasing mortality rates of raptors, restricting the ability to treat falcons, as well as the strategies by authorities to prevent and control the threat. For example,

> FI2: Now, DEFRA and APHA, who are dealing with avian influenza in the UK, are frankly doing a piss poor job of it. You know, we as sort of falconers want the vaccination that Germans have already developed, that's been proved to be very nearly 100% reliable in raptors. And we're campaigning for that because it removes the risk to our birds. In good faith, if we take a wild bird, then that risk should also be removed, as far as I'm concerned. And, you know, if it's going to cost me 150 quid or whatever the vaccination is going to cost. Well, that's the cost you're gonna have to bear. You can't be responsible if you don't.

Interviewees also discussed how avian influenza has severely limited their ability to offer rehabilitative care. For example,

> FI9: The only thing that worries me about injured birds, especially now is obviously the bird flu risk, bringing birds back. I can't even run a bird of prey hospital anymore. Not since bird flu came along. It's just too much risk for my birds. And many folks feel the same about that these days.

Theme 2: Genetics

The genetics theme covers issues relevant to falconer views about the importance, impact, or role of genetics in falconry and aviculture, in particular, issues associated with captive breeding of birds of prey and genetics. It contains several interrelated subthemes, including the genetic diversity in captive bred stock, comparisons between the genetics of captive and wild birds of prey, and how important specific genetics are to falconers. Analysis identifies that some of the falconers interviewed believe that there are some small size differences between wild and captive birds and that captive bred birds are becoming progressively smaller. However, other interviewees suggest no such difference. Concerns were raised that breeding mismanagement may lead to genetic issues in the future if not addressed. This issue was explored further in the breeder oversight and regulation subtheme, where lack of regulation and poor record keeping, especially among small breeders, was viewed as a potential problem for the future of falconry and aviculture. A further subtheme on the Britishness of bird genetics was identified, with falconers interviewed more interested in the lineage and traits of birds rather than their genetic origin. It was suggested that there is no such thing a genetically pure British peregrine and that if desired, sourcing a bird of British lineage is relatively easy. This linked to the final subtheme - hybridisation – which discussed its occurrence in the wild as well as in captive breeding, how this links to the issue of British birds, as well as concerns about escaped birds mating with wild ones.

2.1. Genetics-breeding (FI n=8)

The subtheme genetics-breeding specifically focusses on issues surrounding genetic diversity, and any differences between wild and captive birds of prey. Analysis of the interviews identified that within captive bred birds, the dominant bird species which was considered to have a limited gene pool was the merlin. For example,

> FI1 - for various reasons merlins has suffered a little bit in the last 30 years or so, the captive population is so limited genetically, that is actually affected the Merlin's that are produced a lot smaller than the wild merlins.

The issue of captive bred birds becoming smaller than their wild counterparts was further discussed by another interviewee, who described how the process of captive breeding in the long term may be creating a difference. They explained how,

> FI2 -Captive breeding seems to produce a very peculiar result, which is birds get smaller. Over multiple generations, now our captive bred peregrines are quite noticeably smaller than UK averages. Admittedly, you have to disregard lots of them because they've been the genetics been polluted by lanner or saker. But what we consider to be pure blood peregrines in the UK, generation after generation are getting smaller and smaller. And the same goes for goshawks. The same goes for sparrowhawks. Even kestrels, that are captivity bred are on average, you know, now close to being a third smaller than their wild counterparts... they're still healthy. But they are noticeably getting smaller.

However, another falconer suggested that this is not the case when you compare historical records about the size of birds flown for falconry in the past to those available from captive breeding in the present. They explained,

> FI7 - So, when you were talking about degeneration of DNA, that doesn't exist in peregrines. Yeah. So, I would say that the average 'British' peregrine is a two-pound female, a 20 ounce or a one-pound male. Now, if you go back and read historically, back in the 1850s, or you read the old Hawking Club books, that's what they were flying then. So, they haven't changed much. They haven't changed dramatically.

However, although only two of the interviews mentioned possible size difference between captive and wild birds as indicative of genetic difference, concerns were raised about the potential of captive breeding to create genetic differences in the future. It was noted that captive breeding is still in its relative infancy and so there are still some unknowns around genetics. For example,

> FI4 - Captive breeding hasn't been possible for all that long. I don't see it as a problem today and I would not be looking at pedigrees, but it could be tomorrow.

> How many generations/outcrosses does it take to ruin a good line of dogs? One outcross/generation?

2.2 – Breeder oversight and regulation (FI n=6)

Captive breeding mismanagement and the potential impacts on genetics of captive bred populations was a topic elaborated on in the subtheme breeder oversight, regulation and record keeping. One issue raised by interviewees was how a lack of regulation and formal licensing process within aviculture has resulted in differing standards around captive breeding in terms of care for record keeping and genetic diversity, and that using birds from the wild will not address this. As a falconer explained,

> FI6 - If inbreeding occurs in a captive population, then somewhere along the line, there was mismanagement from the breeder's point of view, that's where that problem lies. The problem with captive breeding has likely arisen because there is no regulation in place and that's not going to change because we can bring a few wild hawks into the system.

It was suggested that this lack of regulation, combined with financial incentives associated with breeding birds of prey, has led to an overall lack of planning within the sector with regard to which birds are bred with others, and how this may impact genetics in the future. For example,

> FI2 - it's generations and generations of people breeding any which way they possibly can because there's a big financial reward if they're successful. You know, it's one of those things if you have historically had a couple of peregrines that were from, you know, descended from UK wild stock from the original wild take, but they don't breed and you can swap one of them for, you know, a French bred one or a Spanish bred one and have successful clutches, then, unfortunately, lots of people will do that. It's one of the things we don't really well, we haven't as falconers, up until fairly recently taken on the whole sort of concept of having, you know, a history of our birds. The better breeders in the UK now are doing so.

Interviewees identified the specific issue of record keeping, or lack thereof among breeders as a key issue in terms of the genetic health and diversity of captive bred birds. As explained,

> FI6 - it's quite common, actually, for a lot of breeders to not have kept records at all. A good breeder, if you say, ‘can I see your records for this breeding line or for this breeding pair?’ for These two individuals’, then they will have absolutely no problems. They’d usually be quite proud and quite happy to show you but that it is a question that should be asked when you make an inquiry to a breeder. And it shouldn't be a consideration for a breeder to put two birds together who don't have that history.

Some interviewees discussed the current deficiencies in regulation and standards of record-keeping in UK falconry practice. For example,

> FI3 - I’ve had a look at one of the applications the [X] sent to me…and one of the things they’re saying is well we’re going to keep superb records. Well, why the hell haven’t they kept superb records up to now? Because they haven’t, and yet there are at least two good software systems…that could have been used and could have given them an idea of what was going on.

This is expanded upon by another falconer, who spoke of the issue regarding a lack of regulation within centres for birds of prey. The interviewee recommended that the falconry industry should be focussed on improving current systems rather than concerning itself with wild take. For example,

> FI1 - we have to go through quite a rigorous inspection process, we have a lot of paperwork managing applications, of course, you would never expect a private owner of bird of prey going through anything along those lines, but there should be something in place to regulate the way birds are kept and the problem is growing exponentially here in this country. And we're vastly behind other developed countries who already have these systems in place, and one of the only countries in Europe that has no licensing scheme in place and America is vastly more advanced as well. So, considering we've had falconry in this country for 3000 years, arguably. And we have probably the highest population density of falconers, outside of Arabia, anywhere in the world. The fact that we're this far behind is embarrassing, really. That's where resources should be going, not supporting wild take.

Another falconer was concerned about additional problems that licensing wild take might bring, for instance husbandry, in the current unregulated falconry system. They discussed how,

FI6 - A husbandry requirement to improve standard of care will be in my eyes incredibly important to stop the wrong. Because it's not something I like to think about, even with the most experienced and knowledgeable falconers taking on a wild taken hawk but the thought of someone who isn't and someone could have had the way the falconry is so unregulated, you could have had 30 years of experience but be in simple terms an absolute disaster for keeping birds of prey. Somebody like that taking a wild taken hawk will have serious problems.

2. 3 – 'British' birds (FI n=6, NFI n=1)

This subtheme relates to debates surrounding the existence of a distinct genetic British peregrine and, if so, whether they are desirable for falconers and can be sourced from current captive stock. Analysis identified that falconers thought it unlikely that there is a genetically distinct British peregrine as raptors migrate, relocate, and can breed with other varieties. An interviewee argued that the idea of a British peregrine may be more of a commercial construct rather than an issue of significance to falconers. For example,

FI1 -. God knows how they can tell but this this notion of pure British peregrine is just ridiculous as the notion of a pure British person. It's frankly bizarre that people still, particularly when I was breeding peregrines, and I've got people phone up just saying, you know, I was talking to so and so and they said you might be able to help me. I'm looking for a pure British peregrine. And as soon as they said I said you won't be having one of mine. I don't know whether there's a commercial aspect to it. Whether it's slightly deluded. You know, this dream of purity.

The idea of the Britishness of a bird being a commercial concept was something a non-falconer also discussed, describing it as a marketing ploy rather than an ecological concern. They discussed,

NFI1 - British culture, you know, there's a lot of stuff which markets you know, British suits, British whiskey. And, you know, I think a British Peregrine suddenly becomes something different. Something potentially desirable in the world market. People who like British, British kind of high-end products…Some of the very world's wealthy definitely will be looking at some of the British brands as being elite. Once we start identifying something as a British peregrine, we pretend it is a special thing. We create an idea that can be marketed.

Falconer interviewees did suggest that there are genetic differences between peregrines when you reach a certain geographic scale, which are linked to migration routes and interaction in the wild. For example,

> FI3 - I think there probably is a difference between the British peregrine and the Australian peregrine, or the Indian peregrine, but I don't think this is a uniquely specific population of peregrines in England or Scotland because they move around so much.

In terms of whether flying a British bird was important to them, interviewees largely agreed that it wasn't the genetic distinctiveness of a bird that was attractive for them, but rather the bird's lineage and associated behavioural traits that increase desirability. For example,

> FI5 - Certain locations seem to produce good quality, or certain traits that we find attractive in falcon dynamics, more aggressive. We know that from our own captive breeding that there are lines which people want and there are others which are just not survivors.

Regarding the ability to source captive birds that had specific genes, lineages or traits, the interviewees agreed that if you were knowledgeable and known within falconry circles in England, it was not difficult to source a bird that met your requirements. For example, and interviewee explained how,

> FI9 - you we can already source English genes if you want them, in fact we can source Cornish genes or Welsh genes or Scottish genes because the breeders tend to have these particular strains. I can source English genes if I want to.

2.4 Natural vs Captive Hybridisation (FI n=7)

Building on the previous theme regarding genetically distinct British peregrines, this subtheme explores hybridisation in wild and captive birds and whether there are distinct genetic differences between wild and captive populations because of this. The first issue identified is that hybridisation within falconry is not a recent phenomenon; hybridised birds have historically been used in falconry and may have bred with wild birds creating further hybridity in the wild. For example, an interviewee explained how,

> FI1 - there's an awful lot from the sort of 15th century onwards talking about hybridisation in the wild peregrines and lanners where everybody kind of accepted

> that peregrines, on occasions hybridized in the wild so those genes whether it's North African barbaries or even peregrines breeding with lanners in the 15th century, we had lanners breeding in this country. So yeah, it's kind of almost inconceivable that it didn't happen on occasions.

Furthermore, interviewees discussed how the trend of favouring of certain breeds or lineages of birds for falconry means that birds were moved and relocated within Great Britain. As a result, when birds were subsequently released back to the wild, this may have created a natural level of hybridisation. For example, it was described how,

> FI2 – Historically, there was a quite a large sort of recruitment of like Scottish and Welsh peregrines that would be brought to London and flown in Salisbury and places like that there were traditional sort of heartland falconry areas, because those Welsh and Scottish birds were larger, and that seemed to be an advantage. That's why peregrine genetics in the UK are a bit weird anyway. For hundreds of years, it's been a bit of a stirring pot.

Despite an acknowledgement of hybridisation occurring naturally in the wild, interviewees did flag a potential concern regarding the impact that the importation and breeding of non-native birds for use in falconry could have on native birds if those non-natives escaped. The non-native birds could mate with wild birds, creating new hybrids and differences between wild and captive populations. For example,

> FI6 - You can kind of say related to that there are hundreds of falconers in the UK flying American or European subspecies of peregrine, for example. If lost, these individuals could and would reproduce with British peregrine. So, in that sense the wild population could be diluted as well. And that will happen naturally in the wild as well in those areas where the subspecies crossover whilst there are distinct subspecies, natural hybridisation does happen in the wild. I mean, I'm not saying it happens all the time but in instances where there is crossover, it will happen. And especially more so now because peregrine population is growing.

However, another interviewee suggested that any differences between wild and captive birds are small because falconers want captive birds to behave the way that wild birds would, so that the sport of falconry is authentic. Therefore, while captive hybridisation may occur it won't significantly change or alter birds used in falconry and therefore reduces any risk associated with lost birds even further. For example,

> FI3 - With falcons that have been bred for hunting, we definitely haven't tried to change them. We want them to do exactly what the wild ones do except for slightly more under control. So, no I don't think we have changed them or altered them in the slightest.

2.5 Characteristics/behaviours (wild and captive) (FI n=9)

This subtheme relates to whether interviewees believe there are any behavioural differences between captive and wild birds of prey when used for falconry and, if so, what the cause of those differences might be, and the perceived impact it may have on the experience and practice of falconry. Several issues were identified: the stage of life at which birds could be taken from the wild, differences in the experience of training wild and captive birds, and finally, the role of nature versus nurture in a falcon's behaviour.

The issue regarding the stage of life a bird could be taken from the wild for use in falconry was highlighted in the sample. Interviewees discussed how the honed hunting and survivalist skills of mature wild birds would be more developed than their captive-bred counterparts. However, reference was made to the licence regulations in England which stipulate that you can only take an eyass - an unfledged nestling hawk taken from the nest – rather than a passage or haggard bird. Overall, it was argued that when you compare the flight abilities of nesting wild or captive birds, there is little discernable difference. One interviewee discussed how a wild falcon which has gained hunting experience in the wild, would be ahead of their captive-bred counterparts. As explained,

> FI5 - If you were to catch a falcon that had left the nest, been flying about with its parents for six weeks and learnt to fly up at six to eight weeks old and bring it into captivity. That would be streets ahead of a captive bred bird. Not because of its genetics, but because of the airtime that its out getting in the wild. If the question was would a six or eight week fledged youngster be better than a captive bred bird? That's not what we're talking about in this debate. But that is the only instance that a wild bird would be better than the captive bred one by the benefit of the experience it had gained.

Another interviewee built on this point suggesting that if taken at the same age there are no discernable differences between a captive or wild eyass in terms of flying and hunting capabilities. They noted that,

> FI3 **-** I don’t know what it is with these people who say oh well a wild one is better than a captive bred one, now they’re going to take them from the wild before they can fly, therefore what is the benefit of being in the wild. The female peregrine isn’t going to sit there and say ‘well hang on children when you learn to fly this is how you nobble a grouse.

Another falconer developed this idea further and explained that since it is possible to take a more mature bird from captive stock compared to those from the wild, captive birds can learn more from their parents than their wild counterparts - who would need to be taken at a younger age so they couldn’t fly away. They explained how,

> FI1 - In practical terms, a wild taken falcon or a passage hawk has obviously learned its trade, it's learned how to take quarry, it's developed flying and footing skills that an eyass might take seasons to develop. But in falconry terms, there is wild taken eyass and the captive bred eyass. The only difference is with the wild take one you don't have the opportunity to take it after it could fly. Because obviously it would just fly off. So, you have to take it earlier than a captive bred eyass or at least a captive bred eyass you can choose to take seven weeks, eight weeks, nine weeks 10 weeks, depending on what characteristics you like and their personality. Taking one at seven weeks is a different personality to taking one at 10 weeks. But taking a wild one, obviously you've got to take it more like five weeks or thereabout before it's in a position to just fly off from and leave you.

Despite a consensus that there was little behavioural difference between an eyass from the wild or captivity, the experiential difference of taking and training an older wild bird compared to an equivalent captive-bred one was described by an interviewee,

> FI8 - When you take, in my case, a 16-week-old bird, yeah. And you train it to come back to you, and then you take it out and try to find something for it to hunt. That is a different experience. And I think there is some, I want to say value, there is certainly a difference in the experience of training a successful wild bird to training a captive-reared bird. And I would, I think, you know, maybe 10 years ago, that the experience of training a captive wild bird, so essentially an adult that has been successful in the wild would have been that would have been of interest to me.

Overall, while the sample agreed that the age at which a bird is taken is potentially an important behavioural differentiator between wild and captive birds, being born in the wild

was no guarantee that the bird would be a better hunter. For those interviewed just as important a factor was the individual falconers' training knowledge, skills, and experience for developing a bird's hunting behaviour. As an interviewee explained,

> FI6 - it is just as possible to have an extremely strong flying, capable falcon that's captive bred than a wild falcon and just the same as you could have a captive bred falcon which has a set of genetics or behaviour characteristics, which means they don't actually perform as brilliantly as you might like, or they don't have the best temperament that you might like, exact same thing can happen with a wild falcon as well. So that roulette still exists, whether you're talking about the captive bird or a wild one. It is about experience. And it is about skills in the falconer. And I think it's a very easy argument to say, well, a captive hawk will never be as good as a wild one. Maybe they don't have the effort and the skill into making that statement. But there are many aspects involved. But it is down to experience. And that experience does not have to just be gained from afar and living independently in the wild, you can generate that experience for them in the field as well.

This debate surrounding innate versus learned hunting capabilities was summed up by another interviewee, who explained that it can in fact be a combination,

> FI7 - let me just stress there is absolutely no difference between a peregrine that's taken from the wild and a peregrine that was reared in captivity by captive bred parents. Genetically, they may well be, there may well be some DNA cell that's different. But it makes absolutely zero difference on the performance and abilities of that bird. I've flown a wild female peregrine, who was an astounding bird. Funnily enough, though, I flew three of her siblings as well. And they were crap. They were crap in comparison. So, you know, there's always this argument amongst falconers about nature or nurture. And, in my view, it's a bit of both.

Theme 3: Conservation

The conservation theme encompasses falconer views on conservation of birds of prey and the role falconry has historically played in this as well as possibilities for the future. Subthemes incorporate the role that falconry and aviculture have played in public education and awareness raising about raptors which was also discussed by non-falconers. Discussion of both falconers and non-falconers also focused on wild population

levels and the ability to sustain a wild take harvest. This theme also considers what some of the falconers interviewed saw possible broader conservation and environmental benefits related to falconry, including land management for falconry and the rerelease of raptors after being flown for falconry. Finally, it also covers potentially negative environmental factors, such as the impact of escaped non-native falconry birds into the wild in the UK.

The analysis reveals a widespread belief among falconers that falconry has historically had a positive impact in the conservation of birds of prey, through both direct action and improved awareness and education. Several interviewees had first-hand experience working directly with conservation organisations successfully. Others discussed the significant impact public displays and education centres have had in increasing public accessibility to and awareness of raptor conservation and positively changing attitudes and behaviours towards falconry. However this impact was disputed by non-falconers. There is consensus among the falconers interviewed that wild populations of at least some species have reached a suitable level to sustain a harvest for wild take, however again non falconers were concerned about regional variations and ongoing persecution. Interviewees discussed how certain raptor species - particularly peregrines - were now so commonplace that impact of wild take on population numbers would be inconsequential. It was also argued that, due to naturally high mortality rates of young in the wild, wild take could even bolster bird of prey populations if rerelease was a condition placed on any licences granted.

3.1 Organisational relationships, and rehabilitation (FI n=5)

This subtheme discusses the relationships between conservation organisations, falconers, and falconry organisations both historically and going forwards. The Peregrine Fund in the United States was cited by interviewees as an example of falconers and conservation organisations successfully working together in restoring birds of prey in the wild. As they explain,

> FI1 - The stage may come, hopefully not, but when you look back at the DDT crisis, for example, and look what the Peregrine Fund did and in the States, friends of mine and then late friends of mine, they were founding members or founding fathers of the Peregrine Fund, and the work that they did in reintroducing falcons

> that effectively had been wiped out through pesticides.....Falconers are probably the best qualified group of people to help in those kinds of circumstances.

Another falconer discussed how the skills and resources falconry clubs possess can be harnessed for conservation of bird species beyond those typically used in falconry. They explained,

> FI2 - the club that I'm a member of, many years ago had a breeding release project for barn owls. Because in our local area the barn owl populations crashed. Now, that was incredibly successful, and they released, you know, certainly a couple of hundred barns owls at selected chosen sites and the populations are still there.

3.2 Awareness/education (FI n=5, NFI n=2)

This subtheme captures views on the role falconry has played in aiding bird of prey conservation through raising awareness and education. This is primarily achieved through bird of prey education centres and public falconry demonstrations. Analysis revealed all interviewees who discussed this topic believed that falconry was a positive influence in this regard. For example,

> FI2 - in my experience coming across members of the general public, regardless of issues with sort of concerning hunting, and politics and all the rest of it, people are still awestruck by birds of prey. Now, if, if the birds of prey they are seeing falconers use happened to be native species, that reflects not only well on falconers, but it reflects well on those wild birds. And people appreciate them up in the sky more than they used to, because they've seen one up close.

It was also argued that increased public access to and understanding of birds of prey through falconry displays and centres, has led to positive behavioural change in how the public interact with wild birds of prey. For example,

> FI7 - when I was a child, like I said, everybody went out and collected eggs and robbed nests. Kids don't do that anymore. They identify nests or they jump on their webcam and watch a peregrine breeding its young and it's enough, and that's great. And that's, I know, a lot of that is because of those educational centres and things like that.

The positive impact that conservation has had, such as increasing access to and understanding of birds of prey, was elaborated on by another falconer, who argued that a change in attitudes towards raptors extends to people who have previously persecuted them,

> FI2 - that's something that has made a huge difference in the time that I've been involved in birds of prey, is, you know, once upon a time when I first got the birds of prey, you know, gamekeeper shot birds of prey, end of story. Every one's a pheasant killer, you know, now, of all the keepers in my area are quite proud of having goshawks or quite proud of having buzzards nesting on their land. And they, you know, they realise that they don't really have an impact. But it's, it's a sort of source of pride that they can manage to keep their sheep running without any problems, even though there's goshawks there. So, I mean, that's something that's changed almost 180 degrees. And that's a lot of it is down to PR work. And the fact that birds of prey are now more accessible to more people.

Non falconers interviewed were more sceptical about the conservation and education benefits of falconry. There was a suggestion that these issues were financially motivated and did little to assist conservation or education. For example, when discussing bird of prey centres an interviewee explained,

> NFI2 - They should be closed, I really mean that. They're out there pretending it's for education. I'm sorry, I've seen them in X shopping centre, with you know, what are those big eagles, seagulls, owls, all this kind of thing in broad daylight. They go around to schools advertise themselves as educational, I'm sorry, we have the internet now. We have huge televisions, apparently, you know, we don't actually need these, they are there for making money.

3.3 Wild population levels (FI n=9, NFI n=2)

This subtheme captures views surrounding the changing numbers of raptors in the wild. Most of the falconer sample expressed the belief that wild population numbers for many birds of prey species (particularly peregrines, buzzards and red kites) have increased dramatically from their historic lows. For example,

> FI8 - While you were talking there, just one thing popped into my mind you talk about changes since the 1980s. As I spoke earlier about common buzzards. And

> the population of common buzzards just exploded. It is not unusual, I live in a small 'X' village, but it's not unusual to hear a buzzard call, look up and see five of them in the sky at once. So, any concerns about impact of let's say specifically wild take of buzzard from the wild population is just ludicrous. They are so, so numerous. If you ever go sort of from Oxford to London, the numbers of red kites in the sky is just staggering…There are species that are doing unbelievably well, at the moment.

It was also argued by multiple falconers that wild populations for many species have reached a point where a licenced wild take harvest would not have a detrimental impact. Another falconer asserted that the numbers likely to be involved in wild take, when compared to natural mortality rates, would be inconsequential. For example,

> FI2 - I was around at the time when it stopped. And the agreement was that, you know, we would support the removal, on the grounds that if birds of prey populations recovered in the future, it would come back now, you know, bird of prey populations are booming. You know, current concerns aside, you know, we don't really have an impact, we're talking about a few hundreds, a couple of 1000 licences a year probably, we're not talking about 10s of 1000s of licences. Most birds of prey have roughly a 90% mortality in their first year. So, you know, even if we had 10s of 1000s of people taking birds of prey, we still wouldn't be dramatically impacting, well, we wouldn't have any real impact on the wild population.

However, one falconer suggested that not all bird of prey populations have reached a sustainable level, with many declining, some of the reasons for which are not yet known. They discussed how,

> FI7 - the sparrowhawk population is in a slow decline from a high of about 10 years ago. And they've yet to find out what's causing that. I personally think it's the expansion of the buzzards, it was predated on quite severely. But there are other issues to that. But as I say, the sparrowhawk is in a steady to slow decline compared to where it was. Merlins, they're not in a good position at all. Goshawks, they've got a foothold but they're not in numbers where they're popping out of the woods.

Non falconers also discussed wild population levels. They had more concern about regional variation, and the impact wild take might have on this. For example,

> NFI3 - There’s no consideration of whether that population in that part of the country is growing or is under stress and is reducing. There's no consideration of conservation factors. It’s just an activity that involves birds being taken and passed on.

3.4 Environmental benefits (FI n=5)

This subtheme captures views on how falconry practices can be a source of environmental gain. Some falconers expressed the belief that not only would wild take have no detrimental impact on population levels, but rather, it could bolster numbers for species that were not recovering naturally. It was argued that because juvenile raptors suffer high rates of mortality, by taking hawks at this stage of life, survival rates could increase and numbers in the wild bolstered if wild take was accompanied by subsequent re-release. As explained,

> FI4 - If the wild population is under threat, it might help if there is a limited wild take with the stipulation that the birds are released into the wild at the end of the hunting season when, hopefully, the birds have outgrown the period of high mortality and are now reasonably skilled in hunting. At the very least, they won’t be worse off.

Another point raised by one interviewee was about how falconers could work with landowners to create a habitat for falconry - resulting in positive environmental outcomes. They explain how more environmentally beneficial land management could be mutually beneficial for falconers,

> FI5 - some people will get together in small groups, four or five, and they may pay rent for some farmland or something and they might enhance that land. And I think that would be to encourage different small group of people get together and the interface with the landowner or farmer, and then can benefit the environment by planting, you know, hedgerows and margins and things like that, which enhance the wildlife to create a sustainable harvestable stock.

3.5 Escaped falconry birds (FI n=4)

This subtheme discussed the environmental impact of falconry birds escaping into the wild, which is influenced by the widespread use of non-native species. Harris hawks were cited as the most common non-native species used in British falconry. However, the

impact escaped falconry birds have on the environment was a cause of division among the sample. Some falconers believed there was a significant risk of non-native species either establishing a wild population in the UK or breeding with native UK species. For example,

> FI2 - We breed and use now a lot of non-indigenous species, you know, I'm holding my hand and I'm doing the same thing. I'm flying Harris, which is a non-indigenous species. But obviously, you know, that lends as you know, causes issues if we lose birds, or they, you know, we're effectively breaking the law and introducing a non-indigenous species. Now, you know, I have some contacts who work in genetics and all the rest of it, and, you know, have looked at wild bird of prey genetics, and they are concerned is the understatement of the century.

However, others interviewed argued that there was little evidence of escaped non-natives having a significant environmental impact. As they explain,

> FI6 - I mean there's a big thing about hybrids escaping and breeding with wild birds. I have this argument all the time when they're going "oh it's terrible, all these Harris hawks escaping they're breeding all over the place", they're not. If Harris hawks were so good at breeding in the wild, we'd be finding Harris hawk nests everywhere. We don't, we find less than five in the last 40 years. They're all known as well; I know where they are. The Plymouth ones were well known, and they've gone now. They're so few and far between. And any sort of hybrid breed. Even hybrid breeding fades out after one generation by the very genetics of it, that it's passed. So, I again, I don't see that as an issue. And a wild peregrine breeding with a peregrine that's happened to come across from Scandinavia. Who's going to stop that?

Despite disagreements on the level of impact non-native species are having, there was a consensus among the sample that using more native bird of prey species in falconry was desirable. It was suggested that it would not only remove any detrimental impact of escapees, but also serve to bolster the existing wild population if they did escape. For example,

> FI8 - I think using what is here and understanding more about what is here is a preferable option. It also avoids the criticism of the impact of lost birds on indigenous populations… it would just avoid any concerns in that direction if we were flying native species. Like the peregrines for example, if somebody loses a

> peregrine, provided the bird survives, then it just enhances the wild population rather than detracting from it.

Another interviewee argued that escaped falconry birds boosting wild populations has already occurred. Regarding the UK's native goshawk population, they discussed that,

> FI2 - indirectly most of the goshawk population in the UK probably comes from losses from falconry. There's very little evidence for much in the way of migration in from Europe, but there's a lot of knowledge within falconry of birds that have escaped and have successfully bred in the wild over the years.

Theme 4: Crime/Illegal Trade

The crime/illegal trade theme analyses falconer and non-falconer opinions on the types and levels of criminal activity associated with falconry. This section includes several connected subthemes ranging from: how the legal market of falconry birds affects incentives to illegally take birds from the wild, to falconer perceptions of the scale of criminality in falconry, and to what extent the falconry community is able to self-police and report criminal behaviour.

The dynamics of market supply versus demand was perceived as the biggest influence on the price of falconry birds, which has a significant impact on incentivising illegal wild take. It was discussed that the small-scale of the captive breeding industry in previous decades caused a huge increase in price for the most in-demand species, notably peregrines. Falconers argued that this inevitably incentivised illegal wild take for a small percentage of falconers. It was suggested that this was exacerbated by an increased demand from Arab falconers, who were willing to pay vast sums for raptors. Despite prices dropping, due partly from Arab investments in captive breeding, there remained a belief that the public still perceive a value in illegally taken birds.

Another subtheme on falconer perceptions of crime suggests a disparity between falconer perceptions of the role falconry plays in the illegal wild take of birds of prey, and what they perceived the public think about this role. Concerns were also raised that links between falconry and illegal wild take were being deliberately overstated by those opposed to falconry. Non falconers held a different view raising concerns about ongoing raptor persecution the pressures caused by which would be further exacerbated by wild take.

While they did not link falconers to persecution, they did make links to illegal trade. This linked to the final subtheme: reporting/self-policing, which discussed the ability of the falconry community to self-police and report criminal activity. Falconers mostly believed they are capable of self-policing, thanks to the role of online forums in exposing any falconer who falls short of what is deemed acceptable behaviour.

4.1 Monetary value (FI n=6, NFI n=2)

This subtheme focusses on the fluctuating market price of raptors for falconry, and how it factors as an incentive to illegally take birds of prey from the wild. An interviewee argued that during the early years of breeding programmes, the limited supply of legal falconry birds caused prices to rise, thereby incentivising people to illegally take them from the wild for monetary gain. For example,

> FI2 - initially, whilst you know, breeding projects and stuff where people were learning how to breed these species, the price of birds of prey was astronomical. Now, that, unfortunately, led to people believing that wild birds of prey had the same value. And I don't know how much background you've seen. But certainly, in the early 1990s, we had a whole string of people stealing birds of prey from the wild and all sorts of things, because they had this misguided idea that, you know, a wild bird had the same value as a captive bred bird.

As the breeding industry scaled-up to meet demand, the increased supply of birds to the limited market of falconers caused their value to decrease significantly, as the following example explains,

> FI3 - When we first started breeding Harris hawks, they were £1800 each and now you can buy a male for £100. Peregrines the price was very high to start with, then they dropped really quite low you could get a female peregrine for less than £800.

However, the legacy of high prices from previous decades has, according to some interviewees, created a misconception to those outside of falconry as to the current value of falcons,

> FI7 - There is a misconception in the public that peregrines are worth 10s of 1000s of pounds. And it really is a misconception.

It was discussed amongst interviewees that the prices of falconry birds on the market have now dropped so low that there is no logical incentive to illegally take them from the wild. For example,

> FI1 – a perfectly legal peregrines even this year, it's as little as 250 pounds. Less, I believe. Why anybody that's got access to something legal for under 200, 300 pounds would think there was any merit in using that much fuel to go and find something illegally?

This view was different to that offered by non-falconer interviewees, who suggested that monetary gain played a role in illegal take and trade of birds of prey within falconry. For example,

> NFI1 - Obviously there's still some falconry interest in stealing them. Let's not pretend that's not going on because there's money in it. You know, once you get one of those birds to somebody, you know, they're worth some cash.

Another non-falconer suggested the prices of birds bred in captivity might be beyond many people interested in having a bird of prey which meant that illegally taken birds could be laundered to supply that market. They explained how,

> NFI3 - the prices associated with purchasing, say, a goshawk from a breeder, or even a peregrine or whatever, is probably beyond the means of a lot of, shall we say young lads. And they're passionate and, you know, drawn towards it and all the rest of it. And I'm not saying that the taking of birds of prey is exclusive to that cohort. I'm not saying that at all. Because I, I think probably that market, if you like has been identified and its people older than them that do the procurement and then sell things on.

Beyond the dynamics of market supply and demand, the requirements imposed on the captive breeding industry combined with increased self-policing amongst falconers was argued by one interviewee to have made illegally taken birds worth even less than captive bred birds. For example,

> FI2 - if they're not close rung, they're worth nothing…These days, to be honest, they have no value. Nobody in falconry would touch a bird that doesn't have a closed ring on it.

However, the same falconer argued that wild birds from certain areas or lineages, may still be valued at a high price when sold to the Arab market. It was suggested that the perceived superiority of certain ‘wild lineages’ could mean that licensing wild take to allow the falconry market access to these lines could help remove the incentive to illegally take them from the wild. They explained,

> FI2 - you can argue that oh, well, you know, if I had, you know, a wild Pembroke peregrine, which is a very famous area traditionally for peregrines, and, you know, if I managed to get one and I bred it, or, you know, I could sell it to the Saudis as a Pembroke peregrine, and they're very aware of the history of falconry in the UK, and, you know, it would be worth more money. But if it's wild taken, and everybody can get a Pembroke or have access to somebody who's bred from a wild taken Pembroke, there's just no reason for anybody to take a wild bird, because, you know, if it was me, I'd double or triple all penalties and bring back wild take.

4.2 Arab market (FI n=6)

The subtheme builds on of the previously discussed dynamics of crime and monetary value by focusing on the influence of the Arab market on falconry in the UK in terms of its demand for falconry birds and the sums involved (either perceived or in reality). Interviewees discussed how falconers in the Arabian Peninsula have invested vast sums into setting up captive breeding programmes, reducing the demand for birds from the UK. One interviewee described their first-hand experience,

> FI1 - The Arabs have no interest; they’ve pumped millions upon millions of pounds into breeding projects of their own. Many, many millions of pounds and I think they've discovered that they're pretty much at capacity now. They’re much the same as British falconers. And I’ve been to breeding establishments in Morocco and things that they’ve set up, Spain and various places. And, I mean, it’s almost industrial, kind of for a traditional little falconer it’s almost distasteful. I mean, it’s a hugely valuable commercial kind of entity.

This was supported by another falconer who highlighted how reputational risk and the lack of traceable lineage serves as a disincentive to source birds from the UK for Arab markets. They explained,

> FI7 - why would an Arab even want to buy a peregrine from a dodgy source? You may buy one unwittingly, and I'll explain that in a moment, but any reputable Arab with the money and the connections to be able to get a peregrine from the wild in the UK would not risk his reputation to get a bird that he can source from his own hack pens when he's got 200 peregrines that are bred specifically for him, by him, with a lineage that he can trace. It's just illogical.

However, according to one interviewee, the huge growth of the breeding programmes in Arabian falconry should be a cause for concern. They explained,

> FI3 - I have spoken to people who have been out to the middle east selling birds, is the majority of them don't last a year…. the demand is huge, and if you look at the number that are imported every year to the middle east you think why do they want more? And the answer is that it's a constantly consuming market.

4.3 Criminal acts (FI n=8, NFI n=3)

The subtheme of criminal acts focuses on instances of criminality regarding birds of prey in falconry, with particular emphasis on the illegal taking of birds or eggs from the wild as well as illegal persecution that non-falconers conflate within their general discussions about falconry and criminal acts. Some of those interviewed could cite known instances of illegal wild take by fellow falconers. For example,

> FI3 – I would say 50% of the people have been over the past taking birds illegally or taking eggs illegally have definitely been falconers… I mean, some of the people in the time that I've been doing this job which is 1967 who have been caught doing illegal trade are definitely falconers, but not all of them are.

The taking of eggs from the wild as well as continued persecution of birds of prey were linked together by non-falconers in a general discussion of falconry and links to crime. For example, a non-falconer suggested that while the illegal taking of eggs might have decreased other forms of illegal persecution have not,

> NFI3 - Taking birds of prey from the wild has always gone on. I can think of quite a number of illegal activities, particularly egg collecting, and perhaps to some extent, the removal of young by would-be falconers. I think that latter activity has perhaps reduced to some extent compared to what it used to be in this sort of 1980s. The persecution side? I don't believe has altered at all.

Another non falconer discussed general illegality which they believe has historically been linked to falconry. They explained,

> NFI1 – I'm not against falconry, but I do know how much illegality there was. And I think people don't have perspective necessarily.

However, other falconer interviewees argued that while illegal wild take may happen, it was not generally being perpetrated by falconers themselves,

> FI6 - I'm sure illegal wild take does still happen in some areas. But from a falconry perspective, I can't imagine there being almost any falconers that would take a bird of prey from the wild because not only is it illegal, it's highly morally unacceptable because it's illegal and because there's no example of anyone doing it.

Another interviewee believed that due to the number of people involved in falconry, it is inevitable that a small number of were engaged in illicit activity. But they emphasised that they were not representative of falconers. Furthermore, the self-policing nature of the falconry community was highlighted as a means to combat such activity. They explain,

> FI7 - That is that is the thing that falconers and breeders point out to people is that yes, there will always be a criminal element. And the thing that I like about it is that we should call them what they are, which is criminals. They’re not falconers. They're just criminals dealing in commodities, whether they be drugs, birds, dogs, cats, horses, they would still be doing the same thing. Yeah. from the falconry world perspective, you know, they're pariahs. And, you know, once that knowledge becomes known, then that should be treated as such.

Regarding the potential impact a future wild take licensing programme could have on illegal wild take, mixed views were offered. One interviewee believed it could have a positive impact. As they explained,

> FI4 - If a limited number of licences were issued for a wild take it might reduce the pressure on those who want a wild take to break the law.

This view was contested by another falconer who argued that licensing wild take could, either intentionally or unintentionally, lead to an increase in the illegal taking of wild birds. They suggested that this could be caused by the practise of flying wild taken birds becoming normalised and perceived as a mark of being a good falconer. For example,

> FI6 - either through ignorance or illegal intent, who knows, if wild takers and falconers who are respected are seen to be flying wild taken birds, people will start to view it as acceptable. So, it will happen and illegal taking of wild raptors will increase, because it will start to be seen as something that is good and something that good falconers do (fly wild birds).

The difficulties any licensing regime may have in tackling the illegal taking of birds for falconry was also discussed. It was suggested that the licensing system could be abused by people with malicious intentions to acquire birds of prey. As one falconer explained,

> FI7 - there's also the element that if licences were granted, there will be people who absolutely hate peregrines who will apply for a licence to go get a peregrine.

4.4 Reporting/self-policing (FI n=4)

This subtheme includes a discussion of the ways in which members of the falconry community react to those who engage in illegal activity. The sample showed conflicting views on this subject. One interviewee discussed the inability to self-police within the falconry community,

> FI1 - We've become, in the last certainly the last 20 years or so, we've become a large community with no ability to self-police at all.

Other falconers, however, were more positive about the role the falconry community has played in regulating and policing its own members. For example,

> FI2 – Falconry is not like a sort of secret handshake club. I think anybody nowadays that broke regarding not just laws about wild taking birds, but welfare standards or anything would be reported.

The role of online falconry forums was highlighted by interviewees as being particularly important in the self-reporting and regulation within falconry. One interviewee highlights a culture of publicly denouncing any wrongdoings alongside reporting illegal activity to the appropriate authorities. For example,

> FI9 - I run a big falconry page, I think we've got about 26,000 members from all over the world, but the admin team are really hot on everything, even down to taking game on a Sunday, you know, somebody, dares to stick a picture up there they get

hammered by the community, who want to do what's right, and want to be seen to do what's right. You know, it's really important.

4.5 Falconer perceptions of public views around falconry (FI n=3)

This subtheme focusses on falconers' views on public perceptions surrounding the level of criminality in falconry. There was a consensus among interviewees that members of the public held an unsubstantiated belief that illegal wild take was an issue with falconry in the UK. An interviewee explained,

> FI5 - I think there is a perception that probably falconers would still steal peregrines and sell them to the Arabs. But sadly, even though that's probably a general perception, it's not based on substantiated facts.

The origin of this perception could, according to one falconer, be traced back to a number of high-profile instances of illegal wild take which, despite the vast majority of cases being committed by non- falconers, became associated with falconry by the public. they explained,

> FI2 - in the early 1990s, we had a whole string of people stealing birds of prey from the wild and all sorts of things, because they had this misguided idea that, you know, a wild bird had the same value as a captive bred bird…unfortunately, you know that 99.9% of it wasn't falconers, because falconers know better. But we got tarred with that brush. And it took a decade or more for falconry to drive off this image that we just go out and steal birds and all the rest of it.

Analysis also revealed a concern amongst falconers that these public perceptions, despite being largely unfounded, could be weaponised by those opposed to the practice of falconry. For example,

> FI7 - it falls exactly into the hands of those that absolutely abhor field sports. You know, and we would then be back to the land of robbing peregrine nests to make money off Arabs. Which, you know, the facts don't match that but there will always be the odd case.

5. Wild take

This theme is comprised of three interlinking sections each of which has several subthemes which combine to create a holistic view of perceptions about wild take in falconry and aviculture. The sections cover topics including the historic and cultural role that wild take plays within falconry, falconer's personal views on wild take, public opinion surrounding it, and a discussion of alternative suitable solutions to wild take.

5.1 Wild take and the cultural history of falconry

This theme relates to discussions about the cultural history of wild take within falconry in England. The subthemes within this section are interconnected. Firstly, a discussion of the historical importance of wild take to falconry compares past and present falconry practices and techniques. Analysis revealed that while the traditional values of falconry remain largely the same, the modernisation of techniques has drastically improved welfare standards. This is connected to a discussion on the cultural/nostalgic elements of wild take, which links it to an intangible emotional connection between falconer, raptor, and the environment. While a small subset of the sample expressed a hankering for this experience, it was predominantly discussed in a past context.

Next, a discussion of the purpose of wild take explores the aims of wild take and captures the justifications and objections to it. While the sample showed an engagement with the historic conservation and rehabilitation efforts of the practice, there was doubt to whether this argument was still relevant enough to warrant its resumption. Discussions on this theme also included a comparison of captive-bred birds and wild birds; the aesthetic and behavioural differences between the two, and the availability of supply. The majority of the sample argued that in terms of performance, aesthetic, and genetics, captive-bred and wild birds exhibited no tangible difference. In addition, most interviewees argued that unlike in previous decades, the increased supply and access to captive-bred birds has displaced the need for wild take.

Another sub-theme explored whether interviewees were interested in obtaining a licencing for wild take, and the reasoning behind it. This discussion identified ethical and circumstantial justifications and a consideration of the legal and vetting methods deemed necessary if licences were to be granted. Analysis showed that while most of the sample had little personal interest in obtaining a licence, an exception was made for potential

species restoration efforts in the future. Re-release was also emphasised as a requisite for any potential wild take by some. The final subtheme, falconer divisions, builds from interest in obtaining a licence for wild take and identifies that there are differences and possible divisions within falconry. It is argued that generational gaps between falconers, as well as between members of falconry clubs and non-members, has created communication issues and has worsened disagreements, including that around wild take in falconry.

5.1.1 Historical importance to falconry (FI n=7)

This subtheme explores the history of wild take and its relative importance to the cultural heritage of falconry in England. Analysis reveals that while most interviewees view wild take as an important legacy of falconry, its prevalence in the practice of English falconry is not perceived as relevant or necessary in the present day. Discussing the history of wild take in England, an interviewee explained how historically the provision of wild birds for falconry was generally met through the importation of passage hawks trapped on migratory routes in Europe. They explained that,

> FI9: Really in recent history, there hasn't been wild take. In England, most of the birds flown by falconers I mean, up until 20 years ago, of course, or 30 years ago when it all changed. Captive breeding came in. But before that, our birds were bought in from Holland, they were imported from Europe. There's no real history of wild take in the UK. So, most of those came from a place called Valkenswaard, which is very famous migration route where young birds and old birds could be trapped easily by people in Holland and then they were sent over here and you could buy goshawk, in the 60s you could buy a goshawk for a fiver that was trapped in Finland. So that's really the history.

In contrast. another interviewee noted that the use of wild birds, regardless of origin, was an important part of falconry. They explained that,

> F2: Historically, you know, for generations and generations and generations, how falconry has been practiced around the world, is the controlled and respectful use of wild raptors. And, you know, though, we would fly them and, you know, they would, you know, if we were no longer able to fly them, or if our use for them had changed, we would then hack them back to the wild. And we have a whole language and

> ethos and knowledge base about, you know, returning birds of prey to the wild and things like that, but all comes down from the use of wild birds of prey.

Another interviewee described a similar example of this historical practice and how if the release component of the practice was enforced today, they would be more likely to support wild take licensing,

> FI3: Well, if they did with merlins what my father used to do, and my great uncle and even more, which was take them from the wild, fly them for six weeks and then release them, I would be for it.

Another interviewee discussed how there are many traditional practices in falconry, some of which have evolved and others which have not. While they recognised the importance of wild take in the history of falconry, they also suggest that it is no longer as important. They explained that,

> FI6: Many aspects of traditional practices as well I think it's worth mentioning that it would no longer condone in modern falconry for example, traditionally live pigeon to be used to help enter a hawk on quarry, hawks would be flown with no telemetry or GPS and slits in their chests and heating, stitching the eyes of a raptor shut would have been used in the UK in Europe. Traditionally poorly shaped hoods would have been used to house the hawks permanently, rocks or logs has been used to tether them because there was no suitable perching. So, you've got all of these other aspects of traditional practices, but maybe just traditional doesn't mean they're right.

The view that while wild take is embedded in the history of falconry, modern falconry has potentially evolved beyond its usage was shared by others. For example,

> FI6: I think wild take is a very memorable part of falconry history. But it's not now, there is no place for it in modern falconry. And I think the way that falconry is practiced on the scale that it's practice, today, we don’t have the ability to facilitate it in a sustainable matter.

Reflecting this discussion about whether wild take has a place in modern falconry in England, another falconer noted a lack of agreement from within falconry itself. For example,

> FI9 - The falconry community is split on it [wild take]. There is a changing split.

5.1.2 Cultural / nostalgic dimension to wild take (FI n=4 NFI n=2)

The next subtheme explores the nostalgic and emotional connections that are associated with the practice of wild take. Anecdotes provided by the falconers reveal how the activity can intimately connect falconers to their raptors and the surrounding landscape. However, there is a division among the sample; while some express an emotional hankering for the experience wild take provides, others view it as outdated. One interviewee discussed how the experience of wild take is one they would find appealing,

> FI5: [wild take] would seem a lovely thing to do. I mean we've argued this point, and somebody's said, their vision of taking a bird from the wild is to go out in February and watch the pair displaying and they can sit, you know on a mountaintop with binoculars, and the sun goes down and they get the wonderment of the whole wildlife experience, which sounds great.

Another interviewee suggested that despite the appeal, they would be unable to justify it as they believed that doing so would cause more reputational damage to falconry than the benefit they would get from the experience. They explained how,

> FI1: it would be impossible for me to justify no matter how much I'd like to be lowered down a cliff on the rope to take a young eyass there is there isn't the benefit to even remotely come close to outweighing the possible negative to it.

Another interviewee described those who want to recapture this experience as naïve, suggesting wild take is associated with a type of nostalgic romanticism. Similarly, to the previous interviewee, they argue that it is important to exclude some traditional elements of falconry for the benefit the sport that could otherwise result in falconry falling into disrepute,

> FI7: So, there's this rose-tinted view, held by a collective of watery eyed old men that recall the days of traipsing around the world and watching for sparrowhawks calling to each other and then trying to find the nest, and then they eventually find the nest, and they've got to wait until the birds the right age to go and get it. And that's a bit of cultural heritage. That is a cultural heritage. But didn't it used to be our cultural heritage that we could ride across the countryside on horses and kill foxes? It didn't mean it was acceptable, it was just something that we did. You know, it was cultural heritage to meet up on a Friday night with a lot of beers and a couple of

> cocks and have a cockfight. They're all cultural heritage, but there are elements to it that can be removed for the betterment of all.

Another interviewee argued the advancement of falconry is more important and more fulfilling than wild take. They note how the increased availability and access to a range of species available through captive-breeding means that falconry offers greater opportunities in the modern day. They explained that,

> FI6: I've never felt 'Oh, I wish I could have taken the hawk from the wild'. I've never had that pop in my mind at any stage in my career. And I think if anything, I've only felt now that what we have offered to us today as a falconer is vastly more advanced than what falconers in the 1980s had available to them. I could fly almost any species I can think of in the UK. I could spend the rest of my life finding new species every year and I wouldn't even get close. The range of the variety of hawks and birds of prey that are bred in captivity now is massive.

In terms of the cultural importance of wild take to the practice of falconry non-falconer interviewees were sceptical suggesting that there is no justification for it. For example,

> NFI2 - essentially my view is that it, for me, is ethically wrong to take an animal from the wild to pursue a selfish hobby. In my view, there is absolutely no moral justification for that.

The description of wild take being 'selfish' was supported by another non-falconer interviewee. When asked about the idea raised by some falconers that wild take is an important experiential component of falconry, they explained,

> NFI3 - I don't know what experience they're talking about. I think it's a very convenient, selfish related sort of description they are playing.

5.1.3 Purpose of and interest in wild take (FI n=8)

This subtheme discusses the purposes for which wild take licences might be granted and explores the parameters for supporting or rejecting its resumption. Interviewees discussed the purposes for which they felt wild take licences should or shouldn't be granted. While there was debate about whether diversifying or refreshing genetics of captive stock through wild take was a legitimate purpose, there was greater agreement that in circumstances where the conservation status of a species was threatened, wild take would

be a legitimate solution to bolster species declines. Summarising both positions about purpose, an interviewee explained that,

> FI8: For me, I think it would be only for conservation benefits, and for maintaining the diversity, the genetic diversity of the captive population. I can see no reason at all, for example, for taking peregrines from the wild.

Falconers also discussed whether they would be interested in obtaining a licence now or in the future. Analysis suggests that while most of the sample expressed no interest in obtaining a licence, a small subset of interviewees would prefer the opportunity to remain open and refenced the conservation benefits of bolstering wild populations if required. For example, an interviewee explained both why they have an interest in obtaining a licence, as well as why they felt they are unlikely to ever apply for one,

> FI1: Potentially, I still hanker after flying a sparrowhawk again. And it may happen in later years. So, if sparrowhawks were obtainable under licence, there's a chance at some stage in the future that I might apply. But I've been saying that for the last 40 years. In truth I probably never will apply for a licence.

Another interviewee suggested that while they do not have a personal interest in obtaining a licence, the faculty to obtain a licence in the future for others is important. They explained,

> FI5: So personally, I don't see a benefit to me to get a licence for a peregrine to go and take one off the cliff for me. I think it's great that there's a facility there, but would I personally use that licence? No. In my opinion.

However, the majority of those interviewed held negative views towards granting licences for wild take because they felt it was unnecessary to the continued practice of falconry for example,

> FI6: In 2022, I'm very strongly against the idea of wild take in falconry. Most of these falconers that I know would not be in favour of wild take largely because they don't need it to fulfil their falconry ambitions and targets. Because they can do just that with captive hawks, I think that is very key point that it's not necessary.

Licensing restrictions were also discussed; it was argued that necessarily stringent regulations would mean that the practical application and experience of wild time would be vastly different to that of the past. For example,

> FI7: So, that's my view is wild take is a nice idea, but there's no requirement for it. Nobody's been beating the drum about it. People who are beating the drum about it, don't really understand the hurdles that will be put in their way. The problem I have with X's idea about this wild take is they are not being honest with the people that they are selling it to. And what I mean by that is they are not stipulating the criteria that would need to be met in order to achieve a wild take licence.

One of the key legislative tests for the licensing of wild take is that, if granted, the licence must be: on a selective basis, in respect of a small number of birds, and compatible with the conservation of the species. This selective basis means that restrictions would exist on how many licences could be granted each year and therefore also on who could get a licence. Another interviewee discussed how they thought that this would lead to disagreement and division within the falconry community. They explained that,

> FI1 - It would definitely cause huge disagreement as to who was considered competent. I think at the moment I don't think it's too bad. I think when the problems would really come about is when there's more applicants than there are licences and people have to be turned down. Once that situation arrives, social media being what it is, I don't know how that could be managed in a way, it’s for the falconry community to manage that. And I think it's a situation that would be unmanageable. You just have to you'd have to expect it and you have to be able to dismiss it as sour grapes. But yeah, any discord is better avoided than managed anyway.

5.1.4 Falconer divisions (FI n=6)

Building on this issue of possible disagreements, this subtheme explores interviewees perceptions of any difference between falconers around a range of topics including wild take. One interviewee described a generational difference in which the ready availability of birds - thanks to captive breeding - has allowed a younger generation of falconers to obtain birds that they find desirable, rather than because they have the necessary capabilities to fly them. This is causing them concern about the care and respect those birds are getting and for the welfare of wild birds if licences are granted to take them. As they explained,

> FI2 – It is one of the things we unfortunately have a generation now of people who don't want to wait. You know, we see a lot of new falconers now that want the bird they want and when we explained to them that they don't have the experience or the knowledge to work with a bird like that, they don't want to listen. Now, you know, with captive breeding at the moment, you know, it's one of the things breeders are, well most breeders are very good about saying 'sorry, but I don't feel you're qualified. Therefore, I'm not going to sell it to you.' But it's like anything, you know, there is a small element where people will sell it regardless, if money's waved around.

Another area of contention identified by interviewees, is the communication between different falconry groups about issues such as wild take. For example, an interviewee suggested that these communication issues exist between those inside and outside of the larger and more established falconry organisations, as well as between falconry and the wider public and conservation organisations. They explained that,

> FI6 - Within falconry, there's been quite a long history of maybe not being the best communication between the top end of the falconry community, the rest of the falconry community and between falconers and the public, and between falconers and conservation.

5.2 Perception of wild take for falconry and aviculture

The subtheme relates to what interviewees perceive the views of other falconers to be about wild take, as well as how they think the wider public will react if licences are granted. Analysis illustrates that interviewees suggest that there is no inherent right for falconers to be able to take birds from the wild and that if they were to obtain licences to be able to do so then they believed several issues would be created, which could have a significant impact on the future of falconry.

5.2.1 Privilege vs right (FI n=3)

Discussion about perceptions of wild take within the falconry community centred on whether wild take is viewed as an inherent right or as a privilege. While it was not a belief held by those interviewed, it was acknowledged that some falconers see it as a right. For example,

> FI9 - some falconers think that really it ought to be a right of a falconer to, you know, obviously with permission, take a bird from the wild and train it.

The perception of wild take as a right was contested by one falconer, who strongly believed it was a privilege. As they explain,

> FI1 - I kind of wish that falconers were more in agreement that it's a privilege. It's a privilege to have a wild hawk on your fist and develop the relationship with it. I think if more people saw it as a privilege, they might appreciate what they were doing a little more than if they considered it a right. I've got a lot of friends who shout about their rights. I had never seen you know, there is no right to take anything from the wild, it's a privilege and it should be treated as such, in my opinion. Throughout history, access to hawks has been governed in one way shape or form. There was never a free for all there was never an absolute right of access to anything really.

5.2.2 Public attitudes toward falconry and possible reaction to wild take (FI n=6)

This sub-theme relates to the way in which interviewees believe the practice of falconry is currently perceived by the public, the role that social media plays in shaping this, and common public misconceptions about falconry. It also covers falconers' views about how they think the public might react if wild take licences are granted, and the impact this may have on falconry in the future. Social media was seen as an important medium in debates about falconry and wild take. While some interviewees expressed concerns around the negative impacts of social media in exacerbating divisions between falconers and opposition groups, others identified the importance of harnessing it as a means of disseminating information surrounding falconry. One interviewee expressed frustration with the lack of engagement from those within falconry with the public to help improve its image. They noted,

> FI8: We are speaking in huge generalisations, but we're not good at managing our public image. We're not good at presenting an argument on behalf of our activities to the public. It's almost every meeting, almost every conversation there will be concern about the image of falconry on social media in particular, and the prominence given to very well organised and vocal campaign groups who are who are opposed to falconry.

Contrastingly, another interviewee identified the positive role of social media in modern-day falconry, and the importance in managing it effectively,

> FI7: All I would do is emphasise the public perception these days, you may not agree with it. You know, our ex-president or former president X was very much anti-social media. He didn't like social media. And it's fine. And I can understand that from that generation. And I mean, I'm that generation but I'm quite savvy with all that kind of stuff. I think that it's better to be leading the conversation than can be playing catch up. And I think the falconry world needs to appreciate that like it or lump in, it's something that we have to deal with. And we have to engage with public perception about the sport is everything because public perception is what will condemn it?

Interviewees discussed what they see as a public 'misconception' that falconry practices are unethical and cruel. One interviewee argued that there is a fundamental lack of understanding by members of the public with regards to falconry practices, which has spurred misconceptions and distorted opinion,

> FI6: I think there are a couple of things that "Joe Public" doesn't really understand about falconry, and they see it in a very responsive way in a very humanitarian way. There's a lot of misconceptions about raptors and people these days, unfortunately, they tend to be misanthropic about things they put human feelings on to animals and birds that they don't really understand.

However, despite this, another interviewee explained that they believe that currently falconry is in a good position image-wise with the public, and that efforts should be addressed to continue educating, demonstrating, and promoting falconry so that this positive public position remains,

> FI7: And at the moment, we're in a very good position, where I wouldn't say we were untouchable. But we're certainly in a position where Joe Public, because of those things that I mentioned before, education, etc., are very much on the side of falconry. I've got friends who were complete 'anti's', I've got friends who have sat, well, they're not friends, but I've got associates who are sabs, putting balaclavas on and going to disrupt the fox hunt. I completely disagree with their views on it. But they absolutely adore what I do with the birds. And they will defend it to the hilt, even amongst all the sabs. And some of them, you know, hate anybody touching

anything that's in the wild. So, I think we have to engage with them. And we have to we have to educate, and we have to keep them on side.'

Regarding discussions about the positive or negative image that falconry has among the public, interviewees were largely in agreement that the licensing of wild take would be detrimental to this image. Interviewees felt the public reaction would be extremely negative if licences for wild take were granted. For example,

> FI9 – My real concern here is, the bad press, we don't need wild take and the reasons given for wild take are just complete nonsense, it seems to me. And it's the public backlash that I really worry about.

This perception was contextualised by another falconer, who discussed peregrines specifically. They described how the public's perception of raptors has been influenced by historical conservation efforts,

> FI1 – How the public sees peregrines, have been educated that peregrines are special they're endangered, all manner of things. And frankly, I think we would be crazy to put ourselves in a position where we can be viewed as just awful takers.

Other falconers were able to cite experiences of those involved in previous wild take applications to justify the perception of a strongly negative reaction. For example,

> FI9 - since that X attempt a few years ago, when Natural England was granting permission, there was so much bad publicity, and all involved. I mean, every single one, every single person mentioned that it's had to, at that time, come off the internet and completely changed their details, because they got hounded. And I know that my friend X is a vet who was named on that first, as a named person on that first thing, he had death threats. The veterinary practice that he's working at had abusive phone calls, because his details were published on these birding sites. And you know, and so every person involved with that first wild take attempt has had to change their online details.

One reason suggested for the likely negative reaction from the public was a perceived lack of justification for wild take regardless of the actual impacts it might have on wild populations. An interviewee described how,

> FI6 - we're at a point now where falconers have expertise, which is integral to the conservation of raptors across the world. And I don't think it gives a very good impression at all to conservation tuitions, the public who are supporting these projects, that falconers can stand up and say x, y, and z, but also taking birds of prey from the wild, regardless of whether that's actually going to impact the wider population. It's almost impossible to explain why that is justified to members of the public or to the conservation community.

Another falconer argued that the lack of necessity for wild take was not only a public perception, but a reality in modern falconry. As they explain,

> FI9 - The best piece of information I give these people, the best received piece of information that I give out is that we don't take birds from the wild anymore, we don't need to.

However, one falconer argued there could be a positive response from the public if there was a well-publicised conservation element. Discussing merlin specifically, they described how,

> FI5 - there is massive work to be done with merlins that could benefit falconry and the wild population. And I think the PR spin off for falconers to the general public would be immense and I think they would accept that and embrace it.

A further point on public perceptions, related to the importance the falconry community should place on it. It was discussed that there was debate within the falconry community in this regard. One interviewee argued that ignoring public perceptions on wild take could significantly impact the future of falconry in the UK. They explained,

> FI9 - the XX XX club I've discussed it with the falconers in there. They… say we should ignore public opinion. But I think that's just crazy in an internet age. I think we should be absolutely worrying about public opinion. Before we go the way of fox hunting.

The view of public perception being crucial to the future of falconry was supported by another falconer. They described the negative impact wild take has had on maintaining the positive perception of falconry,

> FI7 - I think that falconry is probably the only acceptable field sport in modern society at the moment. And I think we're fighting a battle against that. It is the only acceptable field sport, and this is, you know, this is not going to shed it in a good light.

5.3 Alternative satisfactory solutions to wild take

This subtheme includes a discussion of whether falconers and non-falconers believe there to be alternatives to wild take, and if so, whether they are deemed a satisfactory solution. One of the falconers interviewed suggested that while there are alternatives to wild take available, they did not see these as satisfactory. They argued this was because being able to get a licence for wild take was not just important for falconry, but for protecting and managing, species in the wild. They explained their view by reference to what is done in other countries,

> FI4 - I believe 99% of the birds in falconry in the UK will be captive bred. That is not the case elsewhere in the world. When I was looking for a goshawk, I was offered wild taken birds from Germany where birds are taken under licence to protect (for example) game farms and birds bred for shooting. I have always argued that that should easier here. Failing to issue licences (and this argument can be applied to other species — badgers, beavers, etc) simply leads those who occupy land to break the law. Rather than apply for a licence to remove (for example) a nuisance goshawk, it will be quietly disposed of.

5.3.1 Satisfactory solutions: captive bred (FI n=5 NFI n=2)

One of the alternative satisfactory solutions discussed by interviewees was that provided by captive bred birds. A falconer interviewee suggested that because of the availability of captive bred birds, falconry has become self-sufficient and there is therefore no need to take birds from the wild. Specifically discussing peregrines, they explained that how they had no interest in wild take,

> FI1 - certainly in relation to peregrines I have absolutely no interest. I would actually feel like I've lived up to the worst of the anti-falconer kind of rhetoric. There is there is no need for me to have one from the wild. And so, I certainly would not go down that road. I really struggle with the notion of saying, ‘I'd like to take one

> from the wild'. I struggle with it simply because we're self-sufficient with breeding and then some.

The argument that the availability of captive bred birds eclipses the need to take birds from the wild was built upon by another interviewee. They explained that if you wanted to recreate the nostalgic experience of adventure identified in 5.1.2 (Cultural / nostalgic dimension to wild take) traditionally associated with taking birds from the wild, then this could be gained by other outdoor pursuits. If you wanted a bird for falconry however, contacting a breeder is the more viable option. Discussing the issue, they explained,

> FI7 – So, my view on the wild take for the purposes of falconry: There is no justifiable reason to go and take a perfectly viable wild peregrine, in order to fly it for falconry purposes. If you want to go and climb a cliff, join a climbing club. If you want to go climb a tree, join a tree climbing club. If you want to get a peregrine, pick up the phone, speak to a breeder and he'll give you whatever peregrine of whatever colour, size, subspecies you want from the world, and he will supply it at reasonable prices.

Another interviewee reiterated that captive bred birds provide a satisfactory alternative to wild take by noting that,

> FI6 –we have a wonderful thing that is quality captive bred hawks, which can give just as much pleasure and meaningfulness to a falconer as well.

While another interviewee identified how captive breeding has become central to falconry and how it has developed and improved over time,

> FI9 - It's all become about captive breeding. And captive breeding has come on in leaps and bounds in the last 40 years.

The idea that developments in captive breeding has created a suitable solution to sourcing birds for use in falconry means that wild take is unnecessary was also discussed by a non-falconer. They explained that,

> NFI3 – the abilities and expertise of people who were interested in breeding, improved beyond all measure compared to, say, a decade, or a couple of decades previous…But I just don't think there's a need now for birds to be to be removed from

> the from the wild. Because of the level of expertise is improved in the ability of birds to be bred in captivity.

However, another falconer interviewee reflected that while captive breeding of birds for use in falconry can meet demand, it is not without issues. They noted that demand was not being met regarding breeding native birds for falconry. They explained that,

> FI2 - within what we are legally able to access, falconry in UK, it has been self-sustaining now since we lost wild take the previous time. It took us a long time. Now, we are slowly beginning in the UK, to sort of get back to a point where birds of prey prices are dropping, because we're able to produce more than enough birds to supply demand. But the trouble is, is we're not producing the native species.

5.3.2 Captive bred: availability of stock levels (FI n=3)

The idea of self-sufficiency in terms of the number of birds bred and the availability for falconry was explicitly discussed in terms of stock levels. Reflecting on the amount of captive bred birds available, an interviewee noted that there was now a surplus of birds to meet demand and that this meant that breeders were unable to sell or even give away all of their birds. Given this context, they struggled to see how taking of birds from the wild for falconry could be justified. They explained that,

> FI9 - The market is pretty well saturated. In the last few years at the end of hunting season, or the start of the next breeding season breeders are really struggling to find homes for all their youngsters. So, to me, wild take is completely unnecessary because of the market and captive bred birds of prey is oversaturated anyway, I can get peregrines given to me for free in the summer if I need them. Not just peregrines but specific strains of peregrines for free.

Another interviewee discussed how this surplus of stock meant that falconers today were slightly spoilt for choice and that this situation would have been unimaginable in the past, when birds suitable for falconry were less abundant and available. They also discussed how a breeder they knew was struggling to find homes for their birds because supply was outstripping demand,

> FI1 - I've got a friend in Lincolnshire, he’s probably going to limit the breeding that he does. He tries to be breed what he's already got orders for. And, again, he gives hawks away free of charge. But when you find yourself in a situation where you've

> got a young hawk, and nobody coming forward to say, I'd like to fly, it was unimaginable in the 80s. That was an unimaginable situation. In the 70s, my dream was to see a peregrine, let alone to hold one or flying one, just to see one was a dream. You know, it’s changed certainly since wild take came to an end.

However, despite the suggestion of surplus stock outweighing demand, another falconer argued that this surplus was mainly for non-native birds; sourcing native birds, as outlined, remains expensive and difficult to source. They explained that,

> FI2 - Now, can we fly other birds? Yes. Can we necessarily fly indigenous species that we'd like to? No. It's one of those things, a few people who are lucky enough to have deep pockets and, you know, lots of resources financially can probably do it, and the rest of us we may have to make compromises, which unfortunately, in my eyes means non-indigenous species.

5.3.3 Satisfactory solutions: rehabilitation (wild disabled) (FI n=4 NFI n=1))

Another potential satisfactory solution to wild take that was discussed by some of the interviewees (both falconer and non-falconer), was opportunities to rehabilitate and release injured wild birds. This alternative was related to the specific flying and hunting aspect of falconry. When discussing this potential option, an interviewee described how these birds would need to be hunted with until they could demonstrate that they are capable of surviving and then released back into the wild. It was this opportunity to fly and hunt with a bird born in the wild that they felt could address the desire of some falconers to work with wild birds when practicing falconry. They explained that,

> FI9 - Certainly the jumpers, the birds who fall, who tumble, the young birds who tumble from nests, who aren't injured. Those are a wonderful opportunity for falconers, on the condition that the bird is this perhaps, is hunted and then released back into the wild. Because there's a quite a great number of those. And there's some very well-known folks who do fantastic work there who are always looking for somebody to, you know, somebody who really understands peregrines to take one and to take these birds on. So that certainly is an opportunity. Certainly, what we call the jumpers, they are an opportunity for people.

Another falconer, discussing the opportunity that rehabilitating wild injured birds offers falconers, described their own experience of doing this. They noted how they sometimes struggled to find falconers to assist with this activity within the falconry community. Because of this, they felt that the opportunity was not being used widely. They noted that working with a wild raptor was a unique experience, however, returning birds to the wild, rather than taking them from it, was what falconry should be seeking to do. They explained that,

> FI6 - I have had a connection with rehabilitation for my whole career and one thing every single year in rehabilitation, we are looking for falconers to support the projects that we have. We'll have, for example, peregrines who need to be flown for a year and hunted for a year before it can be returned to the wild. And we obviously don't necessarily always have the people here to do that. So, we're always looking for falconers. We're always struggling to find falconers who will take those cases on. And so, we've got an abundance of wildlife. But the funny thing is, we have an abundance of wild hawks that need work with everything that this is asked for. And people aren't taking them.

Another falconer described their experience of working with birds in need of rehabilitation (with subsequent release) and the missed opportunity by other falconers. They discussed an idea they had proposed to others regrading helping the falconry community make greater use of this opportunity. They suggested that doing so could result in a win-win situation: falconers get to fly wild birds and falconry assists in conservation work by rehabilitating and releasing these birds thereby promoting a more positive image of falconry. They explained that,

> FI7 - One nest site I deal with in particular, is in the middle of the town centre on the 200 ft sandstone tower that's been sealed off by the police for obvious reasons to keep miscreants out. And over the last five years I've probably picked up four or five that have been splattered. I picked several up from the vets. I've rehabilitated six of them now. So that's just from one nest site. So, my point is my proposal was to X and X, my proposal was that we set up a network across the country of willing, able, and vetted people to take on various species that come into care in midsummer, as they do every year, that's usually by me or by groups that know me. And then they're disseminated out to those falconers. The powers that be such as APHA and Defra and Natural England etc., are all informed of that, those people are on a

> database. And they've been already pre-verified to be capable and able. And the birds go to them, they're then flown, then hunted with, they're then used and conducted in falconry, and then they're rehabilitated back to the wild, using falconry techniques. Now, I see that as a win for everybody, the birds win, the chances of the birds' survival is better, because you've probably fully aware that most birds die, but 60% of them die before their first winter. So, you're increasing the odds of that bird surviving winter. The falconers get to fly wild birds, sort of satisfied that aspect of it. The conservation groups get to see birds going back to nature, and everybody wins.

The use of wild birds requiring rehabilitation to be released back into the wild as a suitable alternative to wild take was also mentioned by a non-falconer. While they had some reservations they explained how,

> NFI3 - I think it perhaps should be evaluated on the number of instances that actually arise, because I have a suspicion that we're not talking about that many...And for that, to be cared for, in a very caring way, and flown and what have you, certainly for a period, it may well be that a limited period might be granted such that through that exercise and care, the physical dimension, if you like, is already sufficient for then it to be considered to be hack back as it were, or released. I don't think I'd have any firm grounds to object on that.

5.3.4 Suitable solutions: wild disabled (non-releasable) birds (FI n=4 NFI n=1)

Interviewees (both falconer and non-falconer) also discussed another suitable solution to wild take. This was the use of wild disabled (non-releasable) birds to help with the genetic diversity of captive stock rather than for use in flying and hunting. Interviewees suggested that the development of breeding skills and knowledge generated by the increase in captive breeding since the 1980s, means that it is now possible to breed birds that may previously have been difficult. As a result, the use of wild disabled non-releasable peregrines, which interviewees suggested are a common occurrence, was seen as a potential satisfactory alternative to wild take for use in captive breeding. As one interviewee explained,

> FI6 - I think that the opportunities in captive breeding are endless. It's worth to bear in mind as well, and I know a lot of the arguments for wild take have been related to

> the genetic diversity and for wild peregrines, for example, captive breeding programme, but there are already existing wild disabled birds who have been non releasable, especially for peregrines, that happens so regularly with peregrines, they do have to be physically perfect to survive in the wild. So, a minor defect that wouldn't stop them from breeding or survive in captivity will prevent them from living in the wild. So, it's very common to have a wild disabled peregrine, and many of those are very successful in quality breeding lines in the UK.

The use of wild disabled birds being used for captive breeding was also something noted by a non-falconer. They suggested that where the birds would otherwise be euthanized then being brought into a captive breeding programme was something they didn't object to. For example,

> NFI3 – I think if there was sufficient experts with care facilities, and legitimacy associated with their name, to sort of be the arbiters and come to a view and say, look, it's impossible to have this bird back. It's injured to certain extent, it can live for years, be kept in captivity, possibility of breeding from it, I'd have no objection to that at all. It would almost be nice to know that something is being used in that particular way.

While others supported this idea as a satisfactory alternative solution to the use of wild taken birds for captive breeding, it was identified that there are legal restrictions around the offspring of such birds. It was noted that these restrictions relate to different generations of offspring of wild disabled birds, meaning that they cannot be sold for commercial purposes. As an interviewee explained from first-hand experience,

> FI1 - Funnily enough I was given to two peregrines to train for a French friend this year. And they came from wild disabled stock. So, I think the only limitation on young from wild disabled stocks has been they mustn't be sold.

Another interviewee built on this idea of restrictions around the sale of any offspring of wild disabled birds and contrasted it with the possibility that the offspring of healthy birds that had been taken from the wild under licence might be sold, if NE were to grant such licences in the future. They explained what they saw as the problems with such an approach,

> FI3 - If you allow people to take birds from the wild, and breed them, and then sell young, then you have really discounted the law with the injured wild birds. Because

you can't say, oh, well, you've taken that under licence, therefore, you can breed from that one. But this one's an injured wild bird that you've rescued - no, you can't breed from that. Well, you can breed from it, but you can only sell second generation birds.

Summing up the range of issues previously identified regarding the use of wild birds in falconry, captive breeding, wild disabled birds, and the surrounding licensing factors, another interviewee identified what they believed to be an important technical detail when assessing wild disabled birds as a satisfactory solution to wild take. They highlighted that wild disabled birds could not be used for the practice of falconry in the definitional sense of flying and hunting. Additionally, due to changes in regulation, they believed that these birds were also no longer allowed to be used in captive breeding projects. They believed that the use of wild disabled birds for captive breeding was preferable to the use of wild taken birds. They argued that if licences were to be granted for wild taken birds, then a condition should be that they had to be flown and hunted with, not used for breeding and put into captivity where they would not fly and hunt. They explained that,

FI9 - Honestly, it depends on the level of disablement, if a bird is so disabled that it can't be released back into the wild at all, then it's likely not to be competent hunter, when falconry is all about hunting. So, your average, to be honest birds that like that really wants to be put to sleep. We used to be able to get an article 10 for birds like that, put them into breeding projects. And that is where a lot of these original birds have come from, these injured birds, but we can't do that anymore. You don't grant licences for injured wild birds for breeding projects. And one of the things, excuse my French, that was really pissing me off about the wild take XX wanted was that they wanted to take birds of prey from the wild and put them into a breeding project. And they would never fly. I don't know how anybody can justify that. But you know, if wild take was granted, I would like to say on the condition that the bird is flown and hunted, because that is what these birds need, not just put into a breeding enclosure.

5.3.5 Need for release (FI n=4)

Another issue that interviewees discussed when talking about wild take was around whether there was a need or a desire to subsequently release birds back into the wild

once they have been flown and hunted for a period. This topic was discussed in terms of potentially benefitting raptors, although not necessarily of conservation benefit if wild populations were already, stable. Additionally, in terms of public reputation, rerelease may also be more palatable to those opposed to the licensing of wild take. One interviewee discussed that re-release might make wild take less contentious but that, despite this, they would still prefer is it was not licenced at all. They explained that,

> FI9 - if there was an option to release later in life, you know, that, to me, that would be that would be good. You've got that bird through the first winter, you've taught it how to hunt, its experience, then release it back into the wild. But I'm not sure whether that would ever be an option in the UK. I mean it would certainly be a little bit more acceptable. If you're gonna fly a bird for, if you're allowed to fly bird for one or maybe two seasons, and then you had to release it back into the wild. I could see how that would make it a little more acceptable in the eyes of the public. But you know, I'd rather not see it done at all in the UK.

Another interviewee suggested that while release back into the wild might be more palatable for some, it would only possible if the birds taken had been used for falconry, not for captive breeding. As such, they would not support wild take for captive breeding purposes. For example, they explained,

> FI3 – As far as I'm concerned, I would not allow peregrines to be taken from the wild for breeding. I would allow them if people can prove they can use them for falconry, and I think even more allow them if they released them back to the wild at 4 years old. And then and only then, are you a purist falconer, who can possibly justify taking a bird from the wild. When if you justify it, and you then say okay, when it's four years old, I'm going to let it back to the wild. Although it's probably a complete waste of time learning it back to the wild, because they're doing fine there anyway.

5.3.6 "Keeping in statute" (FI n=3)

Another topic that was also seen as relevant to discussions about wild take was about whether it should be banned entirely or kept on statute in case it was needed in future. For instance, species collapse and the need for captive breeding for conservation purposes was cited as an example. One interviewee discussed how there was pressure to remove elements that others did not agree with and once such a decision has been made, it is

very difficult to undo. They discussed that while they did not think there was need to licence wild take at present, there might be in the future and therefore it should remain as an option in statute in case. For example,

> FI7 – in the modern world, it seems to be a clamouring from everybody and every minority group now to sort of bang a drum and say “we want this shutdown. And we want it locked”. And I know from the nature of government and the nature of people is that once a law or once a freedom is removed, it’s never restored. And so, I’m very much of the view that whilst wild take is not required at the moment and should not even be put forward and considered in my view. I do think that it should be retained as a possibility on the statute book.

Theme 6: Licensing

The licensing theme analyses opinions and recommendations on past, present, and potential future issues regarding the licensing of wild take for falconry and aviculture. The theme involves discussions regarding current licensing policy in other countries besides the United Kingdom specifically for the taking of wild birds of prey. Analysis identifies that some falconers believe lessons can be learned from falconry wild take practices in the US and Ireland. Others maintain that such regimes could not work in the UK, as habitats and conservation practices differ greatly from places like North America. The theme also considers potential licensing conditions and enforcement activities that could be applied to a future national licensing regime for wild take in England. Non falconers interviewed also discussed issues associated with enforcement of conditions as well as requirements to monitor not just those people involved but also the impact any wild take has on population levels.

Several falconers suggested that recognised clubs and organisations, such as The British Falconers Club and The Hawk Board, should have either a level of control over or the ability to assess or review applicants for a wild take licence. Many falconers were concerned with the capability of potential licence holders. It was suggested by most interviewees that any potential licence holder should be a member of one of these bodies or make use of a recognised ‘guarantor’, and several falconers mentioned that they had previously peer-reviewed others who had wanted to participate in falconry practices. A further subtheme on licence conditions highlighted a shared concern over avian influenza within bird populations and some recommended annual vet visits and inoculations, as well

as microchipping and registration. Most falconers agreed that if any birds are taken under licence in the future, then they should not be sold, as this could exacerbate issues around illegal take and have potential impacts on bird welfare.

6.1 Existing licensing: Policy in other countries (FI n=7)

This subtheme focusses on past and current foreign licensing policy for the taking of birds of prey from the wild, as well as first-hand experiences of wild take activities in other countries outside of the UK. Falconers tended to discuss two main countries as examples of effective foreign licensing: the USA and Ireland. One interviewee referenced the enforcement conditions for licensing in the USA and discussed how these could be translated for British falconers,

> FI2 - I would say that 75% of falconry in the UK, would support an American style system straightaway. It's a good system because the enforcement is absolutely draconian. There are penalties for, you know, breaking the law or doing things you're not allowed to do are severe, and they're lasting. And… one of those things is the removal of any future involvement in falconry forever. End of. On top of that, there are fines and jail time and all sorts of things. So, it works really well, and the series of mentorship and different levels of qualification that involves allow you to have access to different types of birds of prey because not all birds of prey are equally as easy or hard to train.

Several falconers referenced the tiered system that is used in the USA to assess falconer capability - with levels depending on how many years one has been a practicing falconer. Some endorsed this system,

> FI1 - particularly with it being such a large community, I really don't know how you could allocate hawks or be comfortable that they were going to the right person. And of course, that then probably leads to the notion of having an American style system where there's this kind of tiered level of acknowledged competence for falconers.

While others suggested that controls such as these would be far too stringent,

> FI7 - You know that there are elements to it that are great. But there are elements to it, where I'm looking at guys who've flown birds for three years, and then they can only fly a female red-tail. Whereas over here, you've got a guy who's flying a

> peregrine after two years, and that's well beyond that. They've got to be a master for up to five years and all that sort of stuff. I think if you sacrifice too much to government, and controls, you'll never get it back. And it rarely improves the situation.

Some opposed the American system altogether but were aware that many falconers believe it to be a good system due to the freedoms American policy could offer for wild take and falconry. One falconer suggested that a system such as the US one would not translate in a UK context due to differences in falconry practices, conservation and animal rights legislation. For example,

> FI9 - America, where wild take happens is very different to here. They have different training practices, some, you know, some of which we consider really barbaric. Some of which would be illegal over here, they use what we called bag prey where they, they can just let a rabbit go for a hawk to catch which would be highly illegal over here. And that's acceptable. So, they just have a different mindset in America.

Falconers also referenced falconry policy used in Ireland, who in recent years began licensing wild take on a small scale. An interviewee explained how,

> FI1 - the system in Ireland is basically a lottery system. Which is great because they're a small community of falconers and they’re largely self-policing.

6.2 Future licensing conditions (FI n=7)

Building on the topic of regulation, the subtheme licensing conditions focuses on recommendations for future requirements that could be applied to a licensing regime for wild take; including what should or should not be included within a licence and who should be able to apply for one. Many of the falconers interviewed expressed particular concern regarding the capability of falconers applying for a licence,

> FI3 - I would want definite proof that they know what they're doing, that they have flown a bird not just a Harris hawk, that they have flown falcons and I would absolutely insist that they have telemetry, working telemetry on the bird. You'd need to know what they were feeding it. I mean, I think there would be some sort of form that DEFRA sends out that they fill in describing the aviary, putting a photograph describing the housing weighing machine telemetry, food, how much time they have, where they're going to fly the bird if it was for flying.

The wellbeing and care of birds taken under any future licence was also an important consideration for interviewees when discussing licensing conditions. Registration with and access to suitable veterinary care was seen as important, especially with current impacts of avian influenza. An interviewee explained that,

> FI2 - Pet registration and vaccination is going to be the other one [condition]. So, another point. With it now looking like we're going to have AI vaccination in this country, hopefully next year. Any wild taken bird would have to be registered and inoculated for avian influenza.'

Another falconer supported the idea of veterinary visits, adding that the microchipping process would be beneficial for the registration and subsequent monitoring of wild taken birds,

> FI9 - I can imagine if Natural England gives permission for wild take, that bird is going to be very closely monitored, it's going to be it's going to have a ring, it's probably going to have a microchip every time. If and when it ever changes ownership, you would need to have a record of that.

Most interviewees agreed that any wild taken bird should never be sold, as this could lead of an increase in illegal take or further concerns around bird welfare. For example,

> FI2 - I don't feel that any wild taken bird or any of its direct offspring should be able to be sold. They should have a zero value. So cannot be sold, cannot be transferred. It just makes it safe. It means that nobody can gain the system by taking a while bird of prey breeding from it and then selling the chicks. If people need it for genetics point of view, then they're going to be quite capable of breeding from second generation. And, you know, it means that they are more understanding of the investment they're making in that bird.

6.3 Organisational vetting and peer review (FI n=5)

The third subtheme discusses the process of peer-review by recognised organisations and the potential to utilise this method for any future licensing regime for falconry wild take. Most falconers mentioned that most, if not all practising falconers, are a member of one of these organisations. Others proposed that membership should be a requirement for anyone applying for a potential licence to participate in falconry wild take. For example,

> FI7 - They've got to be a member of a recognized body, which is the BFC or the Hawk Board. And on the Hawk Board. That's the first thing. They've got to be evaluated by their peers. And the people who were evaluating them need to have a traceable history and ability. But I do think that if you're going to police it, that it's got to be done through a registered body such as the BFC; a recognised, well established historical club, where you would hope at least those who are going to be eligible or put forward for it, are going to be vetted by people who know what they're looking for.

Another interviewee expanded on peer-review further, referencing the use of qualifications or assessments that would provide a document to support any applications for licences, as well as those that have been attempted in the past. The explained,

> FI8 - Well, there have been… two or three attempts at voluntary qualifications. There was one, which I'm sure you've heard of through [X] which would have provided documentary evidence that that's kind of being assessed by an approved assessor to support, claims of skill and ability. The [X] has just launched an online training course. I mean, clearly, that's not the same as a practical assessment. But there have been those kinds of attempts, I think, I'm not quite sure where the [X] club stands on those or whether they are broadly supportive, but I don't think they've really gained much traction. But if they became integral to the licensing program, maybe that would maybe open up an avenue to get those a bit more entrenched.

6.4 Enforcement and monitoring (FI n=3 NFI n=3)

Many of those interviewed from the falconry community ascertained that there would be difficulty in policing or enforcing licensing conditions for any potential licence holders. The ability to carry out inspections was also raised by non-falconers. The enforcement of licensing conditions would require relevant agencies to have sufficient resources to be able to do so, with sufficient knowledge and skills and both falconers and non-falconer voiced concerns about this. It was noted that without this ability to enforce conditions a licence would simply be a piece of paper. As an falconer explained,

> FI3 - What DEFRA’s got to do is inspect them, and they aren’t going to do it because they haven't gotten the people to do it. Unless you inspect, you can send

> out as many forms as you like, and you will be wasting the paper and the ink that they're filled up with because it won't work.

Non falconers also raised concern about the ability to monitor and therefor enforce conditions because of resourcing issues. For example, an interviewee explained that,

> NFI2 - I think you would have to include an inspection regime. However, we all know that inspection regimes such as in animal experimentation, where we are having 23 officers to do the whole of the country…so it doesn't work okay. So you would have to put it into place so the people know there is a risk of being inspected.

The need to monitor wild bird populations as part of the monitoring of the impact of licensing wild take was also discussed by non-falconers. The need for flexibility in the granting of any licence was seen as essential so that it would be possible to react to fluctuations in local and national numbers of wild raptor populations. An interviewee explained,

> NFI3 - I think that there needs to be an emphasis on if a licence is granted on where it applies in the geographical context, because you do not want birds taken from what is a minimal population anyway, that may be in the process of building up its numbers after a quite natural reduction in numbers.

This was furthered by another non-falconer interviewee, who referenced the Dichlorodiphenyltrichloroethane (DDT) crisis in the United States as evidence for how fragile even seemingly healthy raptor population can be to environmental changes. They explained,

> NFI1 - I mean monitoring is vital. Serious monitoring. Because as we explored, they're also vulnerable to other environmental changes. So, although we might say yeah, okay we've designed the takes so it can't possibly impact. That's in the conditions today. That's our breeding dynamics today. Next year, might be a new chemical in the market that no one suspects anything about. And the thing is, some people might go, well, that's just overly cautious, not with peregrines. The precautionary principle absolutely has to be there because of past history. The whole of the East side of North America, unimagined vast areas to just suddenly lose the species.

7. Conclusions

Across six broad thematic topics with multiple subthemes, the practices of falconry and aviculture and the role and possible impact of wild take and wild take licensing have been examined. The wider contexts within which falconry and aviculture operate, the issues that have led to support and opposition to wild take licensing resuming, and the future implications for falconry; including conservation, welfare and crime have been analysed to provide perspective from practicing falconers.

Analysis identified that historically, wild take was an important component of falconry, not only in terms of acquiring birds for use but also in terms of the wider experiential component that taking a bird from the wild provided. However, those interviewed suggest that the development of captive breeding since the cessation of wild take in the 1980s means that it is now easier than at any other time to source and acquire birds for falconry. Analysis identified that there is also greater choice in the species of bird that can be flown than ever before. Interviewees suggested that there is even a surplus supply of some species of bird, such as peregrines, due to advancements in breeding techniques that means availability outstrips current demand. While the experiential component to wild take was noted by interviewees, they suggest that times have changed, and similar experiences wouldn't be possible today. Despite this, they discussed the connection to nature that flying birds of prey in the wild at suitable quarry still gave them and argued that it was this flying and hunting with a trained bird in the wild that was the core of falconry and which they could still do today.

While some interviewees suggested that there may be genetic differences between captive bred and wild birds of prey, it was not suggested that this had a negative impact on falconry. The idea of being able to fly a genetically distinct British peregrine was not given importance by those interviewed. Instead, they suggested that the lineage of birds flown rather than specific genetics was more important, and that they were able to source birds from specific lineages from current captive stocks.

Some concerns were raised about the future of falconry and aviculture and bird genetics in captive breeding, but this was around issues of poor management and record keeping rather than anything inherent in the practice of captive breeding itself or current stock.

Behaviourally, it was recognised that taking an older wild bird such as a passage hawk or a haggard offered a different challenge and experience for falconers, with those birds

already having learnt hunting skills and survived in the wild. However, those interviewed suggested that there was no difference between the flying and hunting capabilities of a captive bred or wild taken bird if they were both taken at the same age, as an eyass. It was argued that a bird's hunting capability and skill is a mixture of nature and nurture with interviewees describing that they have trained and flown brilliant birds from captive bred stock and indifferent birds from the wild and vice versa. Being born in the wild was no guarantee of superiority.

Falconers argued that falconry has historically played an important role in the conservation of birds of prey. Those interviewed also provided examples of falconry's continued role in bird of prey conservation. However, it was suggested that falconers and falconry organisations could perhaps do more, especially regarding the rehabilitation of injured wild birds. In turn, it was recognised that this conservation role was something that afforded falconry public support compared to other traditional hunting activities. There was some concern that if falconers started taking birds from the wild again this would have a negative impact on the image of falconry and falconers to the detriment of the future of the practice. Non falconer interviews reflected this suggesting that there is no justification for taking birds from the wild for use in falconry.

Interviewees noted that in the past some falconers had been involved in the illegal taking of birds or eggs from the wild and in their illegal trade. However, it was suggested that this was a very small minority who were ostracised from the wider falconry community. The illegal trade in birds of prey was seen to be a separate issue from falconry and the licensing of wild take for falconry and aviculture was not seen as being likely to impact upon this. It was suggested by some interviewees that seeing some falconers fly wild taken birds could lead to a normative shift whereby others without a licence perceive that it is ok for them to do likewise. Interviewees, suggested that the key drivers of criminality were around the monetary value of birds, perceived or actual, and the growth of the Arab market for falconry birds. However, interviewees suggested that due to Arab investment in large breeding infrastructure, and the general surplus of captive bred birds, in particular peregrines, current values and demand for birds were low as were associated levels of criminality. Some suggested this link was overstated by those opposed to the practice of falconry. Non falconers raised concern about criminality, including persecution and illegal taking of birds or eggs which they associated with monetary values and social norms.

On the topic of wild take specifically, as noted, the historical importance for sourcing birds as well as the experiential component was discussed by interviewees. Interviewees suggested that wild take should be viewed as a privilege not a right for falconers. Interviewees argued that changes since the cessation of wild take in the 1980s mean that falconry can still be practiced successfully today without it. The experiential component was suggested to be overstated due to nostalgia, and the experience of training and flying birds to hunt wild quarry were still available to falconers using other solutions. Falconers were concerned about a negative public reaction to falconry if licences were granted which could pose a threat to the viability of falconry in the future. In terms of alternative suitable solutions, the use of captive bred birds was identified by both falconers and non-falconers as one that was already able to meet the needs and requirements of falconers. It was suggested that it would be difficult to justify wild take in circumstances where there is a surplus of captive-bred birds available, with some struggling to give away surplus birds for free.

Another alternative suitable solution to wild take discussed by some interviewees was for falconers to take part in the rehabilitation and subsequent release of injured wild birds (which prior to release would need to be flown until capable of hunting for themselves). It was argued that this could meet the desire of some falconers to be able experience what it is like to train and fly a bird born in the wild. It was argued that this opportunity wasn't being taken up widely enough and that more support was needed to promote the opportunity and facilitate participation in it.

A third alternative suitable solution discussed by some interviewees was the use of wild-disabled birds to introduce genetic diversity into the captive-breeding population if required. This could help address the argument that new genetics from wild populations are required for the future captive breeding of birds of prey for use in falconry and aviculture. It was argued that the expertise that has developed since the 1980s means that it is now possible to breed wild-disabled birds that may previously have been difficult to breed. However, interviewees noted that there are some difficulties associated with the use of wild disabled birds in aviculture due to implications of current legislation.

Finally, interviewees discussed issues of regulation, licensing conditions, and requirements that they believed would be necessary to safeguard both birds and falconry if wild take licences were granted in the future. In terms of wider regulatory frameworks, the US approach was acknowledged as being a good model and one that enabled wild take to

occur, while the Irish framework was also mentioned. However, interviewees suggest that due to different socioenvironmental and legal contexts these couldn't simply be transferred onto English falconry. Some concerns were raised that enforcing regulatory frameworks could negatively impact on the practices and experiences of falconry that English falconers currently enjoy.

Interviewees suggested that recognised clubs and organisations, such as The British Falconers Club and The Hawk Board, should have either a level of control over, or the ability to assess or review, applicants for a wild take licence. Many falconers were concerned with the capability of potential licence holders. It was suggested by most interviewees that any potential licence holder should be a member of one of these bodies or make use of a recognised 'guarantor', and several falconers mentioned that they had previously peer-reviewed others who had wanted to participate in falconry practices. There was also concern expressed over avian influenza within wild bird populations and some recommended annual vet visits and inoculations, as well as microchipping and registration would be needed for any licensing regime. Most falconers agreed that if any birds are taken under licence in the future, then they should not be sold, as this could exacerbate issues around illegal take and have potential impacts on bird welfare and the image of falconry. For non-falconers' enforcement of licence conditions through inspection and the need for monitoring of impacts on wild bird populations at both local and national levels was essential. Yet concerns were raised about the availability of resources that would be required to do so.

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Appendix 1:Falconer interview questions

1. Tell me about your experience of falconry

Traditional practice questions

2. What would you say are traditional practices and behaviours associated with falconry and why?

Wild take questions

3. What do you think about wild take in falconry?
4. Has the lack of wild take since the 1980s impacted on you as a falconer? Explain.
5. Would you like to take birds from the wild if you could obtain a licence to do so?
    a. If yes, for which species of bird of prey would this be for?
6. Do you think there are satisfactory alternatives to wild take that allow you to engage in the falconry practices important to you? If so, what are they and if not why?

Genetics, behaviour.

7. From your experience do birds taken from the wild behave differently to those bred in captivity when used for falconry?
8. Are you aware of any evidence of significant genetic differences between current captive populations of native bird of prey species in England and their wild counterparts (at UK or sub-UK scales)?
9. Is whether the birds you fly/breed are from pure native [GB] stock important to you?
10. Can you source native GB stock if you wanted to?

Conservation and welfare

11. What, if any, issues do you think that wild take has for animal welfare and conservation?

Safeguards and wildlife crime

12. Based on your experience or the evidence that you are aware of, what effect do you think future licenced wild take in England could have on the illegal taking of birds of prey from the wild across the UK?
13. What, if any, conditions do you think could be placed on wild take licensing applicants to address any conservation/welfare/crime issues identified?

Conclusion

14. What do you think of Natural England's approach to the gathering evidence to inform future licensing of 'wild take' in England?

15.

APPENDIX 2: Ethics check list

NATURAL ENGLAND

CHIEF SCIENTIST DIRECTORATE: ETHICS CHECKLIST

Natural England Research Ethics Committee

Updated 05th November 2021

Introduction

This checklist introduces some key principles for all Natural England staff conducting social research to consider, to help ensure all our research abides by those principles, and information about the types of projects that warrant further ethical consideration by Natural England's Research Ethics Committee.

Completion of this checklist is **mandatory** for all Natural England research and evidence projects, or data collection with people. The checklist should be shared with the Secretariat via the Ethics Committee mailbox and should be stored alongside all other project* documentation. The committee secretariat can be contacted at any time, to provide guidance on any aspect of the checklist or advise whether a project needs to be assessed by the committee. The checklist should be completed at the outset of your project alongside contract development.

*__NB__: for the purposes of this form the term 'project' is used to refer to any piece of work to which ethical principles may apply, including research projects, data collection, surveys etc.

What happens after I complete a checklist?

1. Send the checklist to the committee secretariat. They will review your checklist to ensure all ethical risks have been appropriately considered (please allow approximately 2 weeks for a response).

2. If it is deemed that your project requires review and/or advice from the committee, you will be asked to provide further information - the secretariat will provide you with some questions to consider and come back for a discussion with the committee.
3. Once satisfied all ethical elements have been approved, you will receive a reference number for your project.

If, when completing the form you are unsure, or need further advice on any of the questions, please contact the Secretariat Chris Griffin.

Ethics statement

Natural England's Conservation Strategy 21 (C21) has encouraged innovative approaches to the way we work, research and collect evidence. Our work now has a greater emphasis on 'people', starting with the People at the Heart element of C21 and reflected even more strongly through the Connecting People and Nature Roadmap programme. This will increasingly result in elements of our interventions and associated research or evidence collection involving people as participants or subjects. Natural England's Vision, Mission and Action Plan (May 2020) emphasise this point.

The focus on people in this way is comparatively new for Natural England, which has a strong tradition of ecologically focused research and evidence. As we expand our social research, we must uphold defined professional standards as laid out by the Government Social Research profession. One of these standards requires ethical assurance of social research whether as participants or subjects.

Natural England's response to these requirements has been to create Natural England's Research Ethics Committee (NEREC) to provide independent advice, challenge and review to our research and evidence activities (contracted and in-house) where people are the subjects and/or participants in research. Terms of reference for the committee can be seen on the committee's sharepoint site.

All research with people should meet these ethical principles, as set out in Section 1 below. Additionally, it should:

- Demonstrate how the research process has been made transparent to participants
- Describe clearly how participants can opt out of the study.

Ethical Research Checklist

Project details	
Project Title:	Interviews for Natural England's call for evidence for the licensing of 'wild take' in England
Proposed start date:	14/11/22
Project Officer(s):	James Hoggett
Contact details:	James.hoggett@naturalengland.org.uk

Section 1: Ethical principles

All Natural England staff commissioning or conducting (social) research where people are the subjects and/or participants have a responsibility to uphold five key ethical principles, set out below. More detail about the principles can be found here. The principles are as follows:

1. Sound research methods and appropriate dissemination and utilisation of the findings. Ensuring the research meets a clear organisational need, doesn't place any unnecessary burden on respondents, and is based on sound methods that ensure evidence is robust, usable and accessible
2. Participation based on valid informed consent – it is clearly voluntary and participants have sufficient information to decide whether to take part
3. Enabling participation through method and sample design, with consideration given to likely barriers to participation and reasonable steps taken to address these
4. Avoidance of personal and social harm including avoidance of undue stress
5. Non-disclosure of identity and personal information ensuring confidentiality and data protection and that participants are not identified or identifiable in research outputs.

1. **If your work involves an external contractor or partner, do they have their own set of ethical principles?**

Yes ☐

No ☐

If YES, do they meet the Ethical principles as set out above?

N/A

If the answer to this question is YES, you do not need to complete the remainder of this form. Please send a copy of your contractor/partner's ethical principles and/or procedures to the Committee Secretariat. If they do not meet the NE's ethical principles, please continue to complete this form.

If your work does not involve a contractor or partner, or they do not have their own set of ethical principles, please complete the remainder of the form.

2. **For each principle, please answer the following:**

	I confirm that I understand this principle and have read the detail underpinning it (available through this link)	I would like to receive advice about this principle
1. Sound research methods and appropriate dissemination and utilisation of the findings.	X	

2. Participation based on valid informed consent	X	
3. Enabling participation through method and sample design	X	
4. Avoidance of personal and social harm including avoidance of undue stress	X	
5. Non-disclosure of identity and personal information	X	

3. **Can you confirm that you have incorporated these requirements into your research?**

Ethical principle	**How you have applied this to your proposed research**
1. Sound research methods and appropriate dissemination and utilisation of the findings. Ensuring the research meets a clear organisational need, doesn't place any unnecessary burden on respondents, and is based on sound methods that ensure evidence is robust, usable and accessible	The interviews are part of a wider evidence project to inform Natural England's approach to future wild take licensing. Interviewees have already completed a call for evidence survey published on gov.uk and indicated in this survey that they are happy to be contacted for a follow up interview. Semi

	structured approach will enable probing of participants responses to the survey and enable elaboration while allowing the researcher some control over the content
2. Participation based on valid informed consent – it is clearly voluntary and participants have sufficient information to decide whether to take part	They have already participated in the call for evidence survey which included detailed information about the project, what information would be used for and how as well as their rights as participants. I have also written a information and consent sheet for all interviewees which I will send to them in advance (they have provided email address on survey response for this). I will then go through this with them at the start of each interview to check understanding and obtain consent
3. Enabling participation through method and sample design, with consideration given to likely barriers to participation and reasonable steps taken to address these	Sampling will be purposive from a wider sample who indicated that they would be willing to participate in a follow up interview after completing the call for evidence. All those that indicated their willingness will be examined (demographics) to enable a broad range of backgrounds to participate.
4. Avoidance of personal and social harm including avoidance of undue stress	These have all been considered and are detailed in the information and consent form as well as more detailed ethics application I have written as a guide for the project.

5. Non-disclosure of identity and personal information ensuring confidentiality and data protection and that participants are not identified or identifiable in research outputs.	This is agreed and the information and consent sheet sets out clearly participant rights and safeguards including anonymity and confidentiality

4. Harm to participants and researchers

Have you assessed the risk of harm to **participants**, including physical harm and harm to wellbeing? Please provide detail of the what the assessment(s) are (low, medium, high)

Interviews will take place electronically via Teams so physical harm is not applicable. Mental and emotional harm have been addressed by provision of clear detail about the project and what Natural England are doing it for in the call for evidence and individuals answering yes to a question asking if they would be willing to be interviewed as a follow up to the survey and providing an email address to contact them by. Participants rights and safeguards are further indicated before interviews commence with an information and consent form being sent electronically in advance of interviews and then verbally discussed at the beginning of interviews.

Have you assessed the risk of harm to **researchers,** including physical harm and harm to wellbeing? Please provide detail of the what the assessment(s) are (low, medium, high)

Physical harm is minimised due interviews taking place via Teams. Further all emails will be sent from a project email address rather than a personal email address so that any risks to the researcher being contacted again is reduced. A project team is in place for the researcher to feedback and discuss openly any

issues that may arise from conducting the interviews to reduce mental and emotional harm.

For help and support, please see NE guidance on health and safety, including violence and aggression

5. **How do you plan to share details of the following with participants, in order to enable them to give their informed consent?** (Please provide a brief description of how you will share this information e.g., written, verbally, and/or what information you will share).
   For help and support on the information you need to provide participants, please refer to the template participant information and consent sheet, available on the Social Science Sharepoint Site.

   What the research is about?

A detailed blog on gov.uk already exists which participants read before accessing the call for evidence. The call for evidence had further detailed project information as well as information on participant right and safeguards, including our privacy notice. A new interview specific information and consent form has been written which will be provided in advance of interviews and then reviewed verbally before commencement

   The purposes of the research?

See above

   Who is sponsoring it?

See above

   The nature of their involvement in the research?

See above

   How long their participation is going to take?

The information and consent form of the interviews provides a clear maximum time limit for the interviews (60 mins) if any interviews take longer the interviewer will raise this before the 60-minute mark is reached and based on what the interviewee wants to do they can either continue, be completed another time or end.

That their participation is voluntary and/or that they can withdraw their participation, and any associated data, at any time? If this isn't possible (e.g. if a survey is anonymous and therefore responses cannot be identified to withdraw them), are participants made aware of this prior to participation?

This is included in the information and consent form

What is going to happen to their data (e.g. how it is going to be kept and used)?

This is included in both the blog and the information and consent form.

That their consent is explicitly given (e.g. verbally or via written consent)?

It will be given both in writing (signing the consent form) and verbally before commencement of interviews.

6. Can you answer the following questions about your research?

What steps have you taken to ensure the privacy of the people involved in your research will not be breached?

We have a restricted access SPOL site for all data gathered. Individuals names and detailed will not be included in any written analysis or reporting and audio recordings will be deleted within 12 months and all transcripts anonymised.

Do you confirm that the researchers will not divulge information or views to participants that have been provided by other participants in the course of this research? (Not applicable for surveys)

Yes

What steps have you taken to ensure that participants will not be deceived about the research and its purposes? (Note that deception can occur in many ways including underestimating time taken, so to not put people off, or not giving detailed information about purpose of research, to avoid bias).

Clear detailed information about the overall project (call for evidence and wild take review) what information is going to be used for and how. Interview specific information detailing the above again.

What steps have you taken to ensure confidentiality of data related to participants will be maintained, and participants cannot be identified?

Audio and transcripts will be given alpha numeric codes. An excel spreadsheet linking respondent to code will be kept in a restricted access SPOL site (to enable participants to withdraw their data if they wish).

Does your strategy for keeping data comply with the requirements of Data Protection legislation?

Yes. A link to NE's privacy notice was included in the call for evidence and a link is also provided on the information and consent sheet for the interviews.

You must ensure that your research is covered by a privacy notice, and that participants will be directed to the privacy notice before giving their consent to take part. A generic social science privacy notice is available on Gov.uk here.

Section 2: Does your research include any of the following elements:

1. Participants belonging to vulnerable groups (e.g. children, those with learning difficulties or protected under Mental Health Act)

no

2. Sensitive topics that could potentially cause stress to participants (e.g. health information)

no

3. Data that could potentially lead to the identification of participants (e.g. name, contact details, job title). This includes Methods using visual and/or vocal data collection (e.g. video, photos, recordings) that could lead to identification of participants in reporting and dissemination materials.

Yes – some demographic information captured in call for evidence (but not names or addressed) to aid analysis and develop purposive sampling frame for follow up interviews. All interviewees will then be given alpha numeric codes as detailed above.

4. The need for permission from responsible persons to enable the participation of others (e.g. children)

No

5. Methods that mean it will be either difficult or unsuitable to ensure full informed consent of all participants (e.g. behaviour change trials, internet research such as social media analysis, or analysis of blogs, forums, etc)

No

6. Potential risk to the safety of researchers (e.g. interviews with hard-to-engage groups, or participants potentially hostile to Natural England).

No

Section 3: Behaviour change

The idea of Government agencies intervening to change people's behaviour can be controversial and comes with its own set of ethical considerations. In addition, there are further complicating issues like transparency (can participants discern if they are being

‘nudged’ and/or is it always possible to tell them) and the fact that informed consent cannot always be explicitly obtained in behaviour change trials.

Whilst behaviour change work is in its infancy at Natural England, we recommend that all behaviour change trials and research are brought to the Ethics Committee for consideration and approval. In addition, behaviour change projects should be able to:

- Clearly demonstrate the evidence base of any proposed behaviour intervention, why it is necessary and that it is a proportionate means of addressing a well-defined problem
- Demonstrate that the interests of Natural England, researchers and participants in trials are aligned? (e.g. to ensure that participants in trials are not asked to do things that run contrary to their interests)
- Ensure that the research allows for proper evaluation of the effectiveness of interventions at key stages (and not just on the project’s completion)

Does your research involve behaviour change?

Yes ☐

No ☒

Please send your completed form to the Committee Secretariat at NEResearchEthicsCommittee@naturalengland.org.uk and allow approx. 2 weeks for a response. The secretariat will review the checklist and share with the committee as required.

Appendix 3: Information and consent form

Interviews for Natural England's call for evidence for the licensing of 'wild take' in England

Prior to agreeing to participate in this interview, it is important to understand what it involves and why it is being done. Please read the following information carefully.

Purpose of study

Natural England is undertaking a public call for evidence as part of its review into the licensing of 'wild take' in England – a practice which involves the taking of birds of prey from the wild for use in falconry and aviculture.

All wild birds are fully protected under law. However, falconry and aviculture are listed in the legislation as purposes for which licences may be granted in certain circumstances, provided there are no satisfactory alternatives and no negative conservation impacts. Natural England is responsible for determining applications for such licences on behalf of the Environment Secretary. Licences may only be granted on a selective basis and for a small number of birds.

The aim of this interview is to enable you to expand upon and further discuss evidence related your response to the public call for evidence to help Natural England gather detailed information that will form part of the evidence assessed in its review into the licensing of 'wild take' in England.

Deciding to take part

I would like to invite you to take part. Participation is entirely voluntary. If you are willing to participate, you will be asked to sign a consent form after reading this information sheet. Even after you decide to take part, you are still free to withdraw at any time without giving a specific reason.

If you agree, the interview session will be digitally recorded to fully capture the flow of information from participant to researcher to enable analysis. This audio recording will then be transcribed in full into a word document for subsequent analysis. The extent of your participation would be limited to an interview, which should be no longer than **60** minutes and take place via telephone/Microsoft Teams at a time convenient to you**.**

Confidentiality and Ethics

The only people that will have access to the interview audio recordings and transcripts are the project team in Natural England who are working on the evidence review and both transcripts and audio recordings will be stored securely, and audio recordings will be destroyed after 12 months with only anonymised transcripts remaining. All the information given will be kept strictly confidential and your name will be substituted with an anonymous participant code in any written records that are kept (interview transcripts and research reports). This means that no one will be able to identify specific comments to specific individuals.

At the end of the project, the written report produced will protect the name and privacy of participants so that no information can be attributed back to any identifiable individual. You can withdraw your participation, and any associated data, requesting that it be destroyed at any time. You can read about Natural England's social science privacy policy which this project follows here.

Disclosure and Safeguarding

While your participation will remain confidential, and all data anonymised in written reports the research team do have a duty of care to you the participant and must also adhere to the law. If as part of the interview you disclose information about any illegal activity, then we are legally bound to pass that information on to the relevant authorities. Beyond this anything you discuss will remain confidential and all written work relating to your interview will be anonymised.

Interviews are being led by James Hoggett, a social scientist from Natural England. If you have any concerns about the conduct of this study, you may contact WildTakeReview@naturalengland.org.uk

Interview Structure

Interview questions will be semi-structured, relying on a list of pre-defined questions linked to those topics covered in the Call for Evidence published by Natural England. This provides more focus than a conversation but allows participants to play a greater role in shaping the discussion.

Informed Consent Form

1. I confirm that I have been informed about this research project and I agree to take part.

2. I understand that all personal information I provide will be treated in confidence and my name will not be used in any report, publication or presentation.

3. I understand that I can withdraw from this project at any stage by informing the research team using the WildTakeReview@naturalengland.org.uk email address.

4. I understand that the data I provide will be used by Natural England for the purpose of research. The data will be stored and can only be accessed by authorised users, in line with UK Data Protection Act 2018 and General Data Protection Regulations 2018.

5. Interviews will be recorded and stored securely by James Hoggett as audio files. These audio files will be securely deleted after 12 months.

6. Anonymised transcripts will be created, by removing or replacing identifiers such as name, age, and location. These anonymised transcripts may be quoted from or published in full, in support of findings.

I confirm that I have read and understand the information provided on this form and give my consent to taking part in this research.

Participant's signature:		**Date:**	
Participant's name:			
Researcher's signature:	J.Hoggett	**Date:**	26/10/22

One copy of this form must be given to the participant and one copy held by the researcher.

Appendix 4: Coding template for analysis of interviews.

			N () =	Example
1.	**Theme: Falconry practices and welfare** This theme encompasses aspects relating to the practice and experience of falconry.			
	1.1	**Childhood experiences** A discussion of formative childhood experiences with birds of prey and nature and how it led to lifelong involvement with falconry.	**N= 6** FI1, FI2, FI3, FI4, FI6, FI7	'[…] from the moment that I first flew a hawk I thought was the most amazing thing ever in life. And I just knew that that would be in my life somewhere for a very long time.' (FI6)
	1.2	**Connections to nature** A discussion of the relationship that falconers believe falconry creates with the natural world.	**N= 4** FI1, FI5, FI6, FI8	'I enjoy that interaction with nature, it's my communication with nature, I become a part of nature and plugged into it.' (FI5)
	1.3	**Personal experiences**	**N= 6**	'[…] it's about the quality of the flight. Actually catching something is

	A discussion of the personal experiences of falconers across their life and the overall experience falconry creates.	FI1, FI2, FI4, FI6, FI7, FI8	far from being the most important thing.' (FI1)
1.4	**Falconry definitions and behaviours** A discussion of the types of behaviours that falconers describe as integral to the practice of falconry, including definitions of falconry and what it involves.	**N= 4** FI3, FI6, FI9, FI7	'For me, falconry is training and flying a raptor and hunting with it. That is what falconry really has been for hundreds and hundreds of years.' (FI2)
1.5	**Falconer capabilities** A discussion of falconers' reflections on the skill and knowledge needed to be a good falconer and the commitment required.	**N= 5** FI2, FI3, FI7, FI8, FI9	'[…] the majority of people don't fly their birds properly, and a good 50% don't know how to look after them either.' (FI5)

1.6	**Falconer-bird relationships** A discussion of the connection between a falconer and their bird, how it is developed, and what it means to them.	**N= 4** FI1, FI2, FI3, FI8	'[…] you have to adapt and try and put yourself in that bird's position and work with that bird. And as such, you know, there are great highs the first time you fly a bird free, then it comes back to you is one of the most life affirming things you'll ever do.' (FI2)
1.7	**Domestication** A discussion of falconer views on whether birds used in falconry should be treated as any other domestic animal or pet.	**N= 4** FI1, FI2, FI3, FI6	'Keeping a bird of prey is a little bit more complicated than keeping a dog or a cat. You need a complex level of understanding.' (FI6)
1.8	**Resources, land, and husbandry** A discussion of the resource requirements needed by both the bird and falconer to be able to practice	**N= 7** FI2, FI3, FI4, FI5, FI7, FI8, FI9	'[…] you need sufficient area of ground so they're not going to the same place every day. And so that the basic component is suitable land that they have legal access to and there's a sustainable harvest of quarry.' (FI5)

		falconry and the barriers to it.		
	1.9	**Raptor welfare** A discussion of the impact of avian influenza on the welfare of raptors, the rehabilitation efforts by falconers, as well as pressures on veterinary care.	**N= 4** FI2, FI3, FI8, FI9	'The only thing that worries me about injured birds, especially now is obviously the bird flu risk, bringing birds back. I can't even run a bird of prey hospital anymore.' (FI9)
2.	**Theme: Genetics** This theme encompasses aspects relating to issues relevant to falconer views about the importance, impact, or role of genetics in falconry and aviculture.			
	2.1	**Genetics-Breeding** A discussion of issues surrounding genetic diversity and any differences between wild and captive birds of prey.	**N= 8** FI1, FI2, FI3, FI4, FI5, FI6, FI7, FI9	'Captive breeding seems to produce a very peculiar result, which is birds get smaller. Over multiple generations, now our captive bred peregrines are quite noticeably smaller than UK averages.' (FI2)

2.2	**Breeder oversight and regulation** A discussion of captive breeding mismanagement and the potential impacts on genetics of captive bred populations	**N= 6** FI1, FI2, FI3, FI5, FI6, FI7,	'The problem with captive breeding has likely arisen in many cases, especially and is accelerating now. Because there is no regulation in place and that's not going to change because we can bring a few wild hawks into the system.' (FI6)
2.3	**'British' birds** A discussion of debates surrounding the existence of a distinct genetic British peregrine and, if so, the desirability and ability to source from current captive stock.	**N= 6** FI1, FI2, FI3, FI5, FI6, FI7	'I think there probably is a difference between the British peregrine and the Australian peregrine, or the Indian peregrine, but I don't think this is a uniquely specific population of peregrines in England or Scotland because they move around so much.' (FI3)
2.4	**Natural vs captive hybridisation** A discussion of the hybridisation in wild	**N= 7** FI1, FI2, FI3, FI5,	'there's an awful lot from the sort of 15th century onwards talking about hybridisation in the wild peregrines and lanners where everybody kind of accepted that peregrines, on occasions hybridized in the wild […]' (FI1)

		and captive birds and whether there are distinct genetic differences between wild and captive populations because of this.	FI6, FI7, FI8	
	2.5	**Characteristics - Behaviours (captive v wild birds)** A discussion of whether there are any behavioural differences between captive and wild birds of prey when used for falconry; the cause of those differences, and the perceived impacts.	**N= 9** FI1, FI2, FI3, FI4, FI5, FI6, FI7 FI8, FI9	'in falconry terms, there is wild taken eyass and the captive bred eyass. The only difference is with the wild take one you don't have the opportunity to take it after it could fly.' (FI1)
3.	**Theme: Conservation** This theme encompasses aspects relating to falconer views on conservation of birds of prey and the role falconry has historically played in this as well as possibilities for the future.			

	3.1	**Organisation relationships, and rehabilitation** A discussion of the relationships between conservation organisations, falconers, and falconry organisations both historically and going forwards.	**N= 5** FI1, FI2, FI3, FI6, FI7	'look what the Peregrine Fund did and in the States […] and the work that they did in reintroducing falcons that effectively had been wiped out through pesticides[…]'. (FI1)
	3.2	**Awareness/ education** A discussion of the role falconry has played in aiding bird of prey conservation through raising awareness and education.	**N= 5** FI2, FI5, FI6, FI7, FI9	'in my experience coming across members of the general public, regardless of issues with sort of concerning hunting, and politics and all the rest of it, people are still awestruck by birds of prey.' (FI2)
	3.3	**Wild population levels**	**N= 9**	'Most birds of prey have roughly a 90% mortality in their first year. So, you know, even if we had 10s of

		A discussion of the views surrounding the changing numbers of raptors in the wild historically and in the present day. Includes discussion about whether wild populations could sustain wild take.	FI1, FI2, FI3, FI4, FI5, FI6, FI7, FI8, FI9	1000s of people taking birds of prey, we still wouldn't be dramatically impacting, well, we wouldn't have any real impact on the wild population.' (FI2)
	3.4	**Environmental benefits** A discussion of how falconry practices can be a source of environmental gain, particularly regarding wild population levels.	**N= 5** FI2, FI3, FI4, FI5, FI9	'If the wild population is under threat, it might help if there is a limited wild take with the stipulation that the birds are released into the wild at the end of the hunting season when, hopefully, the birds have outgrown the period of high mortality and are now reasonably skilled in hunting.' (FI4)
	3.5	**Escaped falconry birds** A discussion of the environmental impact of falconry	**N= 4** FI2, FI6, FI7, FI8	'I'm flying Harris, which is a non-indigenous species. But obviously, you know, that lends as you know, causes issues if we lose birds, or they, you know, we're effectively breaking the law and introducing a non-indigenous species.' (FI2)

		birds escaping into the wild, which is influenced by the widespread use of non-native species.		
4.	**Theme: Crime/ illegal** This theme encompasses aspects relating to falconer opinions on the types and levels of criminal activity associated with falconry and discussion of possible impact wild take licensing could have.			
	4.1	**Monetary value** A discussion of the fluctuating market price of raptors for falconry, and how it factors as an incentive to illegally take birds of prey from the wild.	**N= 6** FI1, FI2, FI3, FI7, FI8, FI9	When we first started breeding Harris hawks, they were £1800 each and now you can buy a male for £100. Peregrines the price was very high to start with, then they dropped really quite low you could get a female peregrine for less than £800 (FI3)
	4.2	**Arab market** A discussion of the influence of the Arab market on falconry in the UK in terms of its	**N= 6** FI1, FI2, FI3, FI5,	'The Arabs have no interest [in illegally acquired birds]; they've pumped millions upon millions of pounds into breeding projects of their own.' (FI1)

		demand for falconry birds.	FI7, FI9	
	4.3	**Criminal Acts** A discussion of instances of criminality regarding birds of prey in falconry, with particular emphasis on the illegal taking of birds or eggs from the wild.	**N= 8** FI1, FI2, FI3, FI4. FI5, FI6, FI7, FI9	'I would say 50% of the people have been over the past taking birds illegally or taking eggs illegally have definitely been falconers […].' (FI3)
	4.4	**Reporting/self-policing** A discussion of the ways in which members of the falconry community react to those who engage in illegal activity.	**N= 4** FI1, FI2, FI7, FI9	'We've become, in the last certainly the last 20 years or so, we've become a large community with no ability to self-police at all.' (FI1)
	4.5	**Falconer perceptions of public views around falconry**	**N= 3** FI1, FI2, FI5	'I think there is a perception that probably falconers would still steal peregrines and sell them to the Arabs. But sadly, even though that's probably a general perception, it's

			A discussion of falconers' views on public perceptions surrounding the level of criminality in falconry.		not based on substantiated facts.' (FI5)
5.	**Theme: Wild take** This theme encompasses three interlinking sections each of which has several subthemes which combine to create a holistic view of perceptions about wild take in falconry and aviculture. Topics including the historic and cultural role that wild take plays within falconry, falconer's personal views on wild take, public opinion surrounding it, and a discussion of alternative suitable solutions to wild take.				
	5.1	**Wild take and the cultural history of falconry has 4 subthemes.** It captures a discussion of the historic and cultural role that wild take plays within falconry, falconer's personal views on wild take including whether they would be interested in obtaining a licence or not and any divisions within falconry related to differing views about wild take.			

5.1.1	**Historical importance to falconry** A discussion of the history of wild take and its relative importance to the cultural heritage of falconry in England.	**N= 7** FI1, FI2, FI3, FI5, FI6, FI7, FI9	'Really in recent history, there hasn't been wild take […] up until 20 years ago, of course, or 30 years ago when it all changed. Captive breeding came in. But before that, our birds were bought in from Holland, they were imported from Europe.' (FI9)
5.1.2	**Cultural / Nostalgia** A discussion of the nostalgic and emotional connections that are associated with the practice of wild take.	**N= 4** FI5, FI6, FI7, FI8	'It would be impossible for me to justify no matter how much I'd like to be lowered down a cliff on the rope to take a young eyass there is there isn't the benefit to even remotely come close to outweighing the possible negative to it.' (FI1)
5.1.3	**Purpose of and interest in wild take** A discussion of the purposes for which wild take licences might be granted and the parameters for supporting or	**N= 8** FI1, FI2, FI3, FI5, FI6, FI7, FI8, FI9	'For me, I think it would be only for conservation benefits, and for maintaining the diversity, the genetic diversity of the captive population. I can see no reason at all, for example, for taking peregrines from the wild.' (FI8)

		rejecting its resumption.		
	5.1.4	**Falconer divisions** A discussion of perceived differences between falconers around a range of topics including wild take.	**N= 6** FI1, FI2, FI4, FI6 FI7, FI9	'Within falconry, there's been quite a long history of maybe not being the best communication between the top end of the falconry community, the rest of the falconry community and between falconers and the public, and between falconers and conservation'. (FI6)
5.2	**Perception of wild take for falconry and aviculture has 2 subthemes.** It captures what interviewees perceive the views of other falconers to be about wild take, as well as how they think the wider public will react if licences are granted.			
	5.2.1	**Privilege vs right** A discussion of perceptions of wild take within the falconry community, centred on whether wild take is viewed as an inherent right or as a privilege.	**N= 3** FI1, FI2, FI9	'I kind of wish that falconers were more in agreement that it's a privilege. It's a privilege to have a wild hawk on your fist and develop the relationship with it.' (FI1)

	5.2.2	**Public attitudes toward falconry and possible reaction to wild take** A discussion of the way in which interviewees believe the practice of falconry is currently perceived by the public, the role that social media plays in shaping this, common public misconceptions about falconry and the impact wild take might have of public attitudes.	**N= 6** FI1, FI2, FI5, FI6, FI7, FI8	'My real concern here is, the bad press, we don't need wild take and the reasons given for wild take are just complete nonsense, it seems to me. And it's the public backlash that I really worry about.' (FI9)
5.3	**Code: Alternative satisfactory solutions to wild take has 6 subthemes** This code captures a discussion of whether falconers believe there to be alternatives suitable solutions to wild take, and if so, whether they are deemed a satisfactory and why as well as about what the future of falconry and wild take might be.			
	5.3.1	**Suitable solutions: captive bred**	**N= 5**	'if you want to get a peregrine, pick up the phone, speak to a breeder and he'll give you whatever peregrine of whatever colour, size,

	A discussion of how captive bred birds may provide a suitable solution to wild take.	FI1, FI2, FI6, FI7, FI9	subspecies you want from the world, and he will supply it at reasonable prices.' (FI7)
5.3.2	**Captive bred: availability of stock levels** A discussion of self-sufficiency in terms of the number of birds bred and the surplus availability of captive birds for falconry.	**N= 3** FI1, FI2, FI9	'The market is pretty well saturated. In the last few years at the end of hunting season, or the start of the next breeding season breeders are really struggling to find homes for all their youngsters.' (FI9)
5.3.3	**Suitable alternatives: rehabilitation** A discussion of opportunities to rehabilitate and release injured wild birds.	**N= 4** FI1, FI6, FI7, FI9	'We'll have, for example, peregrines who need to be flown for a year and hunted for a year before it can be returned to the wild. And we obviously don't necessarily always have the people here to do that. So, we're always looking for falconers.' (FI6)
5.3.4	**Suitable alternatives: wild disabled** A discussion of the use of wild disabled (non-releasable) birds to help with the genetic diversity	**N= 4** FI3, FI6, FI7, FI9	'[…]it's very common to have a wild disabled peregrine, and many of those are very successful in quality breeding lines in the UK.' (FI6)

		of captive stock rather than for use in flying and hunting.		
	5.3.5	**Need for release** A discussion of whether there was a need or a desire to subsequently release birds back into the wild once they have been flown and hunted for a period.	**N= 4** FI3, FI5, FI8, FI9	'if there was an option to release later in life, you know, that, to me, that would be that would be good. You've got that bird through the first winter, you've taught it how to hunt, its experience, then release it back into the wild.' (FI9)
	5.3.6	**"Keeping in statute"** A discussion of whether wild take should be banned entirely or kept on statute in case it is needed in future.	**N= 3** FI1, FI7, FI9	'[…]I'm very much of the view that whilst wild take is not required at the moment and should not even be put forward and considered in my view. I do think that it should be retained as a possibility on the statute book.' (FI7)
6.	**Theme: Licensing has 4 subthemes** This theme encompasses aspects relating to falconer opinions and recommendations on past, present and potential future issues regarding the licensing of wild take for falconry and aviculture. The theme involves discussions regarding current licensing policy in other countries besides the United			

Kingdom specifically for the taking of wild birds of prey			
6.1	**Existing licencing: Policy in other countries** A discussion of past and current foreign licensing policy for the taking of birds of prey from the wild, as well as first-hand experiences of wild take activities in other countries outside of the UK.	**N= 7** FI1, FI2, FI3, FI5, FI7, FI8, FI9	'I would say that 75% of falconry in the UK, would support an American style system straightaway. It's a good system because the enforcement is absolutely draconian. There are penalties for, you know, breaking the law […] and they're lasting'. (FI2)
6.2	**Future licensing conditions** A discussion of licensing conditions; recommendations for future requirements that could be applied to a licensing regime for wild take.	**N= 7** FI2, FI3, FI4, FI5, FI7, FI8, FI9	'I can imagine if Natural England gives permission for wild take, that bird is going to be very closely monitored, it's going to be it's going to have a ring, it's probably going to have a microchip every time.' (FI9)
6.3	**Organisational vetting and peer review** A discussion of introducing peer-review by recognised	**N= 5** FI2, FI3, FI7,	'They've got to be a member of a recognized body, which is the BFC or the Hawk Board. And on the Hawk Board. That's the first thing. They've got to be evaluated by their peers.' (FI7)

		organisations and the potential to utilise this method for any future licensing regime for falconry wild take.	FI8, FI9	
	6.4	**Enforcement** A discussion of the difficulties in policing or enforcing licensing conditions for any potential licence holders.	**N= 3** FI2, FI3, FI8	'What DEFRA's got to do is inspect them, and they aren't going to do it because they haven't gotten the people to do it.' (FI3)

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