

Wildcat Reintroduction in South-West England: A Social Feasibility Study

Report for Submission to the South West Wildcat Project

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July 2024

IMPORTANT NOTES FOR ALL READERS

- This report deals with perspectives and opinions **only**. Those described are those of the study participants, as they have been shared with the research team.
- It is not within the scope of this report to determine where points raised by participants are "correct" or "incorrect", and participant statements of "fact" may or may not be scientifically evidenced. The researchers' role is to enable an understanding of the viewpoints that exist, based upon participants' knowledge.
- Perspectives detailed are the result of research engaging with real people living in southwest England. The reader may or may not agree with those viewpoints or points raised. All readers are encouraged to read this report with respect for the diverse opinions presented, regardless of their own views.
- The opinions presented in these pages are those of participants as articulated to the research team. They may not necessarily reflect the personal views of any member of the research team.

Citation

This report should be cited as:

Auster, R.E., Moody, S., Crowley, S.L., Dando, T., Barr, S.W., & Brazier, R.E. 2024. *Wildcat reintroduction in south-west England: A social feasibility study.* University of Exeter. https://doi.org/10.5281/zenodo.14283637

Funding

This research was commissioned by the South West Wildcat Project. The project is led by Devon Wildlife Trust, in partnership with Derek Gow Consultancy and Forestry England.

The study presented herein was undertaken independently by researchers at the University of Exeter; the South West Wildcat Project had no input into, or oversight of, analysis.

Acknowledgments

The authors would like to thank all 2512 participants who took part across the research activities, as well as all those who shared research invitations within their networks. The authors would also like to express gratitude to the South West Wildcat Project for their respect of the researchers' position and role during the course of this work, as well as Prof. C. Sox for his support during the project timeframe.

Cover Image

Captive European wildcat (2024). Credit: R. Auster

EXECUTIVE SUMMARY

Context

- In 2020, a preliminary study led by Vincent Wildlife Trust identified south-west England as a potentially suitable region for wildcat reintroduction¹ based on habitat suitability and risk factors. Subsequently the South West Wildcat Project was formed, led by Devon Wildlife Trust in partnership with Derek Gow Consultancy and Forestry England, to further explore the feasibility of reintroducing the European wildcat into south-west England.
- At the time of writing, the South West Wildcat Project is investigating whether it is possible to reintroduce European wildcat (*Felis sylvestris*) to south-west England, considering both social and ecological aspects.
- No reintroduction is currently planned. The results from all aspects of the feasibility study will be presented later in 2024, following which the South West Wildcat Project will consider whether to develop a reintroduction proposal.
- The authors of this report were commissioned in 2023 to independently undertake a social feasibility study to enable understanding of perspectives about wildcats and reintroduction.
- The activities reported were undertaken in a research-only capacity; the researchers are not involved in proposing or opposing a wildcat reintroduction, and the University of Exeter are not members of the South West Wildcat Project.

Method

- The project used mixed-methods to explore perspectives of key stakeholders, and the views among wider publics.
- <u>Part 1</u> investigated key interest groups' viewpoints using Q-Methodology, the design of which was informed by stakeholder interviews completed previously in a PhD project².
- Informed by the results of Part 1, <u>Part 2</u> was comprised of public surveys with both representative and open samples to understand relationships between demographics and identified perspectives, as well as insights into prevalence of societal viewpoints.

Results 1: Interest group perspectives

- The following page summarises points which characterise four perspectives identified from key interest groups (section 1.3). Demographic variables associated with each perspective are also given (section 2.4). These are in bold text when a strong relationship was observed in at least one sample, plain text when moderate, and italic when weak.
- Each identified perspective is given an indicative title. These are nominative, and solely for the purpose of easing discussion in this report. It is strongly recommended that complete perspective descriptions are read to provide a richer and more nuanced understanding of each see section 1.3.

RESTORATION NATURALIST

-Favourable to wildcat reintroduction for conservation and wilder landscapes. -Thinks reintroduction will have benefits for wild experiences, wilder landscapes, and nature tourism. -Predicts few negative outcomes, but a conflict management plan needed from the start.

Positively associated with:

- Higher wildcat knowledge scores.
- Ages 18-24, 25-34, or 35-44.
- Occupation in Education.

Negatively associated with:

- Occupation in Farming & Agriculture.
- Age 55-64.
- People who do not have cats.

ENVIRONMENTAL GUARDIAN

-Conserving existing wildlife should be the priority; wildcats occur elsewhere. -Need to be able to manage conflicts: legally protecting wildcats could create difficulties.

-Risks for some poultry and concern about unintended consequences.

Positively associated with:

- Occupation as Student.
- Age 18-24.
- People who do not have cats.
- Occupation in Environment, Nature & Wildlife.

Negatively associated with:

- Higher wildcat knowledge scores.
- Ages 45-54 or 35-44.
- Occupation in Community & Social Service, Tourism or Education.

SCEPTICAL PRAGMATIST

-Unsupportive of wildcat reintroduction, believe the ecosystem has changed too much.

-Hybridisation with domestic cats is considered impossible to overcome. -Concerned that wildcats may predate poultry and game birds, and may pose a disease risk.

Positively associated with:

- Occupation in Farming & Agriculture, Building & Maintenance, or Student.
- People who do not have cats.
- Ages 55-64, 65-74.

Negatively associated with:

- Higher wildcat knowledge scores.
- Ages 18-24, 25-34, or 35-44.
- Occupation in Education.

WILDLIFE ADVOCATE*

-Like the idea of more wildlife and is supportive of wildcat reintroduction. -Although less familiar with wildcats, issues for domestic cats seen as unlikely.

-Support transparency, openness, and a conflict management plan.

* Statistical models to test relationships between 'Wildlife Advocate' and demographic variables did not meet the criteria for goodness of model fit.

Results 2: Prevalence of view in public surveys

- 1000 participants took part in a statistically representative survey. The representative sample provides insight into the prevalence of opinions in the south-west population.
- 1425 participants completed the open survey; an opportunity that was available for all residents in the south-west to take part in. The open sample included key occupation groups which were not well represented in the representative sample: Environment, Nature & Wildlife; Forestry & Woodland Management; Farming & Agriculture; or Gamekeeping & Shooting).
- The open sample exhibited a greater degree of knowledge about wildcats. E.g. 58.2% correctly identified a wildcat from a choice of four images, whereas only 18.9% of the representative sample did so (53.5% selected the photo of a Eurasian lynx (*Lynx lynx*)).
- Levels of (dis)agreement with 19 statements were analysed in relation to demographic variables (section 2.5). These statements encompassed views on: reintroduction; interbreeding with domestic cats; business impact; habitat suitability; and conflict management.
- The open sample more frequently agreed or disagreed with statements than the representative sample. This was often more strongly, at either end of the spectrum.
- 70.8% of the representative sample agreed that they like the idea of wildcat reintroduction (31% strongly), while 10% disagreed (3.5% strongly). A higher share of the open sample agreed, and more strongly:
- 76.5% of the representative sample agreed that there would need to be a clear conflict management plan in place right at the start of any programme, while 3.9% disagreed. In the open sample, these figures are 85.2% and 4%, respectively.
- Wildcat knowledge score in both samples was consistently positively associated with statements supportive of wildcats and their reintroduction, and negatively associated with statements indicating concern about wildcats.
- Cat owners often agreed more strongly with statements supporting wildcats and their reintroduction than non-owners, across both samples.

Researcher Reflections

Four analytic insights were independently developed by the research team. These are provided for consideration if a renewed coexistence with wildcats is deemed possible. These are discussed fully in <u>Part 3</u>.

To summarise:

- <u>Reflection 1</u>: If a decision is made to develop a reintroduction project, clear justification will be needed that is anchored in the local ecosystem; the core focus should be on how wildcats contribute towards a healthier ecosystem in a locally relevant approach.
- <u>Reflection 2</u>: Presently, there is little familiarity with wildcats in south-west England. Any project will need to involve sensitive outreach to help communities familiarise themselves with the species and recognise distinctions from domestic cats and other species (particularly predators) with which local people have lived experience.
- <u>Reflection 3</u>: There is strong consensus that a clear conflict management plan will need to be in place right at the start of any programme; this is essential. During its development, this should involve local actors in the locality of release. To provide reassurance in response to concerns of unintended consequences, fora for engagement will need to continue throughout a reintroduction process.
- <u>Reflection 4</u>: There are different opinions regarding the degree to which interbreeding between domestic cats and wildcats could be a problem. If a project concludes that interbreeding risk can be overcome, evidence on how this conclusion has been reached and how remaining challenges will be managed should be clearly communicated.

<u>Concluding remark</u>: Should the principles of the four reflections be effectively integrated into project development and planning, the researchers conclude it is conceivable for wildcat reintroduction to be a socially feasible prospect in south-west England.

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Introduction

i. Background

At the time of writing, the South West Wildcat Project (SWWP) is investigating whether it is possible to reintroduce European wildcat (*Felis sylvestris*) to the south-west of England. The South West Wildcat Project is led by Devon Wildlife Trust and includes Derek Gow Consultancy and Forestry England.

Reintroduction is when individuals of a species are released into an area where they previously lived, but are no longer present³. European wildcats historically lived throughout England and Wales until the mid-1800s, until persecution and habitat fragmentation resulted in them becoming extinct¹. A critically endangered wildcat population remains in Scotland and is the subject of conservation action⁴.

At the time of writing, no reintroduction is currently planned in south-west England. In 2020, a preliminary ecological feasibility study led by Vincent Wildlife Trust identified the south-west as a potentially suitable area for reintroduction¹. Subsequently, the South West Wildcat Project (SWWP) was formed and is now in a feasibility phase, whereby the project is seeking to understand whether a reintroduction is possible by exploring both social and ecological factors. The results from all aspects of the feasibility phase will be presented later in 2024, following which the SWWP will consider whether or not to develop a reintroduction proposal.

This report contains details of a social feasibility study conducted as one facet of the SWWP's feasibility work. The authors were commissioned by the SWWP to undertake this independent study, to identify and provide understanding of perspectives that exist about the possibility of wildcat reintroduction in the region.

This social research has involved a two-stage process:

- First, the activities focused on developing a nuanced understanding of viewpoints held by key stakeholders or groups that may be interested and/or affected if wildcat were reintroduced, using a new Q-Method study that was informed by prior interviews undertaken as part of prior PhD research² (see section Part 1, which includes an introduction to what Q-Method entails and can achieve).
- Second, a public survey was developed (informed by the Q-study outcomes) to investigate perspectives held among the wider public of south-west England. Two versions of the survey took place; one which recruited participants for a sample that is statistically representative of the south-west population by age and gender, and a second which was open publicly to provide an opportunity for all residents in the south-west to participate (see Part 2).

This report details the findings of all aspects of this social feasibility study. The report will be submitted to the South West Wildcat Project who will consider it, alongside ecological and other evidence from across the wider feasibility phase, when deciding on whether to work towards a reintroduction proposal. The report will also be shared back with the participants who opted to receive a copy, and made publicly available via the University of Exeter's ORE open access repository.

Notes on Terminology

European wildcats are also sometimes known in England as the 'wood cat'¹, or as 'wildcats'. They are also known in Scotland as 'Scottish wildcats'. The remainder of this report will primarily refer to the species as 'wildcats'.

The term domestic cat is used to describe all cat types within the *Felis catus* species. This includes domestic pets / companion cats, former pets turned stray cats, urban and rural feral (non-socialised) cats, and farm cats.

ii. Social Feasibility in Wildlife Reintroductions

Wildlife reintroductions are an increasingly used technique in conservation, and normally seek to restore species populations or ecological functions.

Where they occur, the outcomes of reintroductions are more likely to be improved where an understanding of social factors and potential interactions between people and the reintroduced species has been incorporated into the project's design^{5,6}. An integrated understanding of the social and ecological dimensions - from the outset - is more likely to enable a successful outcome when reintroductions occur^{5,7}, with coexistence being more likely to be achieved and sustainable in the longer term⁶.

Social feasibility assessments undertaken *in advance of* a reintroduction enable understanding of the human dimensions and potential human-wildlife interactions which may occur in the future⁵. This includes both where there are beneficial outcomes and potential conflicts – whether those be observed or perceived^{7–9}. In the case of the latter, social feasibility outcomes can enable planning of mitigation or management processes which are less likely to escalate conflicts⁵. Ultimately this can facilitate renewed coexistence, both between humans and the reintroduced species, and to other species within the local ecosystem. ^{6,8}.

Until recently, social feasibility assessments have: "often [been] absent, narrow in scope, or conducted too late to influence actions", in part due to resourcing limitations or capacity to undertake social research^{5(p1)}. There is increasing awareness of the role of social understanding in conservation contexts, however, which may drive further efforts, and recent research has sought to garner greater understanding within British contexts of human-wildlife interactions within the context of reintroductions at different stages. For example, social research has taken place around the cases of Eurasian beaver (*Castor fiber*)^{8,10}, pine marten (*Martes martes*)^{11,12}, white stork (*Ciconia ciconia*)¹³, and Eurasian lynx (*Lynx lynx*)¹⁴. Ideally, social feasibility assessments should take place *prior to* species reintroduction processes to enable subsequent planning to integrate the understanding that they foster⁵, thereby being more likely to enable inclusive reintroduction processes with greater trust between groups^{5,8}.

Social feasibility assessments are advocated for by the International Union for the Conservation of Nature (IUCN) in their *Guidelines for Reintroductions and Other Conservation Translocations*^{*3}. In England, new reintroductions are expected to follow the *Reintroductions and other conservation*

^{*} Translocation in conservation refers to the intentional movement of individual animals (or plants) between locations. Reintroduction is a specific form of translocation, where the release location is an area in which the species previously existed but has since become locally extinct.

*translocations: Code and Guidance for England*¹⁵ (guidelines from Natural England which in themselves are informed by the IUCN Guidelines), which includes guidance on 'engagement, consultation, and transparent communication' (p58-63).

Where possible, it is advisable that mixed-method approaches are employed for social feasibility assessment^{5,12}; different approaches have merits and limitations, and combined approaches can account for the merits and limits of each. For example, historically when social feasibility assessments *have* taken place, these have most commonly relied on public surveys with self-selecting samples⁵. Such surveys have benefits in providing a useful overview of community attitudes^{7,12,13}, but if relied upon in isolation, could overlook minority viewpoints which may be low in prevalence yet may have a disproportionately high influence upon the reintroduction outcome¹¹.

his study has employed mixed-method approaches which together seek to provide both depth and an overview of perspectives in the south-west, with data captured both from key stakeholders and wider publics. It is hoped therefore that this study provides a social feasibility assessment with comprehensive insight, with identification of key aspects to be addressed if a reintroduction proposal is later to be taken forward (whether by the South West Wildcat Project, or others).

iii. Role of the researchers and this report

The authors of this report are independent of the South West Wildcat Project, and are **not** members of the Project's partnership. Beyond commissioning the work, the SWWP did not have any involvement in research design or analyses. The research team are not involved in proposing or opposing a wildcat reintroduction, and it is not within the researchers' gift to determine whether or how to proceed upon conclusion of the feasibility studies. The report does, however, include independently developed researcher reflections and conclusions from this social feasibility assessment (provided in Part 3).

It is the research team's intention to develop academic text(s) based upon the work detailed within these pages, and it is possible further study may take place in the future. As things currently stand, there are no such plans for subsequent research and submission of this report marks the end of this research team's involvement in the SWWP. This is with exception of S. Moody who is undertaking a PhD on ethics and welfare in wildlife reintroductions, supervised by Prof Samantha Hurn and Dr Sarah Crowley.

Further outreach and engagement activities have been undertaken by partners within the SWWP. As this is beyond the scope of this report and the research team has not been involved in these activities, these are not reported upon within this document. As such, it should **not** be assumed that further activities have, or have not, taken place on the basis of this report in isolation. As it is not the role of the researchers to report on these activities, the reader is advised to contact a member of the SWWP if they have questions or require any further information about the South West Wildcat Project.

iv. Study Ethics

For all research which involves human subjects, the University of Exeter requires an ethical review process to be completed, prior to commencing. This study was granted ethical approval by the

Geography Department's Ethics Committee^{*}. The following are a summary of ethical principles applied to this project:

- Prior to taking part, all participants were provided with research information and provided informed consent. In the Q-Method study, this was in written format with a signed consent form (either in-person or returned by email). In the public surveys, which were hosted online, participants were required to tick a box to indicate they had read and agreed to take part; it was not possible to complete the surveys without first ticking this box.
- Participation was voluntary. Participants were able to withdraw from the study by notifying the researcher prior to the analysis, without the need to provide a reason. No such withdrawal requests were received.
- Participation was on an anonymous basis. To enable understanding about participant backgrounds some personal data were collected, but none that would enable individuals to be identifiable. In the Q-Method study, participants were asked to self-describe their interest group or background in a manner which they felt was representative yet would prevent them from being personally identifiable. In the surveys, demographic information was requested in broad terms; participants were not required to identify themselves. Participants were informed of the intended project outcomes, primarily that results would be reported upon in this document and potential subsequent academic text(s). All participants were offered the opportunity to receive a copy of this report and, if they opted in, an email address was requested for the purpose of dissemination. These were stored on a secure University of Exeter site and will be permanently deleted once the report has been shared with those participants who opted to receive it.

v. Research Timeline

Here, an overview of the timeline and key project milestones is provided:

- Prior to this social feasibility project commencing, interviews with stakeholder groups were undertaken by T. Dando as part of a PhD investigating social and ecological feasibility of wildcat reintroduction, based at the University of Exeter².
- 21st August 2023: Researchers notified of successful award of contract.
- 25th August 2023: Application for ethical approval submitted.
- 26th August 17th October 2023: Q-Method statements designed, while awaiting ethical approval.
- 18th October 2023: Ethical approval granted for the project, following which the first invitation to take part in the Q-study were extended.
- 12th December 2023 29th February 2024: Q-Method data collection; dates represent agreed dates for the first and last participant meetings
- 1st March 22nd April 2024: Q-Method analysis and public survey design.
- 23rd April 23rd May 2024: Public survey data collection window.
- 7th 21st May 2024: Statistically representative survey data collection window.
- 24th April 31st July 2024: Analysis of public survey data, and project report writing.
- 31st July 2024: Final project report submitted to South West Wildcat Project.

^{*} Application ID 3958163.

Part 1: Q-Method - Perspectives of key stakeholder and interest group representatives

In this section, the results of a study to identify and understand shared perspectives held among representatives of key interest groups are presented. This part of the study used a technique known as 'Q-Methodology'. First, an introduction to Q-Method is given (<u>section 1.1</u>), followed by detail on the specific methodological details as they were applied to this study (<u>section 1.2</u>). The results are then presented in <u>section 1.3</u>.

1.1. Introducing Q-Methodology

Q-Method is a technique for eliciting understanding of shared perspectives that exist on a given issue. It seeks to identify, explore, and characterise subjective views that exist about a topic^{16,17} – in this case about wildcats and their possible reintroduction to the south-west.

Originating from the field of psychology, Q-Method is increasingly used to understand subjectivity that underpins viewpoints in the environmental sphere. It is recognised as an effective tool for understanding viewpoints that exist about species reintroductions and has been used, for example, to explore perspectives about the possibility of lynx reintroduction in Scotland¹⁴, pine marten reintroductions in Wales¹¹ and the south-west of England¹², and beaver reintroduction in England^{18,19}.

As a method, it aims to advance understanding of perspectives that exist, and where there are points of commonality or divergence between views. Thus, it seeks to enable a nuanced exploration of subjectivity rather than generalise or estimate prevalence of opinion in wider society^{17(p72),19}. Consequently, the method is effective with smaller numbers of participants (typically between 12 and 60) and is sensitive to marginal viewpoints which may perhaps be in a minority among a wider population, but could have a defining influence upon the likelihood of reintroduction success or failure¹¹.

In practical terms, Q-method involves participants sorting a set of informed, pre-determined statements (known as the Q-set) into a matrix configuration (the Q-Matrix) that captures the strength of agreement with statements relative to each other. The final arrangement of these statements, which is carried out by participants, is known as the Q-sort. Throughout the sorting process participants can discuss the subject, e.g. by sharing how they have interpreted statements or why they have responded to it in way that they have.

For analysis, the researchers undertake a statistical (factor) analysis to compare the entire set of Q-Sorts holistically, exploring correlations between them. Analysis identifies a series of 'factors'; these resemble exemplar Q-Sorts that could be considered typical of each identified perspective. Participant Q-sorts that align with each factor (or 'load onto' a factor) are statistically recognised.

Factors can then be interpreted, following a systematic process and with the support of things participants said during the sorting exercise. Following this procedure, the end-product resembles a written profile of each identified shared perspective, through which distinguishing features can be highlighted and areas of consensus recognised.

1.2. Method

1.1.1. Q-Set Design

The context of this Q-Study was to explore perspectives on wildcats and the possibility of reintroduction within the south-west, among representatives of groups that may have a particular interest or stake in a reintroduction.

Within this context, Dando previously completed a PhD upon the social and ecological feasibility of wildcat reintroduction (in the south-west and Wales)². Interviews were completed with representatives of stakeholder groups during this time, including with farmers, domestic cat owners, and gamekeepers. The Q-Set was built upon and informed by the prior interviews that had been undertaken.

Dando reviewed the interview transcripts to extract an initial long list of statements, which sought to encompass comprehensive subject coverage using the language of those groups. This consisted of 144 statements.

Q-Method is concerned with the subjective, thus 'subject coverage' here refers to the range of opinion; it is not for the researchers to determine what is factually 'correct' or 'incorrect'. It is also preferable that statements are written to evoke a response of agreement or disagreement.

To balance subject coverage with participant comfort / willingness to participate, the statement list was refined to a short list of statements with the aim of providing subject coverage while not becoming onerous to sort. Two members of the research team reviewed the list independently of each other to extract a sample of statements they felt to be representative of the subject coverage, which were then compiled together and discussed with T. Dando. At first, 88 statements remained, but following a second round of refinement, the final list comprised 44 statements.

Most statements were reproduced verbatim from the original interviews. In a small number of cases, minor tweaks to wording were made for clarity; the final set of statements could be considered as "nearly quotes" that represent things real people have said. This final list can be seen in Table 2.

1.1.2. Participants

Given that Q-Method is not one which seeks to statistically generalise opinions to wider society, a sample of key informants was selected through purposive and snowball sampling methods, ensuring a range of groups were represented. This was achieved by: inviting organisational representatives to participate and to further the invitation within their networks; inviting known or identified individual contacts to disseminate the invitation within their networks; and (particularly for domestic cat owners) sharing an invitation through community Facebook pages. The resulting sample included at least one representative who had a background interest of or involvement in: farming (primarily of poultry); wildlife- or eco-tourism; gamekeeping; forestry and woodland management; cat welfare professional; veterinary care; domestic cat owner; environmental professional; and wildlife volunteering.

A summary of participants is given in Table 1, in which each is ascribed an anonymised participant code. Participants were asked to self-describe their background in a manner they felt comfortable with while not personally identifying them.

Participant ID	Gender	Participant Background
P1	Female	Ecotourism / Rural Business
P2	Female	Ecotourism
Р3	Female	Cat Welfare (unowned cats)
Ρ4	Female	Environmental NGO
P5	Female	Government Organisation
P6	Male	Land Management – Environment / Agriculture
P7	Female	Cat Welfare Organisation
P8	Male	Gamekeeper
P9	Female	Domestic Cat Owner
P10	Male	Forester / Woodland Management
P11	Male	Wildlife Tourism
P12	Female	Domestic Cat Owner
P13	Male	Wildlife Volunteer
P14	Male	Environmental Professional
P15	Male	Wildlife Volunteer
P16	Male	Wildlife Volunteer
P17	Female	Domestic Cat Owner
P18	Male	Wildlife Manager
P19	Female	Domestic Cat Owner
P20	Male	Nature Conservation Charity Representative
P21	Male	Vet
P22	Female	Conservation Professional with Poultry, Domestic Cat, Sheep
P23	Male	Sheep Farmer - Tenant
P24	Male	Poultry Farmer – Organic, Free Range, Eggs
P25	Male	Forester
P26	Female	Regenerative Farmer (Vegetables, Free Range Chickens, Pigs, Sheep)
P27	Male	Poultry and Sheep Farmer

TABLE 1. SUMMARY OF Q-METHOD PARTICIPANT BACKGROUNDS.

1.1.3. Q-Sort process

Sorting took place in two stages:

- First, participants were asked to sort the statements into three piles: one each for statements with which they agreed, disagreed, or had no strong feelings about (or were unsure).
- Second, statements were placed into the Q-Matrix to reflect the strength of (dis)agreement with statements, relative to one another. The Q-Matrix was an eleven-point scale ranging from 'Most Disagree' (-5) to 'Most Agree' (+5) (Figure 1), and every statement needed to be placed somewhere, relative to the strength of agreement with the others
 - There is discussion about the advantages of using a forced distribution (where participants must place the statements into a pre-determined matrix shape) versus a free distribution (where participants may place statements wherever they choose). The method is effective either way. Here, the lead researcher has

previously observed some participants preferring to follow a guide and others feeling greater comfort when unforced, so a hybrid approach was here taken; a matrix configuration with quasi-normal distribution was provided as a guide to help frame thinking, but participants were told they could place as many statements in each column as they wished.

 For clarity, statements placed in the furthest left-hand column are those participants most strongly disagreed with, and moving from one column to the next (heading right) indicates a higher level of agreement with those statements relative to the ones in the previous column.

FIGURE 1. EXAMPLE OF THE Q-MATRIX.

Dependent upon participant availability and preference, Q-sorting took place either online or faceto-face. In both cases the procedure was the same. In face-to-face participation, the statements were presented on physical cards that could be placed into a matrix on a table (Figure 2a). In online participation, the statements were on virtual cards which could be placed into a matrix configuration using EQ Web Sort software²⁰ (Figure 2b). For the latter, a link was shared with participants to open on their computer, with request to share their screen back with the researcher to enable observation of, and assistance with, the sorting process.

FIGURE 2. EXAMPLES OF COMPLETED Q-SORTS FROM A) AN IN-PERSON SORTING PROCESS, AND B) AN ONLINE SORTING PROCESS.



Throughout sorting, participants could freely discuss their thoughts. There was also opportunity for free discussion upon completion, and participants were asked if they felt anything had been missed out. The researchers took written notes of verbal discussion to support interpretation of the data in the analysis stage.

1.1.4. Analysis procedure: Identifying the perspectives

To identify the shared perspectives (known as 'factors'), all Q-Sorts were holistically compared with a Principal Component Analysis and Varimax Rotation. Varimax mathematically maximises the amount of variance that can be explained^{17(p122-126)}. Analyses were undertaken with KADE software²¹.

Factors were extracted and retained when:

- 1. the Kaiser-Guttman criteria were met^{17(p105-106),19-21}, in that factor Eigenvalues were greater than one;
- at least two participant Q-Sorts significantly loaded onto (statistically associated with) the factor^{*(p107)};
- 3. and Humphrey's rule was met^{17(p107)}, whereby the cross-product of two highest loadings exceeded twice the standard error.

Originally, a five-factor solution met the retainment criteria. While the above criteria guide objective decision-making, final decisions on factors to extract rest with the researcher(s)^{17(p105-107)}. Upon preliminary review of those five factors, it was felt that the fifth added little explanatory value as it did not contribute a useful or recognisable perspective, and a four-factor solution was deemed more logical[†]. In addition, a four-factor solution was more inclusive of participant Q-Sorts, as only

^{*} All sorts loaded to a Factor at the significance level of 0.01 but ten were confounded at this level (loaded onto more than one factor). Rather than exclude the confounded sorts (which are typically not used in the construction of factor estimates^{17(p129)}) and to be more inclusive for participants, the threshold for loading was increased until there were no longer any confounded Q-Sorts (a loading threshold of 0.56). Sorts which remain loaded at this level contribute more towards each factor than those that were lost^{17(p105-107)}.

⁺ This was supported by visual inspection of the Scree-plot^{17(p107)}, which signalled a three- or four-factor solution.

two did not load onto a factor, whereas this was the case for four Q-Sorts in the five-factor solution. The accepted four-factor solution accounted for 68%^{*} of the variance in the data[†].

Weighted averages of the loaded configurations were used to generate factor arrays (single, exemplar Q-Sorts which represent the placement of statements that would be typical of someone associated with that factor). Complete factor arrays (summaries of typical scores for each shared perspective) are presented in Table 2.

Each factor array was systematically interpreted using the Crib Sheet method proposed by Watts and Stenner (Chapter 7), which manually examines:

- statements ranked at +5 or -5 (highest levels of agreement or disagreement);
- statements ranked higher or lower than in other factor arrays, relative to each other;
- and additional statements of interest, here being those which scored highly (+/-), which were related to the emerging narrative, or statistically distinguishing/consensus statements.

This technique results in every statement being engaged with during interpretation at least once. Comments made by participants during the Q-Sort were also reviewed to identify quotes of interest which support the interpretative narrative.

^{*} This can be considered a sound solution, which is typically considered to be one which explains 35-40% of variance, and above^{17(p105),25}.

⁺ Q-Method is a data reduction technique^{17(p98),26}; the remaining 32% is explained by factors which did not meet the necessary criteria to be retained.

TABLE 2. FACTOR ARRAYS FOR THE FOUR IDENTIFIED PERSPECTIVES. STATISTICALLY DISTINGUISHING STATEMENTS ARE HIGHLIGHTED IN YELLOW.

				Perspective (Factor)				
	Statement	1	2	3	4			
1	Wildcats are an interesting animal, there is a story to be told.	2	0	-1	5			
2	Wildcats need help.	1	-2	1	3			
3	It is a problem that domestic cats and wildcats can interbreed.	1	4	3	0			
4	Maybe if the reintroduction happened, people wouldn't need feral cats for pest control.	-2	0	-2	-2			
5	People would have to be more on top of neutering domestic cats for it to be successful.	0	1	1	2			
6	People are familiar with domestic cats which are similar to wildcats, so they might be more accepting.	0	0	-2	-1			
7	If wildcats were going to be an issue for my cats, then that might be something that concerned me.	-1	-2	0	0			
8	Many farmers would tolerate wildcats.	-1	0	-3	-1			
9	The anti-farmer narrative that accompanies reintroductions is more of a problem than the species itself.	0	-2	-1	2			
10	I don't know if there is prey for wildcats.	-3	-4	-3	-2			
11	There is not enough habitat for wildcats here.	-2	-2	2	-3			
12	You've got to think about roads. It would be awful to reintroduce the species and then they get run over.	0	-1	0	-1			
13	If they take a few grey squirrels that can only be a good thing.	2	3	2	0			
14	I am concerned about wildcats' impacts on wildlife.	-2	2	1	-1			
15	Wildcat reintroduction would add to the more wild experience of the countryside.	3	-1	0	1			
16	It would probably help rural businesses and holiday businesses.	1	-2	-5	0			
17	Wildcats could be a threat to poultry or gamebirds.	-1	2	2	1			
18	Wildcats will not eat livestock.	0	2	-2	-1			
19	We'd have trouble with wildcats with people and children.	-5	-5	-1	-5			
20	There is always the possibility of unintended consequences.	0	4	5	1			
21	It starts with a wildcat but what's next? Lynx? Wolf? Bear?	0	0	2	-4			
22	I don't know much about wildcats.	-2	0	1	2			
23	There would need to be a lot of education about wildcat behaviour.	1	1	4	1			
24	There is a reason wildcats went extinct.	-1	-1	3	0			
25	A wildcat is not a particularly big cat.	1	3	0	0			
26	It's a Scottish wildcat not a Welsh or English one, the clue is in the name.	-4	-3	-1	-3			

27	It's the numbers that will be the difficult thing; you don't want too many wildcats, so you'd need a form of control.	-3	3	-1	-1
28	If wildcats were protected in the countryside, you could see problems.	-3	2	1	-2
29	If they were once native, then they should be reintroduced.	3	-1	-4	1
30	People feel wildcat reintroduction is being imposed upon them.	-2	0	0	-2
31	It's about transparency and openness at the end of the day.	2	1	3	4
32	There would need to be a clear conflict management plan in place right at the start of the programme.	2	1	4	3
33	Unless you can remove the threats facing wildcats I don't think it would be ethical to reintroduce them.	-1	-4	2	-2
34	I like the idea of more wildlife in our landscape.	4	1	0	2
35	We should focus on looking after what we have got.	-1	5	1	-4
36	I like the idea of wildcat reintroduction.	4	-1	-3	3
37	I would modify my behaviour if it meant that any sort of animal that needs to be there should be there.	1	-1	-2	2
38	The ecology of that place is geared to that animal being there. And that's a different scenario to a domestic cat, which is not necessarily supposed to be in the area that it is.	0	-1	-2	1
39	I think it would bother me if they didn't look well and they didn't look looked after.	-1	-3	-1	1
40	I would much rather have real wildcats in the countryside than feral moggies.	3	1	-4	0
41	I think reintroductions like this are an essential part of creating a wilder landscape.	2	-3	0	0
42	I would love to see one in the wild.	5	0	0	-3
43	It feels like it would be introducing something for the sake of introducing it.	-4	1	1	-1
44	You'd probably never see them anyway they'd be very shy.	1	2	-1	4

1.3. Results: Four identified perspectives

Four distinct perspectives were identified through the analytical procedure. In this section, an interpretation of each is presented in turn. These are presented as a written summary of the perspective, with inclusion of participant comments and references to which participants statistically associated with those viewpoints.

- Participants are referred to using their assigned participant number (e.g. P1 = Participant 1).
- References to the placement of individual statements in the exemplar Q-Sort for that perspective (Table 2) are given using the following convention: (statement number, score)*
- Statistically distinguishing statements are highlighted using bold text.
- Consensus statements (those with statistically similar scores across perspectives) are indicated using italic text.

REMINDER OF IMPORTANT NOTE FOR ALL READERS

This report deals with perspectives and opinions only. It is not within the scope of this report to determine where points raised by participants are "correct" or "incorrect", and participant statements of "fact" may or may not be scientifically evidenced. The researchers' role is to enable an understanding of the viewpoints that exist, based upon participants' current knowledge. Thus, the identified perspectives are presented as though articulated from that viewpoint.

^{*} For example, "(3, +5)" would mean statement 3 and a score of +5 (most strongly agree), or "(2, -5)" would indicate statement number 2 scoring -5 (most strongly disagree).

1.3.1. Perspective 1: Restoration Naturalist

SUMMARY POINTS:

- FAVOURABLE TO WILDCAT REINTRODUCTION FOR CONSERVATION AND WILDER LANDSCAPES.
- THINKS REINTRODUCTION WILL HAVE BENEFITS FOR WILD EXPERIENCES, WILDER LANDSCAPES, AND NATURE TOURISM.
- PREDICTS FEW NEGATIVE OUTCOMES, BUT A CONFLICT MANAGEMENT PLAN NEEDED FROM THE START.

Fifteen participants were significantly associated with this factor. These include: P1 – ecotourism / rural business; P2 – ecotourism; P4 – environmental NGO; P5 – government organisation; P8 – gamekeeper; P11 – wildlife tourism; P13 – wildlife volunteer; P14 – environmental professional; P15 – wildlife volunteer; P16 – wildlife volunteer; P20 – nature conservation charity representative; P21 – vet; P22 – conservation professional with poultry, domestic cat, sheep; P23 – sheep farmer, tenant; P26 – regenerative farmer (vegetables, free range chickens, pigs, sheep). The factor had an eigenvalue of 11.88 and accounted for 34% of the explained variance.

Restoration Naturalists strongly like the idea of wildcat reintroduction (36, +4) and the idea of more wildlife in our landscape (34, +4). They feel they have a degree of knowledge about wildcats, moreso than other perspectives (22, -2), but with more to learn. "*I know a fair bit, but I'm not an expert"* (*P2o*). Wildcat reintroduction does not feel like reintroduction for the sake of it (43, -4) as wildcats should be reintroduced if they were once native (29, +3). Wildcats need help (2, +1), and while at first it appears there is disagreement with focusing on looking after what we have got (35, -1), the principle is not challenged - rather, this should not be a reason to prevent wildcat reintroduction; "*Needs to happen anyway, but shouldn't be to the exclusion of wildcats, so no"* (*P*13); "*I don't think it is stressed enough that [wildcats] are functionally extinct, and it's a crucial time to help them"* (*P*5).

Reintroduction would add more to the wild experience of the countryside (**15**, **+3**) and reintroductions such as this are viewed as an essential part of creating a wilder landscape (**41**, **+2**). "*The current wave of reintroductions [can be used] to push for wilder countryside, more than just in pockets"* (*P*14). Wildcats themselves are an interesting animal with a story to be told (**1**, **+2**), which would help rural businesses and holiday businesses (**16**, **+1**). "*I know if your nature tour species encounter might be a wildcat, that would increase sales of the holiday, it certainly would"* (*P*11); "*I will pay money to see wildlife"* (*P*21). There is a strong desire to see a wildcat in the wild (**4**2, **+5**). "*I like them for the ecosystem service, but I also like them for themselves, it would be so exciting to see one"* (*P*8).

There are few concerns about negative outcomes, and a strong belief there would not be a problem with people and children (19, -5). "*They are low impact, except for the birds and small mammals that they'd predate" (P11).* There is a lack of concern about problems if wildcats were protected in the countryside (28, -3), although "*it's <u>how</u> they would be protected that is my issue" (P23).* There is no strong feeling about wildcats predating livestock (18, 0), but slight disagreement with the notion of wildcats posing a threat to poultry or gamebirds (**17, -1**). "*I keep chickens, so I might lose chickens, but it won't be exceptional" (P8).* Nonetheless, "*Disease transmission needs to be addressed, to livestock and also to domestic cats" (P21).* There is no strong feeling about interactions between wildcats and roads (**12**, *o*); "*Sure roads are a problem. [...] This isn't a reason for it not to work" (P2);* "*Depends where you reintroduce them really" (P4).*

There is limited concern about impacts of wildcat on other wildlife (14, -2), although further understanding about possible ecosystem impacts is needed. "We'd need to understand the implications for species like breeding birds, and small mammals. [...] 'Concerned' is probably the wrong word, but we need to have a good understanding of the impacts and whether to think about mitigation" (P20). Numbers of wildcats are not an issue requiring control (**27**, **-3**) as they "won't be living at high density" (P5). Domestic cat predation is considered a greater issue for native fauna tha wildcat predation, and wildcats would be preferred in the countryside over feral 'moggies' (40, +3). "Domestic cats have supplementary feeding, no population is suppressed through lack of food. [...] The domestic cat has a disproportionate effect on the ecosystem. A wildcat population would be more proportionate to prey availability" (P8).

Interbreeding between domestic cats and wildcats is perceived as a problem (**3**, **+1**), in part for the wildcat population but also because of differences between wildcats and domestic cats: "*If they interbreed with feral cats, with more young, and you have a larger population than you want with hybrid vigour, then the environment could be overrun by hybrids" (P15).* Although unsure whether people would need to be more on top of neutering domestic cats for it to be successful (5, o), Restoration Naturalists think interbreeding can be overcome: "*If the population is big enough, [wildcats] wouldn't want to breed with domestic cats"* (P5). However, this could be expensive so there may be question of "*are there better things in conservation?"* (P16).

There is little fear of unintended consequences, yet neither are they ruled out (20, 0). "Reintroductions now have more understanding of the baseline consequences, but you never know" (P26). Restoration Naturalists support transparency and openness (31, +2) and a clear conflict management plan right at the start of a reintroduction programme (32, +2). "Yes, a clear conflict management plan to help people feel secure about the unknown. [...] it will be needed, but I don't think the conflict will be hugely severe" (P5).

1.3.2. Perspective 2: Environmental Guardian

SUMMARY POINTS:

- CONSERVING EXISTING WILDLIFE SHOULD BE THE PRIORITY; WILDCATS OCCUR ELSEWHERE.
- NEED TO BE ABLE TO MANAGE CONFLICTS: LEGALLY PROTECTING WILDCATS COULD CREATE DIFFICULTIES.
- RISKS FOR SOME POULTRY AND CONCERN ABOUT UNINTENDED CONSEQUENCES.

Three participants significantly associated with this factor. These include: P10 – forester / woodland management; P24 – poultry farmer (organic, free range, eggs); and P25 – forester. The factor had an eigenvalue of 3.55 and accounted for 12% of the explained variance.

Environmental Guardians are ambivalent about wildcat reintroduction (**36**, **-1**) as they feel wildcats do not need help (**2**, **-2**): "*They're not endangered in Europe are they?"* (*P10*). Reintroduction feels somewhat feels like it may just be being done for the sake of it (43, +1); the Environmental Guardian strongly believes that we should instead focus on looking after what we've got (**35**, **+5**). "*Beavers, lynx, wildcats* [...] *just feel like headline-grabbing stories, whereas other things like heathland..."* (*P24*). It is not the case that wildcats should be reintroduced if they were once native (**29**, **-1**). "*I'm very happy that they're somewhere else. I think they haven't been here in such a long time"* (*P10*); "It's not a given that they should be reintroduced if once native. It needs proper research" (*P24*).

While Environmental Guardians feel it can only be a good thing if wildcats take a few grey squirrels (13, +3), there is also concern about wildcats' impact on wildlife (14, +2). "I do have concerns for this, we don't know how much they predate on woodland birds. Already a big pressure from grey squirrels, any more could be an issue" (P25). The numbers of wildcats would be the difficult thing, so a form of control would be needed to prevent there being too many (27, +3). "We need to have control available when they come into conflict" (P25). If wildcats were protected in the countryside, Environmental Guardians could see problems (28, +2): "Badgers are protected and there are no natural predators, so their numbers are increasing and becoming an issue" (P24); "When we manage the forest and the number of things we have to think about, we can't manage the forest because it's driven by species restriction. If someone suddenly identifies that we have a den of wildcats, and we're told nothing can be done within 500 (it is in the remain (33, -4), as "they need a threat" (P24) to help control their numbers.

A wildcat is not perceived to be a particularly big cat (25, +3), there is enough prey for them to eat (10, -4), and there is no concern about wildcats troubling people and children (19, -5). However, reintroduction was not thought to add more to the wild experience of the countryside (15, -1) and reintroductions like this are not considered an essential part of creating a wilder landscape (41, -3). "*There's quite enough going on already. My focus is on future ecologies" (P10).* It would not be a bother if the wildcats didn't look well or looked after (39, -3) and roads are not of concern (12, -1). "*This is part of the process of reintroduction – the ones that work out the roads are the ones that survive" (P10).*

Environmental Guardians believe wildcats will eat livestock (18, +2), although there is distinction drawn upon what qualifies as 'livestock' at risk. "*If they mean lambs etc, no they won't [eat them], but a six-week pullet from us they might. It's an open question, but depends on us [humans]" (P24).* Similarly, wildcats are expected to pose a threat to poultry or gamebirds (17, +2), but some existing anti-predation measures may provide a level of protection. "*I can't see wildcats taking fully-grown chickens, though it could be an issue with pullets. [...] The things we do to keep foxes at bay I imagine* are quite similar with wildcats. Wildcats might be more of an issue with meat chickens rather than for egg-laying hens. There are a lot of meat bird producers in the south-west [...] and they only live to twelve weeks old so they tend to be less savvy with fencing, so they may be more susceptible" (P24). An anti-farmer narrative accompanying reintroduction is not considered more of a problem than the species itself (9, -2), but there is no strong feeling about whether many farmers will tolerate wildcats (8, 0); "I think it's some farmers in some places, I think on the whole they'd be pro-wildcat to get rid of vermin" (P10).

Environmental Guardians think it is a problem that domestic cats and wildcats can interbreed (3, +4) and there is some agreement that people would have to be more on top of neutering domestic cats for it to be successful (5, +1). However, they are not concerned that wildcats will be an issue for 'their' cats (7, -2) ("*Not got one"* (*P24*)), and there are no strong feelings about whether people will need feral cats for pest control if a reintroduction happens (4, o). There are mixed feelings about whether people may be more accepting of wildcats due to familiarity with domestic cats (6, o). "Some will be very pro, some will be very anti" (*P10*).

It is strongly felt that there is always the possibility of unintended consequences (20, +4), so Environmental Guardians perceive a need for a clear conflict management plan in place right at the start of a reintroduction programme (32, +1). While there is agreement with the principle of transparency and openness, there remains scepticism about the reality (31, -1). "[People] are inherently distortive of the truth. The thing is, even with transparency, what part is transparent?" (P10). There is a recognition that "you'll never get everyone to agree, [but] it's about not alienating people and people feeling like they're not listened to. You know, if people feel listened to, they can agree to differ" (P24).

1.3.3. Perspective 3: Sceptical Pragmatist

SUMMARY POINTS:

- Unsupportive of wildcat reintroduction, believe the ecosystem has changed too much.
- HYBRIDISATION WITH DOMESTIC CATS IS CONSIDERED IMPOSSIBLE TO OVERCOME.
- CONCERNED THAT WILDCATS MAY PREDATE POULTRY AND GAME BIRDS, AND MAY POSE A DISEASE RISK.

Four participants significantly associated with this factor. These include: P₃ – cat welfare (unowned cats); P₇ – cat welfare organisation; P₁₈ – wildlife manager; and P₂₇ – poultry and sheep farmer. The factor had an eigenvalue of 1.64 and accounted for 9% of the explained variance.

Sceptical Pragmatists dislike the idea of wildcat reintroduction (**36**, -**3**) and strongly disagree with the notion that species should be reintroduced if they were once native (**29**, -**4**). They believe there was a reason that wildcats went extinct (**24**, +**3**) and that it is unethical to reintroduce them unless the threats facing them are removed (**33**, +**2**), which will be difficult: "*How can you remove all the threats?*" (*P27*). There is a view that the ecology of the south-west is not geared to wildcats being there (**38**, -**2**) as "*the ecosystem has changed*" (*P3*) and there is not enough habitat for wildcats (**11**, +**2**). "*I would need a really good reason for their introduction to support it. I'm not inherently against the idea, but we are an overpopulated island as it is, with too many stray or feral cats. We can't bring any species into that without a really good reason" (<i>P3*). There is strong concern about the possibility of unintended consequences (**20**, +**5**).

Sceptical Pragmatists are concerned about interbreeding between domestic cats and wildcats (3, +3): "It will never work. We can keep releasing pure wildcats but there are moggies so [hybridisation] can only get worse. I think it's impossible to reintroduce and maintain a population of wildcats as there's a massive population of domestic cats" (P18). There is some agreement that people would have to be more on top of neutering domestic cats for it to be successful (5, +1) but scepticism of this being done to a sufficient degree. "The Trap-Neuter-Return programme would be incredibly difficult. I'm sensitive to numbers, we have too many domestic cats. Hybridisation result would be a waste of money. [...] Concerned from a welfare view but also the practicalities of it" (P3).

There are also concerns that wildcats will eat livestock (18, -2) and pose a threat to poultry and game birds (17, +2). "I can see this as an issue for game keepers" (P3). Many farmers are expected not to tolerate wildcats (**8**, -3) and there is concern about whether wildcats could pose a disease transmission risk: "They're never going to tell you the bad stuff. The disease toxoplasma, they're never going to tell you the death in your flocks" (P27). There is strong agreement that there would need to be a clear conflict management plan right at the start of a reintroduction (32, +4) and that there would need to be a lot of education about wildcat behaviour (23, +4). There was support for the idea of transparency and openness (31, +3), but "they're never going to tell you the complete truth" (P27), concern about whether wildcats could pose a disease transmission risk.

Sceptical Pragmatists have mixed opinions about whether people would see wildcats as they are shy (**44**, **-1**), and limited concern about potential issues with wildcats to people and children (**19**, **-1**) or roads (*12*, *o*). There would not be modifications to the Sceptical Pragmatist's behaviour if it meant any sort of animal that needs to be there should be there (37, -2). "*People say this but in reality, people don't.* [...] *People express views but the doing is hard"* (*P*₃).

Sceptical Pragmatists are not convinced that wildcats are an interesting animal with a story to be told (1, -1), and do not believe that reintroduction will help rural businesses and holiday businesses (16, -5). "[I'm] horrified that people would come looking. I wouldn't want this [...] I disagree that should be a rationale for reintroduction" (P3). Additionally, there is uncertainty whether wildcats should be considered Scottish, not English or Welsh one (26, -1). Sceptical Pragmatists would not prefer to see wildcats in the countryside over feral moggies (40, -4) as "we know the feral moggies, don't we... we KNOW them" (P27).

1.3.4. Perspective 4: Wildlife Advocate

SUMMARY POINTS:

- LIKE THE IDEA OF MORE WILDLIFE AND IS SUPPORTIVE OF WILDCAT REINTRODUCTION.
- ALTHOUGH LESS FAMILIAR WITH WILDCATS, ISSUES FOR DOMESTIC CATS SEEN AS UNLIKELY.
- SUPPORT TRANSPARENCY, OPENNESS, AND A CONFLICT MANAGEMENT PLAN.

Three participants significantly associated with this factor. These include: P9 – domestic cat owner; P12 – domestic cat owner; and P19 – domestic cat owner. The factor had an eigenvalue of 1.41 and accounted for 13% of the explained variance.

Wildlife Advocates strongly believe that wildcats are an interesting animal, with a story to be told (1, +5). Despite feeling unknowledgeable about wildcats (22, +2), they like the ideas of wildcat reintroduction (36, +3) and more wildlife in our landscape (34, +2). They do not feel like a reintroduction would just be for the sake of it (43, -1) as wildcats need help (2, +3). Reintroductions like this are not considered an essential part of creating a wilder landscape ("*there is a problem with the word 'essential' there"* (*P*9)) but at the same time we should not only focus on looking after what we have got (35, -4). There is thought to be enough habitat for wildcats in the south-west (11, -3) as well as prey (10, -2). "*I had a domestic cat that survived in the wild for thirteen months"* (*P*12). Wildlife Advocates would be willing to modify their behaviour if it meant any sort of animal that needs to be there should be there (37, +2).

Wildlife Advocates did not expect issues relating to wildcats, people and children (19, -5) because people would probably never see wildcats anyway, as they'd be very shy (44, +4). Rather, there is a degree of wish to not see them in the wild (42, -1) as "*if you see it, it's not good. It probably means they're not scared of humans, it means there is a problem probably" (P9).* If seen, it would somewhat bother Wildlife Advocates if wildcats didn't look well, and didn't appear looked after (39, +1); but with an acceptance that they would be a wild animal. "*It would bother me if they were not well, but they're wild animals, so I've no strong feelings" (P12).*

There is uncertainty about whether interbreeding with domestic cats is problematic (3, o), but agreement that people would have to be more on top of neutering domestic cats for it to be successful (5, +2). "I used to volunteer at a [cat welfare organisation] where it was a huge deal. [Interbreeding is] what happened to Scottish wildcats, which bred with domestics. I wonder whether there would be a neutering programme" (P12). There are, however, no strong feelings about wildcats being an issue for their own cats (7, o). "The chances of that are so remote, they're a zillion to one. It's nonsensical. My cat might be hit by lightning, but I'm not concerned about lightning" (P9).

If a reintroduction happened, this may not mean people wouldn't need feral cats for pest control (4, -2) nor that familiarity with domestic cats might mean people are more accepting of wildcats (6, -1); "50 / 50" (P19). If wildcats take a few grey squirrels, there are no strong feelings about whether that is a good thing (**13**, **0**). Neither are roads of particular concern (12, -1). "They'll take a sensible approach to where they'll reintroduce them" (P12). In addition, Wildlife Advocates did not think a wildcat reintroduction necessarily means lynx, wolf or bear are next (**21**, -**4**): "that's ridiculous" (P12).

Wildlife Advocates strongly support transparency and openness (**31**, **+4**), and think the anti-farmer narrative that accompanies reintroductions is more of a problem than the species itself (**9**, **+2**). "Domestic cat owners need to be mindful of all parties, and need to be more educated about farmers'

views" (P12). They agree that there needs to be a clear conflict management plan in place right at the start of the programme (*32*, +*3*).

Part 2: Public Surveys – Perspectives among wider publics

Q-Method is useful for gaining a nuanced understanding of shared perspectives among key informants, and has merit in being sensitive to marginal viewpoints. However, used alone Q-method is limited in its ability to understand opinion prevalence more widely. A second study approach was therefore undertaken to enable insight into the prevalence of perspectives more broadly in southwest England, and to explore these in relation to demographic variables.

An online survey was designed to provide the opportunity for wider public participation, using a questionnaire designed in response to the Q-Method study outcomes. Two study samples were collected: one sample of 1000 people that was statistically representative of the population of south-west England, and one 'open' survey to provide an opportunity for all residents in the south-west to take part.

In this section, we present methodological approaches to survey design (<u>section 2.1.1</u>) and participant recruitment (<u>section 2.1.2</u>). The survey results are then presented in sections <u>2.3</u> (<u>indicative levels of knowledge</u>), <u>2.4</u> (<u>analyses of Q perspectives by survey demographics</u>), and <u>2.5</u> (<u>individual question analyses</u>).

2.1. Method Specifics

2.1.1. Question Design

The survey was designed in three discrete sections. This section will provide an outline of the intent behind each and the respective approaches to question design.

2.1.1.1. Wildcat Knowledge

This section of the questionnaire sought to provide an indication of participant levels of knowledge wildcats. Informed by approaches taken in prior surveys by the research team on beavers⁷ and subsequently by others on white stork¹³ and pine marten reintroductions^{12,27}, this comprised a set of three multiple-choice questions about wildcats. For each question there was one correct answer, and the option to select 'not sure'.

The first question asked participants to visually identify a wildcat from a set of four images: "Which of the following pictures shows a European wildcat?". The photos to choose from included: a wildcat as the correct answer; a Eurasian lynx (*Lynx lynx*) as a different but also formerly native cat species that has been proposed as a reintroduction candidate; and two different domestic cats – one whose fur pattern might be considered as visually similar to wildcats, and one that is visually very distinct from a wildcat. The images used are presented in Figure 3.

FIGURE 3. IMAGES USED IN PHOTOGRAPHIC QUESTION, FROM WHICH PARTICIPANTS WERE ASKED TO IDENTIFY A WILDCAT. A = WILDCAT; B = EURASIAN LYNX; C = DOMESTIC CAT; D = DOMESTIC CAT^{*}.



The remaining two questions asked about wildcat ecology, specifically their diet and habitat. These were complex to formulate as wildcats can eat more than one food type, and utilise more than one habitat. Thus, the questions were asked in a specific manner to minimise confusion:

- "Which of the following *best* describes the *most common* part of a wildcats' diet?"
 The correct answer to this question was "Small mammals (including rabbits)", as this makes
 up an estimated 75% of a wildcats' diet. (Their remaining diet can include birds or insects, as
 well as amphibians or reptiles). Other options given for the question were: birds; insects; roe
 deer; vegetation; human food.
- In which habitat would wildcats be *most likely* to be found during breeding season?" Here, the correct answer was 'Broadleaved woodland'. Most females will den and raise kittens here for it provides shelter and safety from predators. (Overall, wildcats will do best where there are mixed landscapes that include woodland and low intensity grassland habitats, when there is sufficient prey). Other options given for the question were: open grassland; mountain; marshland; coast; urban area; farmland.

Upon survey submission, correct answers to these three questions were shared back with participants in the thank you screen.

2.1.1.2. Perspectives on wildcats and reintroduction

A key aim for this survey to support a joined-up approach between the Q-Method findings and understanding of wider opinion prevalence. Thus, the questionnaire was composed using distinguishing statements from the identified perspectives described in <u>section 1.3</u>, presented as a

^{*} CREDITS: PHOTOS A, B AND C - R.AUSTER; PHOTO D - S.CROWLEY)

series of Likert scale questions for participants to rank based on their level of (dis)agreement on a scale from 1 (strongly disagree) to 5 (strongly agree).

The process of statement selection was specific, and comprised of two sets of statement choices. For ease of discussion, these will here be discussed as "set 1" and "set 2".

2.1.1.2.1. Set 1

In this approach of aligning Q-method and public survey, there was opportunity to measure the identified perspectives against demographic variables in publics more widely. Thus, a 'scale creation' method as proposed by Brown (2002)^{28,29} was used; in this approach, distinctive Q-Statements are presented to the respondents as Likert items, which then can be used to construct a psychometric scale and measure each perspective against participant backgrounds (see <u>section</u> 2.1.3 on analysis for details on how this is achieved).

For this method, two statements needed to be chosen that would represent each of the four identified factors. These needed to be statistically distinguishing statements which scored highly within a perspective (preferably one high score of agreement and one high score of disagreement). The statements and their scores on each factor are given in Table 3.

TABLE 3. STATEMENTS SELECTED FOR SET 1, AND THEIR ASSOCIATED SCORES FOR EACH OF THE FOUR SHARED PERSPECTIVES (DESCRIBED IN <u>section 1.3</u>). THOSE HIGHLIGHTED IN YELLOW INDICATE DISTINGUISHING HIGH / LOW SCORES FOR THE PERSPECTIVE TO WHICH THEY RELATE.

Statement	Perspective				
	1	2	3	4	
Wildcat reintroduction would add to a more wild experience of the countryside	3	-1	0	1	
It feels like it would be introducing something for the sake of introducing it.*	-4	1	1	-1	
We should focus on looking after what we've got.	-1	5	1	-4	
Wildcats need help.	1	-2	1	3	
There is a reason wildcats went extinct, so why should we bring them back.	-1	-1	3	0	
If they were once native, then they should be reintroduced.	3	-1	-4	1	
Wildcats are an interesting animal, there is a story to be told.	2	0	-1	5	
I would love to see a wildcat in the wild.	5	0	0	-3	

2.1.1.2.1. Set 2

While distributing this survey, there was opportunity to include additional statements and examine how far wider publics are aligned with each statement; these further statements were also presented as Likert scale questions for consistency in the survey presentation.

The aim of this survey was to present statements from the original Q-set that allowed a wider group of participants to share their views, whilst presenting fewer statements than in the Q-sort due to the constraints of an online survey approach. As these statements were intended to represent the diversity of views, statements were chosen that best typified the range of perspectives identified in

^{*} A minor amendment to this statement was made to ensure it was reflective of the manner it was interpreted in Perspective 3, with the addition of "...so why should we bring them back".

the study from the statistically distinguishing statements. The list was reviewed together by the research team and, to prevent the survey from becoming over-long, a selection of eight remaining distinguishing statements among the four factors was chosen (alongside those already selected for set 1). Between them, the statements chosen covered: familiarity with wildcats; the idea of reintroduction; interbreeding with domestic cats; business impact; habitat suitability; and issues of conflict management.

In addition to these distinguishing statements, three further statements were included:

- Across all four perspectives, there was consensus agreement (+1 to +4) that "There would need to be a clear conflict management plan in place right at the very start of the programme". As an influential component in human-wildlife conflict and as an expectation in the IUCN and Natural England guidelines for reintroductions, this statement was included to test whether the wider population also agrees with this suggestion.
- One non-distinguishing, non-consensus statement was included. Factors 2 and 3 were less favourable towards reintroduction, and the possibility of unintended consequences was an issue of high concern for both. It was thought useful to better understand how widespread this concern is.
- Disease risk was raised independently as an issue of concern by two participants in the Q-Study. This was not included as a statement in the original Q-Set for participants to discuss, thus it was deemed appropriate to include in the survey to gain further insight into whether it is of concern more widely. The wording of the statement given is an adaptation of a quotation from P21.

Table 4 details the set 2 statements chosen for inclusion within the survey.

TABLE 4. STATEMENTS SELECTED FOR SET 2, AND THEIR ASSOCIATED SCORES FOR EACH OF THE FOUR SHARED PERSPECTIVES (DESCRIBED IN <u>section 1.3</u>). THOSE HIGHLIGHTED IN YELLOW INDICATE DISTINGUISHING STATEMENTS, AND THAT HIGHLIGHTED IN GREEN INDICATES CONSENSUS.

Statement		Persp	ective	
	1	2	3	4
I don't know much about wildcats.	-2	О	1	2
I like the idea of wildcat reintroduction.	4	-1	-3	3
I'm concerned about disease transmission to livestock and domestic cats.	New statement			
It is a problem that domestic cats and wildcats can interbreed.	1	4	3	0
Wildcats could be a threat to poultry or gamebirds.	-1	2	2	1
Many farmers would tolerate wildcats.	-1	0	-3	-1
Wildcat reintroduction would probably help rural businesses and holiday businesses.	1	-2	-5	0
There is not enough habitat for wildcats here.	-2	-2	2	-3
You don't want too many wildcats, so you'd need a form of control.	-3	3	-1	-1
There would need to be a clear conflict management plan in place right at the start of the programme.	2	1	4	3
I'm concerned that there is always the possibility of unintended consequences.	0	4	5	1

2.1.1.3. Demographics

The final questions sought to capture demographic information to explore responses in relation to participant demographics. These were asked in broad terms to prevent participants becoming personally identifiable, and participants could choose not to answer.

Demographic variables included: gender; age group; occupation; county of residence; whether they were resident in a rural or urban area (identified with the first half of residential postcode); and whether participants have cats.

2.1.2. Distribution

Two samples were collected for this survey:

- To capture a statistically representative sample of the south-west population, an online market research panel provider was used. Bilendi Limited recruited a sample of south-west residents stratified by age and sex^{*}, based on UK census data[†].
- To enable opportunity for residents to opt-in and participate, a mixed recruitment method was used: a press release was shared with regional press outlets by the University of Exeter to promote participation; the press release was shared via institutional social media channels; and a range of organisational contacts were invited to disseminate the invitation within their networks. The aim was to share this invitation as widely as possible, with the hope of that invitation being 'snowballed' to recruit participants from a broad range of backgrounds across the south-west. This survey was open for one month, between 23rd April and 23rd May 2024.

2.1.3. Analysis

As the data were collected separately, there is a possibility of an individual having completed both surveys. To avoid this risk, the samples were analysed independently.

The multiple-choice wildcat questions were utilised to develop an indicator of participant levels of knowledge about wildcats. First, total counts of correct and incorrect answers for each question were examined using descriptive statistics. Differences in the overall counts in responses were then compared between the samples using the chi-square test for independence. Lastly, the participants were each assigned an indicative 'wildcat knowledge score' to aid later analyses. For each correct answer across the three questions, participants were awarded one point. The wildcat knowledge score represents the sum of the number of correct answers given; knowledge scores therefore range from zero to three.

^{*} The sample was stratified by sex following guidance from the market research panel provider. Data collection commenced on 7th May 2024, after the self-selecting survey which utilised the intended question on gender. For this sample only therefore, the question was adjusted to ask about participant sex, to enable the quota mechanism for weighting the sample to represent the south-west population.

⁺ Originally, quotas for the age categories of 75 and over and 65-74 were set independently, weighted to be representative for these groups. It was a challenge to recruit the full quota for the age group of 75 and over, thus these the weighting for these two age groups was combined.

The scale from Set 1 was analysed in relation to the demographic variables from each sample. To do so, single standardised Z-Scores for each factor were created from each specific pairing of statements, using the method described in Brown $(2002)^{28,29,*}$: each pair of scores from each participant is taken (reverse coded for the low-ranked distinguishing statement), multiplied by the absolute value of the ranking in the Q perspective, summed together to create an index score, and standardised using the mean and standard deviation of all index scores.

Each factor's standardised Z-Score was then analysed in relation to demographic variables using a generalised linear model with Gaussian distribution, whereby the predictor variables consisted of the demographic variables. Categories consisting of fewer than ten data points were not included within the model, with exception of Gamekeeping & Shooting (in the Open Sample) as it is considered as a key stakeholder group in this context. Models for the first three perspectives met the deviance test for goodness of fit; the models significantly improved the fit over the null model. This was not the case for the 'Wildlife Advocate' model[†]; results for the Wildlife Advocate are therefore presented for indication only, and **must** be treated with caution[‡].

Each Likert item (from both Set 1 and Set 2) was then analysed individually to explore responses to each statement question in relation to the participants' demographic variables in each sample:

- The overall pattern of responses to each statement is first examined using descriptive statistics. Differences in the overall counts in responses are compared between the samples using the chi-square test for independence.
- Differences in response to the Likert statements is then analysed in relation to categorical demographic variables:
 - Mann-Whitney U-Tests were used when the independent variable consisted of two distinct categories (i.e. cat ownership; gender).
 - Kruskal-Wallis tests were used when the independent variable had three or more distinct categories (i.e. gender, age group, occupation, region of residence, wildcat knowledge score). When Kruskal-Wall indicated there to be a statistical significance, post-hoc Dunn's test were used to identify which pairs of categories were statistically different to one another.

Note: In analyses for the open sample, the total n varies as participants were not required to answer every question; only those who answered required questions were included within each analysis.

^{*} Brown (2002) creates a standardised T-Score from the Z-Scores. As the samples in this study are large however, this final step was deemed unnecessary so analyses here utilised the standardised Z-Scores. * Representative sample p = 0.09; Open sample p = 0.3669.

^{*} It is suggested by the research team that this makes logical sense as, from a subjective standpoint, the Wildlife Advocate perspective seems to encompass a broader viewpoint.

2.2. Summary of Participants

SUMMARY POINTS

- REPRESENTATIVE SAMPLE OF SOUTH-WEST: 1000 PARTICIPANTS WEIGHTED BY AGE AND GENDER.
 SELF-SELECTED OPEN SAMPLE: 1425 RESIDENTS FROM SOUTH-WEST ENGLAND.
 - REPRESENTATIVE SAMPLE INCLUDES BROADER SPREAD ACROSS SOUTH-WEST COUNTIES.
 - OPEN SAMPLE CAPTURED DATA FROM KEY OCCUPATIONS MISSED IN REPRESENTATIVE SAMPLE (E.G. FORESTRY & WOODLAND MANAGEMENT, GAMEKEEPING & SHOOTING).

2.2.1. Representative Sample

The representative sample consisted of 1000 respondents, weighted by age and gender of the south-west population. Table 5 summarises the demographic variables of this group.

Variable	Category	Number	Percentage
Cat ownership	Yes	351	35.1%
	No	649	64.9%
Gender	Male	490	49.0%
	Female	510	51.0%
Age Group	18–24	105	10.5%
	25 - 34	147	14.7%
	35 - 44	142	14.2%
	45 - 54	174	17.4%
	55 - 64	159	15.9%
	65 – 74	168	16.8%
	75 and over	105	10.5%
Occupation	Architecture, Energy & Engineering	13	1.3%
	Arts, Sport & Media	18	1.8%
	Building & Maintenance	21	2.1%
	Business & Finance	47	4.7%
	Community & Social Service	16	1.6%
	Computer & Mathematical	31	3.1%
	Education	58	5.8%
	Environment, Nature & Wildlife	4	0.4%
	Farming & Agriculture	8	0.8%
	Fisheries & Aquaculture	2	0.2%
	Forestry & Woodland Management	0	0.0%
	Gamekeeping & Shooting	0	0.0%
	Healthcare	64	6.4%
	Hospitality	42	4.2%
	Office & Administrative Support	82	8.2%
	Physical & Social Science	2	0.2%
	Production / Manufacturing	23	2.3%
	Retired	257	25.7%

TABLE 5. DEMOGRAPHICS OF THE STATISTICALLY REPRESENTATIVE SURVEY SAMPLE.
	Sales	45	4.5%
	Student	78	7.8%
	Tourism	4	0.4%
	Transport	22	2.2%
	Unemployed (or not currently working)	78	7.8%
	Other	82	8.2%
	Unspecified	3	0.3%
County of residence	Bristol	124	12.4%
	Cornwall & Isles of Scilly	107	10.7%
	Devon	263	26.3%
	Dorset	154	15.4%
	Gloucestershire	99	9.9%
	Somerset	154	15.4%
	Wiltshire	99	9.9%

2.2.1. Open Sample

Overall, 1495 respondents completed the open survey.

When asked about the county of residence, 60 participants identified as 'not resident in the southwest', and 10 did not provide an answer. Thus, the total number of responses from people who identified themselves as resident in the region was 1425.

Table 6 summarises the demographic variables across the samples.

Throughout the remainder of this report, analyses of the open sample will prioritise the south-west residents' pool.

Descriptive statistics from the non-south-west resident sample will be reported in footnotes, but not analysed in depth. As this is a non-representative sample, these data should not be considered representative of opinion prevalence outside of the south-west.

TABLE 6. DEMOGRAPHICS OF THE NON-STATISTICALLY REPRESENTATIVE SURVEY SAMPLE, INCLUDINGTHE SAMPLE AS A WHOLE, AND BROKEN DOWN INTO THOSE WHO IDENTIFIED THEMSELVES AS RESIDENTWITHIN THE SOUTH-WEST, AND THOSE WHO DID NOT.

Variable	Category	Whole	sample	South	-West	Non-South-		
				Resid	dents	West Re	sidents	
		Number	%	Number	%	Number	%	
Cat	Yes	563	37.7%	536	37.6%	27	38.6%	
ownership	No	932	62.3%	889	62.4%	43	61.4%	
Gender	Male	5 ⁸ 7	39.3%	556	39.0%	31	44.3%	
	Female	866	57.9%	827	58.0%	39	55.7%	
	Prefer to self- describe	11	0.7%	11	0.8%	0	0.0%	
	Prefer not to say	26	1.7%	26	1.8%	0	0.0%	
	Unspecified	5	0.3%	5	0.4%	0	0.0%	
Age Group	18–24	83	5.6%	76	5.3%	7	10.0%	
	25 - 34	224	15.0%	205	14.4%	19	27.1%	
	35-44	231	15.5%	222	15.6%	9	12.9%	
	45 - 54	289	19.3%	278	19.5%	11	15.7%	
	55 – 64	293	19.6%	282	19.8%	11	15.7%	
	65 – 74	261	17.5%	253	17.8%	8	11.4%	
	75 and Over	95	6.4%	92	6.5%	3	4.3%	
	Prefer not to say	19	1.3%	17	1.2%	2	2.9%	
Occupation	Architecture, Energy & Engineering	25	1.7%	23	1.6%	2	2.9%	
	Arts, Sport & Media	50	3.3%	49	3.4%	1	1.4%	
	Building & Maintenance	21	1.4%	20	1.4%	1	1.4%	
	Business & Finance	51	3.4%	48	3.4%	3	4.3%	
	Community & Social Service	40	2.7%	39	2.7%	1	1.4%	

	Computer & Mathematical	39	2.6%	38	2.7%	1	1.4%
	Education	101	8 1%	110	7 7%	11	15.7%
	Environment	200	10.1%	270	18 0%	20	28.6%
	Nature & Wildlife	290	-9.4/0	2/0	10.9/0	20	201070
	Farming &	44	2.9%	43	3.0%	1	1.4%
	Agriculture		5	15	5		·
	Fisheries &	3	0.2%	3	0.2%	0	0.0%
	Aquaculture	-		_			
	Forestry &	13	0.9%	12	o.8%	1	1.4%
	Woodland						
	Management						
	Gamekeeping &	10	0.7%	9	0.6%	1	1.4%
	Shooting						
	Healthcare	110	7.4%	106	7.4%	4	5.7%
	Hospitality	14	0.9%	14	1.0%		0.0%
	Office &	55	3.7%	52	3.6%	3	4.3%
	Administrative						
	Support		0.4		0/		0/
	Physical & Social	20	1.3%	20	1.4%	0	0.0%
	Broduction /	45	1 006	45	1 106	0	0.006
	Manufacturing	15	1.0%0	15	1.190	0	0.0%0
	Retired	276	22.1%	242	24.0%	1	г 70%
	Sales	26	1 7%	342 2E	1.8%	4	<u> </u>
	Student	20 76	2.1%	- <u>-</u> 5	2.8%	6	8.6%
	Tourism	40 11	0.7%	11	0.8%	0	0.0%
	Transport	14	0.9%	12	0.0%	1	1.4%
	Unemployed (or	26	1.7%	- <u>-</u> 5 26	1.8%	0	0.0%
	not currently	20	1.,,,,	20	21070	Ũ	01070
	working)						
	Other	97	6.5%	91	6.4%	6	8.6%
	Unspecified	10	0.7%	8	0.6%	2	2.9%
County of	Bristol	43	2.9%	43	3.0%	-	-
residence	Cornwall & Isles	123	8.2%	123	8.6%	-	-
	of Scilly						
	Devon	1099	73.5%	1099	77.1%	-	-
	Dorset	27	1.8%	27	1.9%	-	-
	Gloucestershire	14	0.9%	14	1.0%	-	-
	Somerset	105	7.0%	105	7.4%	-	-
	Wiltshire	14	0.9%	14	1.0%	-	-
	Not resident in South-West	60	4.0%	-	-	60	85.7%
	Unspecified	10	0.7%	-	-	10	14.3%

2.3. Results 1: Indicative Level of Knowledge about Wildcats

SUMMARY POINTS

- THERE IS LITTLE KNOWLEDGE ABOUT WILDCATS IN THE SOUTH-WEST.
- HOWEVER, THE MAJORITY OF THE POPULATION CAN CORRECTLY IDENTIFY THE PRIMARY DIET.
- THERE IS A SIGNIFICANTLY HIGHER LEVEL OF KNOWLEDGE ABOUT WILDCATS IN THE OPEN SAMPLE.

In this section, the responses to the three multiple-choice questions about wildcats are outlined in turn (for both samples). The section will conclude by examining the total wildcat knowledge scores, with comparison between samples.

2.3.1. "Which of the following pictures shows a European wildcat?"

In the representative sample, only 18.9% correctly identified the wildcat photo, while over half selected the lynx image (53.5%).

In the open sample however, over half did correctly identify the wildcat (58.2%), with the second highest selected option being the visually similar domestic cat photo (20.4%)^{*}.

The relationship between the representative and open samples was statistically significant[†], Table 7 provides a full breakdown of responses to this question[‡].

		Representat	ive sample	Open samp	le (n=1420)
		N	%	N	%
Correct	Wildcat	189	18.9%	827	58.2%
answer					
Incorrect	Total	679	67.9%	525	37.0%
answers	Incorrect				
	Lynx	535	53.5%	235	16.5%
	Domestic cat	138	13.8%	289	20.4%
	(bengal)				
	Domestic cat	6	0.6%	1	0.1%
	(tuxedo)				
Not sure		132	13.2%	68	4.8%

TABLE 7. SUMMARY OF RESPONSES TO WILDCAT KNOWLEDGE QUESTION: WHICH OF THE FOLLOWING PICTURES SHOWS A EUROPEAN WILDCAT?

^{*} As the Bengal cat was intentionally included as a visually similar domestic cat option, here an additional figure is provided for the total numbers that selected *either* the wildcat or Bengal. In the representative sample n=327 (32.7%), and in the open sample n=1116 (78.6%). * p < 0.0001

⁺Non-south-west respondents (n=69): Wildcat, 60.9%; Lynx, 17.4%; Domestic cat (Bengal), 15.9%; Domestic Cat (tuxedo), 0.0%; Not sure, 5.8%.

2.3.2. "Which of the following best describes the most common part of a wildcats' diet?"

In both the representative and open samples, the majority of participants correctly selected 'small mammals (including rabbits)'.

A higher proportion of the open sample were correct (91.1%) relative to the representative sample (69.3%).

Of the incorrect answers, 'birds' was the most highly selected in both the representative and open samples (10.3% and 3.2%, respectively).

The relationship between the representative and open samples was statistically significant^{*}, and Table 8 provides a full breakdown of responses to this question[†].

TABLE 8. SUMMARY OF RESPONSES TO WILDCAT KNOWLEDGE QUESTION: WHICH OF THE FOLLOWING BEST DESCRIBES THE MOST COMMON PART OF A WILDCATS' DIET?

		Representat	ive sample	Open sample (n=1422)		
		Ν	%	Ν	%	
Correct answer	Small mammals (including rabbits)	693	69.3%	1296	91.1%	
Incorrect answers	Total Incorrect	145	14.5%	67	4.7%	
	Birds	103	10.3%	45	3.2%	
	Vegetation	14	1.4%	4	0.3%	
	Roe deer	12	1.2%	5	0.4%	
	Insects	10	1.0%	13	0.9%	
	Human food	6	0.6%	0	0.0%	
Not sure		162	16.2%	59	4.1%	

[†] p < 0.0001

⁺ Non-south-west respondents (n=70): Small mammals (including rabbits), 94.3%; Birds, 4.3%; Insects, 1.4%.

2.3.3. "In which habitat would wildcats be most likely to be found during breeding season?"

In the representative sample, fewer than half (41.7%) correctly selected 'broadleaved woodland' and 25.2% were 'not sure'.

In the open sample however, a high majority were correct (70.4%).

Of incorrect answers, the most highly selected was open grassland in both samples.

The relationship between the representative and open samples was statistically significant^{*}, and Table 9 provides a full breakdown of responses to this question[†].

TABLE 9. SUMMARY OF RESPONSES TO WILDCAT KNOWLEDGE QUESTION: IN WHICH HABITAT WOULD WILDCATS BE MOST LIKELY TO BE FOUND DURING BREEDING SEASON?"

		Representat	ive sample	Open samp	le (n=1424)
		N	%	Ν	%
Correct	Broadleaved	417	41.7%	1003	70.4%
answer	woodland				
Incorrect	Total	331	33.1%	212	14.9%
answers	Incorrect				
	Open	146	14.6%	114	8.0%
	grassland				
	Mountain	109	10.9%	75	5.3%
	Farmland	38	3.8%	19	1.3%
	Urban area	20	2.0%	0	0.0%
	Marshland	10	1.0%	4	0.3%
	Coast	8	o.8%	0	0.0%
Not sure		252	25.2%	209	14.7%

^{*} p < 0.0001

⁺ Non-south-west respondents (n=70): Broadleaved woodland, 70.0%; Open grassland, 15.7%; Mountain, 7.1%; Farmland, 1.4%; Not sure, 5.7%.

2.3.4. Total wildcat knowledge scores

2.3.4.1. Descriptive Statistics

To provide an indicative level of knowledge about wildcats for each participant, a total score of correct answers given was calculated. These scores are referred to as the 'wildcat knowledge scores'.

For example, if the participant correctly answered all three questions, they obtained a wildcat knowledge score of three.

Fewer than half of the representative sample answered two or three questions correctly (44.0%), with only 7.7% getting all three answers correct. Approximately one fifth (21.8%) did not select any correct answer.

Among the open sample, a high percentage scored either two or three (80.4%), with 42.5% correctly answering all three questions. Only 3.0% did not select any correct answer.

The relationship between the representative and open samples was statistically significant^{*}, and Table 10 and Figure 4 provide a breakdown of total knowledge scores[†].

Hence, it can be concluded that:

- there is little knowledge about wildcats across the south-west population;
- and the open sample consists of a population that have a significantly greater level of knowledge about wildcats, than the wider population.

TABLE 10. SUMMARY OF RESPONDENTS AND THEIR TOTAL NUMBER OF CORRECT ANSWERS TO THE WILDCAT KNOWLEDGE QUESTIONS

		Representat	ive sample	Open sample (n=1419)		
		N	%	Ν	%	
Total score	Three	77	7.7%	603	42.5%	
correct	Two	363	36.3%	538	37.9%	
	One	342	34.2%	235	16.6%	
	Zero	218	21.8%	43	3.0%	

^{*} X² = 521.1, df = 3, p < 0.0001

⁺ Non-south-west respondents (n=60): Three, 42.0%; Two, 43.5%; One, 11.6%; Zero, 2.9%.



FIGURE 4. SUMMARY OF RESPONDENTS BETWEEN SAMPLES IN RELATION TO THEIR WILDCAT KNOWLEDGE SCORES

2.3.4.2. Wildcat Knowledge Scores and Demographic Variables: Representative Sample

In the representative sample, there were statistically significant differences by occupation^{*}, age group⁺, and whether respondents have cats[‡] - although in all cases the effect size was very small. Whether respondents had cats is a binary variable, and for age group and occupation, post-hoc tests were used to explore which groups were different from one another. For occupation, these post-hoc tests did not reveal difference between any specific occupational pairings.

There was a statistically significant difference between those who did or did not have cats, the relationship is visualised in Table 11.

		Have (Cats?
		Yes (n=351)	No (n=649)
Total score	Three	10.0%	6.5%
correct	Two	37.6%	35.6%
	One	33.0%	34.8%
	Zero	19.4%	23.1%

TABLE 11. DIFFERENCE IN WILDCAT KNOWLEDGE SCORE BETWEEN THOSE WHO DO AND DO NOT HAVE CATS (REPRESENTATIVE SAMPLE).

 $X^{2} = 40.56$, df = 22, p < 0.01, $\varepsilon^{2} = 0.041$

 $^{^{+}}X^{2}$ = 29.098, df = 6, p < 0.001, ϵ^{2} = 0.029

^{*}W = 105333, p < 0.05, rank-biserial correlation coefficient = -0.08 (95% Cl: -0.15 to 0.00).

Those aged 75 and over were significantly different from ages 18-24, 25-34, and 35-44 years old. 25-34 year-olds were also significantly different from those in age groups 55-64 and 65-74. The relationships are visualised in Figure 5.



FIGURE 5. DIFFERENCE IN WILDCAT KNOWLEDGE SCORE BETWEEN AGE GROUPS (REPRESENTATIVE SAMPLE).

2.3.4.3. Wildcat Knowledge Scores and Demographic Variables: Open Sample

In the open sample, there were statistically significant differences by age group^{*}, county of residence⁺, and occupation[‡] – although in all cases with a very small effect size. Post-hoc tests revealed which groups were different from one another.

County: There was a significant difference between respondents from Bristol and Cornwall & Isles of Scilly (Table 12): participants from Bristol were more likely to have higher knowledge scores.

		County		
		Bristol (n=43)	Cornwall & Isles	
Total score	Three	62.8%	38.2%	
correct	Two	30.2%	39.0%	
	One	7.0%	18.7%	
	Zero	0.00%	4.1%	

TABLE 12. DIFFERENCE IN WILDCAT KNOWLEDGE SCORE BETWEEN RESPONDENTS FROM BRISTOL AND CORNWALL & ISLES OF SCILLY (OPEN SAMPLE).

Occupation: Respondents with an occupation in Environment, Nature & Wildlife were significantly different from Retired respondents, the relationship is visualised in Table 13.

 $^{^{*}}$ X² = 32.308, df = 6, p < 0.001, ϵ^{2} = 0.023

 $^{^{+}}X^{2} = 14.045$, df = 6, p < 0.05, $\epsilon^{2} = 0.010$

 $^{^{\}pm}$ X2 = 36.724, df = 23, p < 0.05, ϵ^{2} = 0.026

TABLE 13. DIFFERENCE IN WILDCAT KNOWLEDGE SCORE BETWEEN RESPONDENTS WORKING IN ENVIRONMENT, NATURE & WILDLIFE AND THOSE WHO WERE RETIRED (OPEN SAMPLE).

		Occupation			
		Environment, Nature & WIIdlife	Retired (n=450)		
		(n=270)			
Total score	Three	54.8%	51.1%		
correct	Two	31.9%	32.9%		
	One	11.5%	13.8%		
	Zero	1.9%	2.2%		

Those aged 25-34 were significantly different to all other age groups except 35-44, and 35-44 year-old were significantly different to those aged 75 and over. The relationships are visualised in Figure 6.

10% 0% 70% 80% 90% 100% 20% 30% 40% 50% 60% 18-24 (n=76) 25-34 (n=204) 35-44 (n=222) 45-54 (n=276) 55-64 (n=281) 65-74 (n=251) 75 and over (n=92) Zero One Two Three

FIGURE 6. DIFFERENCE IN WILDCAT KNOWLEDGE SCORE BETWEEN AGE GROUPS (OPEN SAMPLE).

2.4. Results 2: Q Perspectives Measured Against Survey Demographics

In <u>Section 1.2.</u> of this report, four perspectives were identified using Q-Methodology and are referred to as: Restoration Naturalist; Environmental Guardian; Sceptical Pragmatist; and Wildlife Advocate.

With the approach to scale creation from these perspectives for the survey (described in <u>section</u> <u>2.1.1.2.1</u>), the survey could be used to explore the demographic variables that were more likely to associate with each viewpoint using the two regional samples.

This section reports upon these results with a summary of results given in Table 14, showing statistically significant results only.

Correlation coefficients here describe the relationship between a variable and a perspective. A positive figure indicates a positive correlation (i.e. more likely to associate with the perspective), and a negative figure indicates a negative correlation (i.e. less likely to associate with the perspective).

A relationship between variables was considered as weak when the correlation coefficient was 0.19 or below, moderate when the correlation was between 0.2 and 0.39, and strong where the coefficient was 0.4 or higher.

In the results presented, it can be concluded that wildcat knowledge score is the predictor variable that is most influential across multiple perspectives, exhibiting a strong or moderate positive correlation with the Restoration Naturalist viewpoint, a strong or moderate negative correlation with the Environmental Guardian viewpoint, and a strong positive correlation in both samples with the Sceptical Pragmatist viewpoint.

TABLE 14. SUMMARY OF STATISTICALLY SIGNIFICANT RELATIONSHIPS BETWEEN IDENTIFIED PERSPECTIVES AND WIDER POPULATION DEMOGRAPHICS. STRONG CORRELATIONS ARE HIGHLIGHTED IN RED, MODERATE CORRELATIONS IN YELLOW, AND ALL OTHERS ARE WEAK. NUMBERS IN BOLD INDICATE RELATIONSHIPS IDENTIFIED IN BOTH SAMPLES.

VARIABLE	CATEGORY	STATISTICALLY SIGNIFICANT			
		CORRELATION	COEFFICIENTS		
		Representative	Open Sample		
		Sample			
Cat Ouwe analyin	RESTORATION NATUR				
Cat Ownership	Do not nave cats	-0.16	-		
Age Group	18-24	-	0.32		
	25-34	-	0.24		
	35-44	-	0.20		
	55 - 64	-	-0.21		
Occupation	Education	-	0.26		
	Farming & Agriculture	-	-0.66		
Wildcat Knowledge S	Score	0.64	0.26		
	ENVIRONMENTAL GUA	RDIAN			
Cat Ownership	Do not have cats	0.13	-		
Age Group	18–24	0.35	-		
	34 - 44	-0.18	-		
	45 - 54	-0.43	-		
Occupation	Community & Social Service	-0.46	-0.35		
	Education	-	-0.25		
	Environment, Nature & Wildlife	-	0.17		
	Tourism	-	-0.63		
	Student	-	0.48		
Wildcat Knowledge S	Score	-0.43	-0.30		
	SCEPTICAL PRAGMA	TIST			
Cat Ownership	Do not have cats	0.15	0.09		
Age Group	18-24	-	-0.51		
5	25 - 34	-	-0.30		
	35 - 44	-	-0.16		
	55 - 64	-	0.19		
	65 - 74	-	0.18		
Occupation	Building & Maintenance	0.45	-		
	Education	-	-0.29		
	Farming & Agriculture	-	0.60		
	Students	_	0.45		
Wildcat Knowledge	Score	-0.67	-0.42		
	WILDLIFE ADVOCA	, TE*			
Cat ownership	Do not have cats	-0.07	-0.06		
Gender	Female	0.09	_		
Age Group	45 - 54	-	-0.14		
	55 - 64	-	0.16		
Occupation	Gamekeeping & Shooting	_	0.64		
*The statistical model	s to test 'Wildlife Advocate' by demo	araphic variables faile	ed the acodness of		
fit tests, meaning the	nodel did not significantly improve th	ne fit over the null mo	del. Thereby, these		
associations should be	treated with caution and used as an	indicator only.			

2.5. Results 3: Analyses of Individual Likert Questions

SUMMARY POINTS

- A range of opinion was captured. Results were broadly favourable to wildcats, although not unanimously so and with nuances in the findings.
- The representative sample often tended towards the middle of the opinion scales; participants often had 'no opinion' or general (dis)agreement with each statement.
- The open sample tended to express stronger viewpoints at both ends of the agree/disagree spectrum.
- The demographic variables for which statistically significant differences in responses were most frequently observed were whether the respondent has cats, and the wildcat knowledge score.
- Generally, respondents with cats were more likely to strongly agree with statements positive about wildcats and their introduction, as were respondents with higher wildcat knowledge scores
- In both samples, over 70% of participants agreed that "I like the idea of wildcat reintroduction", with a portion also taking a position of disagreement.
- For both samples, over 76% of participants agreed that 'there would need to be a clear conflict management plan in place right at the start of the programme'.

In the following section, results in relation to each of the nineteen statement questions will be presented in the order in which they appeared in the survey(s), with descriptive statistics to outline the overall response between the two samples.

Responses in relation to demographic variables are then presented (for each sample) where observed differences in responses were statistically significant.

An overview summary of the statistical relationships is given in Table 15.

To note, percentage figures given in parentheses will, by convention, always report the figure for the representative sample first, followed by that for the open sample.

Statement	Ag	ge	Ger	lder	Occupatio	n / County	Cat Ow	nership	Knowled	lge Score
Sample	Rep	Open	Rep	Open	Rep	Open	Rep	Open	Rep	Open
Wildcat reintroduction would add to a more wild experience of the countryside		Agree decreases with age		Males strongly agree > females		Education / Env, Nat & Wildlife agree > retired	Owners agree > non- owners		Agree increases with score	Score of 3 agree / strongly agree > all others
It feels like introducing something for the sake of introducing it.	45-54 disagree > 25-34 and 75+	Disagree higher in groups <55				Education strongly disagree > Retired	Owners strongly disagree > non- owners	Owners strongly disagree > non- owners	Disagree increases with score	Strongly disagree higher with higher scores
We should focus on looking after what we've got.	Middle age groups (35- 64) more likely to disagree	Middle age groups (35- 64) more likely to disagree					Non- owners strongly agree > owners	Non- owners agree > owners	Score of o/1 agree > score of 2/3	Score of 3 disagree > score of 1
Wildcats need help		75+ less likely to agree		Males strongly agree > females			Owners agree > non- owners	Owners agree > non- owners (marginal)	Agree increases with score	Agree increases with score
There is a reason wildcats went extinct, so why would be bring them back		Disagree decreases with age (highest in 25-34)		Males strongly disagree > females		Education / Env, Nat & Wildlife strongly disagree > Retired	Owners strongly disagree > non- owners	Owners strongly disagree > non- owners (marginal)	Disagree increases with score	Score of 3 agree / strongly disagree > all other scores

TABLE 15. OVERVIEW SUMMARY OF THE STATISTICALLY SIGNIFICANT RELATIONSHIPS BETWEEN EACH STATEMENT AND THE DEMOGRAPHIC VARIABLES.

Statement	Age		Gender		Occupation / County		Cat Ownership		Knowledge Score	
If they were once native, then they should be reintroduced		Agree decreases with age (broadly)		Males strongly agree > females			Owners strongly agree > non- owners		Agree increases with score	Agree increases with score
Wildcats are an interesting animal, there is a story to be told	Significant differences but no clear relationshi p	Agree decreases with age (broadly)					Owners strongly agree > non- owners	Owners strongly agree > non- owners	Score of o more likely to have no opinion	Score of 3 strongly agree > score of o
l would love to see a wildcat in the wild	Agree decreases with age (broadly)	Agree decreases with age (broadly)		Males strongly agree > females	Bristol agree > Wiltshire	Farm & Ag strongly disagree > Education / Env, Nat, & Wildlife	Owners strongly agree > non- owners	Owners strongly agree > non- owners	Agree increases with score	Strongly agree increases with score
l don't know much about wildcats			Females strongly agree > males	Females agree > males (marginal)		Env, Nat & Wildlife strongly disagree > Farm & Ag / Retired	Owners strongly agree > non- owners		Strongly agree decreases with score	Agree decreases with score
I like the idea of wildcat reintroduction	Agree decreases with age (highest 25-34)	Agree decreases with age (highest 18-24)		Males strongly agree > females		Education agree > Retired	Owners strongly agree > non- owners	Owners strongly agree > non- owners	Agree increases with score	Agree increases with score
I'm concerned about disease transmission, to	Agree decreases with age, except 75+	35-44 / 45- 54 disagree > 75+		Males strongly disagree > females		Phys & Soc Sciences disagree > Students /			Disagree increases with score	Disagree increases with score

Statement	Age		Gender		Occupation / County		Cat Ownership		Knowledge Score	
livestock and domestic cats						Art, Sport, Media				
It is a problem that domestic cats and wildcats can interbreed	75+ agree > 45 ⁻ 54 No clear pattern	More agree in older (55+) and youngest (18-24) groups			Devon agree > Bristol			Non- owners strongly agree > owners		Agree increases with score (broadly)
Wildcats could be a threat to poultry or gamebirds		More disagree in oldest (75+) and youngest (18-24) groups			Somerset agree > Bristol		Owners disagree > non owners (marginal)		Disagree increases with score	Disagree increases with score
Many farmers would tolerate wildcats							Owners agree > non owners (marginal)			Score of 1 strongly disagree > score of 2/3
Wildcat reintroduction would probably help rural businesses and holiday businesses	75+ disagree > 35-44	Agree decreases with age		Males strongly agree > females, who have no opinion > males		Bristol agree > Cornwall & IoS and Devon Retired disagree > Education/ Env Nature & Wildlife/ Transport	Owners agree > non- owners	Owners agree > non- owners (marginal)	Agree increases with score	

Statement	Age		Gender		Occupation / County		Cat Ownership		Knowledge Score	
There is not enough habitat for wildcats here	Significant differences but no clear relationshi p		Males disagree > females	Males strongly disagree > females	Wiltshire agree > Cornwall & IoS	Keeping & Shooting strongly agree > all other occ			Disagree increases with score	
You don't want too many wildcats, so you'd need a form of control		18-24 and 75+ disagree < other groups	Females agree > males (marginal)	Males strongly disagree > females		Env, Nature & Wildlife disagree > Retired	Non- owners agree > owners		Score of 3 disagree > all other groups	Disagree increases with score
There would need to be a clear conflict management plan in place right at the start of the programme		More agreement in older and younger age groups; least in 45- 54			Cornwall & IoS agree > Bristol, who had no opinion > Cornwall & IoS	Env, Nat & Wildlife strongly agree > Arts, Sport & Media			Score of 3 agree > score of 1/o Agree increases with score	Score of 1 had no opinion > score of 2, who strongly agree > score of 1
I'm concerned that there is always the possibility of unintended consequences	18-24 strongly agree > all groups between 34 and 74	75+ agree > all groups between 25 and 64	Females agree > males (marginal)				Significant differences but no clear relationshi p	Non- owners agree > owners (marginal)		Disagree increases with score

2.5.1. "Wildcat reintroduction would add to a more wild experience of the countryside."

2.5.1.1. Descriptive Statistics

In both samples, the majority took a position of agreement (72.9%; 76.8%), while a minority took a position of disagreement (8.1%; 14.2%). The remainder had no opinion or were unsure (19.0%; 8.9%)* (Figure 7).

There was a statistically significant difference in responses between the two samples[†]. Here, there was a higher proportion of respondents with 'no opinion' (+10.1%) in the representative sample. The open sample exhibited higher levels of disagreement (+3.2%) and strong disagreement (+2.9%). The representative sample had higher proportions of agreement (+15.3%), but the open sample expressed stronger agreement (+19.2%).

FIGURE 7. PARTICIPANT RESPONSES TO STATEMENT, "WILDCAT REINTRODUCTION WOULD ADD TO A MORE WILD EXPERIENCE OF THE COUNTRYSIDE." COMPARED BETWEEN THE TWO SAMPLES.



2.5.1.2. Relationships with demographics: Representative Sample

In the representative sample, there were significant differences in response based upon whether respondents have cats[‡] and wildcat knowledge scores[§]. In both cases, the effect size was small.

⁺ X² = 166.21, df = 4, p < 0.0001

^{*} Non-south-west respondents (n=70): Strongly Agree - 31; Agree - 26; No Opinion - 5; Disagree - 4; Strongly Disagree - 4.

^{*}W = 91979, p < 0.001, rank-biserial correlation coefficient = -0.19 (95% Cl: -0.26 to -0.12).

 $^{^{\$}}X^{2} = 51.171$, df = 3, p < 0.001, $\epsilon^{2} = 0.051$

Cat Ownership: Among those who have cats, 80.91% took a position of agreement, compared with 68.57% among those who do not have cats.

Wildcat Knowledge Score: The responses of those who obtained a wildcat knowledge score of zero were significantly different to all other score levels, and there was a further difference between those who scored one and three. At all score levels, a majority agreed with the statement. Agreement increased with knowledge score (Fig 8), from 55.96% of those who scored zero to 72.51% of those who scored one; 80.17% of those who scored two; and 88.31% of those who scored three.



FIGURE 8. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCAT REINTRODUCTION WOULD ADD TO A MORE WILD EXPERIENCE OF THE COUNTRYSIDE", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.1.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant gender^{*}, age group[†], occupation[‡], and wildcat knowledge score[§]. There was also a significant difference observed in responses in relation to county of residence^{**}, however there were no pairwise significant differences. In all cases, the effect size was small.

Gender: There was a significant difference between male and female respondents. While over 74% took a position of agreement in both cases, a higher proportion of females agreed (40.78%) than male (33.99%), and a higher proportion of males strongly agreed (46.94%) than females (33.37%).

Age: There was a significant difference in response among those aged 75 and over and all other age groups except 45-54. Both 18-24- and 25–34 groups were also significantly different from those aged 55-64, and there was a further difference between the age groups of 24-34 and 65-74. While

^{*} $X^2 = 23.215$, df = 2, p < 0.001, $\epsilon^2 = 0.017$

⁺ X^2 = 53.554, df = 6, p < 0.001, ϵ^2 = 0.038

 $^{^{+}}$ X² = 60.338, df = 23, p < 0.001, ϵ^{2} = 0.043

[§] $X^2 = 23.279$, df = 3, p < 0.001, $\epsilon^2 = 0.017$

^{**} X^2 = 13.302, df = 6, p < 0.05, ϵ^2 = 0.009

the pattern is not perfect, Figure 9 indicates decreasing levels of agreement in the higher age groups, although more than half of respondents took a position of agreement in all categories.



FIGURE 9. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCAT REINTRODUCTION WOULD ADD TO A MORE WILD EXPERIENCE OF THE COUNTRYSIDE", BETWEEN AGE GROUPS (OPEN SAMPLE).

Occupation: The proportion of retired respondents who took a position of agreement was 65.4%, significantly lower than that of respondents working in Education (88.18%) and Environment, Nature and Wildlife (81.11%). There were also marginally higher levels of disagreement from the retired group. This is consistent with the findings relating to age, above.

Wildcat Knowledge Score: Respondents with wildcat knowledge scores of three responded in a significantly different manner to those of all other scores. While respondents of all knowledge levels were more likely to take a position of agreement, those scoring three (indicating a high level of knowledge) were the most likely to do so (80.93%), with 44.4% of this group strongly agreeing with the statement.

2.5.2. "It feels like introducing something for the sake of introducing it."

2.5.2.1. Descriptive Statistics

In both samples, the majority took a position of disagreement (51.4%; 78.7%), while a minority took a position of agreement (24.9%; 14.6%). The remainder had no opinion or were unsure (23.7%; 6.7%) *(Figure 10).

There was a statistically significant difference in responses between the two samples[†]. Here, there was a much higher number of respondents with 'no opinion' (+17%) in the representative sample. The open sample included slightly higher levels of disagreement (+1.2%) and substantially higher levels of strong agreement (+26.1%) than the representative sample. There was a lower proportion of respondents in the open sample who agreed overall (-10.3%), but a small percentage increase of those who strongly agreed (+0.8%). This indicates that the open sample were both more likely to disagree with the statement, and more likely to feel strongly about it.

FIGURE 10. RESPONSES TO THE STATEMENT "IT FEELS LIKE INTRODUCING SOMETHING FOR THE SAKE OF INTRODUCING IT." COMPARED BETWEEN THE TWO SAMPLES.



^{*} Non-south-west respondents (n=70): Strongly Agree - 3; Agree - 6; No Opinion - 5; Disagree - 21; Strongly Disagree - 35.

⁺X² = 310.97, df = 4, p < 0.0001

2.5.2.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats^{*}, age group⁺, and wildcat knowledge scores[‡]. In all cases, the effect size was small.

Cat Ownership: Among those who have cats, 57.55% took a position of disagreement; this figure was 48.07% among those who do not have cats, driven by those not having cats being less likely to strongly disagree (10.9% cf. 23.08% of those with cats).

Age Group: There was a significant difference between the responses of 45-54 year olds and those in the age groups of 25-34 or 75 and over; in both cases the 45-54 year olds exhibited higher levels of disagreement.

Wildcat Knowledge Score: The responses of those with wildcat knowledge scores of zero were significantly different from all other score levels, and there were further differences between those who scored one and two and between one and three. Among those who scored two or three, a majority disagreed with the statement; 65.0% and 77.9%, respectively. Among those who scored zero or one, there was neither a majority taking a position of agreement or disagreement, and a comparatively high level of no opinion. The broad trend (observable in Fig 11 below) is that higher knowledge scores are associated with greater disagreement.





^{*}W = 129744, p < 0.001, rank-biserial correlation coefficient = 0.14 (95% Cl: 0.06 to 0.21).

⁺ X^2 = 18.345, df = 6, p < 0.01, ϵ^2 = 0.019

 $^{^{*}}X^{2} = 78.97$, df = 3, p < 0.001, $\epsilon^{2} = 0.079$

2.5.2.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether or not respondents have cats^{*}, age group[†], occupation[‡], and wildcat knowledge score[§]. There was also statistical significance found in relation to gender^{**}, but there were no pairwise statistical significances. In all cases, the effect size was small.

Cat Ownership: In both groups, a majority took a position of disagreement but this proportion was higher for those with cats (82.02%) and with stronger levels of disagreement than among those who did not have cats (76.66%).

Age Group (Figure 12): There was a statistical difference in responses between those in age groups 25-34 or 35-44, and all groups over age 55. There was also a difference between the age groups of 45-54 and 75 and over. In all groups, a majority took a position of disagreement, but these proportions were greater in the younger age groups.





Occupation: While a majority of both groups took a position of disagreement, those working in education were more likely to disagree strongly (52.39%) than retired respondents (33.04%).

Wildcat Knowledge Score: There were statistical differences in response between those who obtained a wildcat knowledge score of three, and those who had obtained scores of either one or two. Among those with a higher knowledge score, strength of disagreement was higher.

^{*} W = 256508, p < 0.001, rank-biserial correlation coefficient = 0.08 (95% CI: 0.02 to 0.14).

 $^{^{+}}$ X² = 39.922, df = 6, p < 0.05, ϵ^{2} = 0.029

[‡]X² = 39.171, df = 23, p < 0.05, ε² = 0.028

 $SX^{2} = 37.378$, df = 3, p < 0.001, $\varepsilon^{2} = 0.026$

^{**} X^2 = 6.7099, df = 2, p < 0.05, ε^2 = 0.005

2.5.3 "We should focus on looking after what we've got."

2.5.3.1. Descriptive Statistics

In the representative sample, almost half took a position of agreement (47.5%), followed by no opinion (29.9%). The remainder took a position of disagreement (22.6%). In the open sample, conversely, almost half took a position of disagreement (48.1%), then agreement (35.1%); the remainder had no opinion or were unsure (16.7%)^{*} (Figure 13).

There was a statistically significant difference in responses between the two samples[†]. There was a higher number of respondents with 'no opinion' (+13.2%) or who agreed with the statement overall (+12.4%) in the representative sample. The open sample exhibited much higher levels of respondents who disagreed(+25.5%).

This finding may be related to statement interpretation. In general, there were higher levels of knowledge about wildcats in the open sample (Figure 4) and as the sample is self-selecting, likely more interest in conservation issues. This statement can be interpreted two ways: either as a simple statement of intention (i.e. we should look after what we have) or as a statement of priorities (i.e. we should look after what we have) or as a statement of priorities (i.e. we should look after what we focus on reintroductions). Those with an interest in reintroductions are perhaps more likely to consider this in the latter terms, whereas lay audiences may be more likely to agree with the statement generally.



FIGURE 13. RESPONSES TO THE STATEMENT "WE SHOULD FOCUS ON LOOKING AFTER WHAT WE'VE GOT." COMPARED BETWEEN THE TWO SAMPLES.

^{*} Non-south-west respondents (n=70): Strongly Agree - 6; Agree – 16; No Opinion - 10; Disagree - 25; Strongly Disagree - 13.

⁺ X² = 181.96, df = 4, p < 0.0001

2.5.3.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats^{*}, age group[†], and wildcat knowledge scores[‡]. In all cases, the effect size was small.

Cat Ownership: A significantly higher percentage of respondents who do not have cats strongly agreed with the statement (15.25%), compared to those with cats (8.83%).

Age Group (Figure 14): There was a significant difference between the responses of the 18-24 age group and those in the age groups of 35-44, 45-54, or 55-64. There were also differences between the 45-54 age group and those aged 25-34, and over 75. Broadly, therefore, there were lower levels of agreement in the middle-aged groups.

FIGURE 14. DIFFERENCE IN RESPONSE TO THE STATEMENT "WE SHOULD FOCUS ON LOOKING AFTER WHAT WE'VE GOT", BETWEEN AGE GROUPS (REPRESENTATIVE SAMPLE).



Wildcat Knowledge Score (Figure 15): The responses of those who obtained a wildcat knowledge score of zero or one were significantly different to those of respondents who obtained scores of two or three. Among those who scored zero or one, fewer took positions of disagreement compared to those who scored two or three, and higher percentages took positions of agreement.

^{*} W = 122306, p < 0.05, rank-biserial correlation coefficient = 0.07 (95% CI: 0.00 to 0.15).

 $^{^{+}}$ X² = 36.157, df = 6, p < 0.01, ϵ^{2} = 0.036

 $^{^{*}}X^{2} = 24.741$, df = 3, p < 0.001, $\epsilon^{2} = 0.025$



FIGURE 15. DIFFERENCE IN RESPONSE TO THE STATEMENT "WE SHOULD FOCUS ON LOOKING AFTER WHAT WE'VE GOT", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.3.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, age group[†], and wildcat knowledge score[‡]. A significance in relation to occupation[§] was also observed, but no pairwise significances were observed in post-hoc tests. In all cases, the effect size was small.

Cat Ownership: Among those who have cats, just over half took positions of disagreement (51.15%). While the largest share of those without cats also took positions of disagreement, this was fewer than half overall (45.78%) with higher proportions taking positions of agreement (38.92% compared with 28.79% of those with cats).

Age Group (Figure 16): There was a statistical difference in response between those aged 75 and over and those in the age groups of both 35-44 and 45-54, with higher levels of disagreement observed in the middle-aged groups.

^{*}W = 261753, p < 0.001, rank-biserial correlation coefficient = 0.10 (95% Cl: 0.04 to 0.16).

⁺ X^2 = 18.461, df = 6, p < 0.01, ϵ^2 = 0.014

 $^{^{+}}$ X² = 13.063, df = 3, p < 0.01, ϵ^{2} = 0.009

 $^{^{\$}}X^{2} = 40.575$, df = 23, p < 0.05, $\epsilon^{2} = 0.013$



FIGURE 16. DIFFERENCE IN RESPONSE TO THE STATEMENT "WE SHOULD FOCUS ON LOOKING AFTER WHAT WE'VE GOT", BETWEEN AGE GROUPS (OPEN SAMPLE).

Wildcat Knowledge Score: There was a significant difference in response between those who obtained wildcat knowledge scores of one and three, with the latter demonstrating higher levels of disagreement with the statement (53.16%) than the former (41.28%).

2.5.4. "Wildcats need help."

2.5.4.1. Descriptive Statistics

In both samples, the majority took a position of agreement (67%; 85.3%), while a minority took a position of disagreement (4.8%; 5.2%). The remainder had no opinion or were unsure (28.2%; 9.5%)^{*} (Figure 17).

There was a statistically significant difference in responses between the two samples[†]. There was a higher proportion of respondents with 'no opinion' (+18.7%) in the representative sample. The open sample exhibited higher levels of overall agreement (+18.3%) and disagreement (+0.4%) with higher proportions also feeling more strongly, particularly among those that strongly agreed (+31.4%).





2.5.4.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡] and wildcat knowledge scores[§]. In both cases, the effect size was small.

Cat Ownership (Figure 18): Among those who have cats, 80.06% took a position of agreement; this figure was 59.94% among those who do not have cats.

^{*} Non-south-west respondents (n=70): Strongly Agree - 41; Agree - 20; No Opinion - 6; Disagree - 2; Strongly Disagree - 1.

⁺ X² = 295.65, df = 4, p < 0.0001

⁺W = 83962, p < 0.001, rank-biserial correlation coefficient = -0.26 (95% CI: -0.33 to -0.19).

 $^{^{\$}}$ X² = 65.118, df = 3, p < 0.001, ϵ^{2} = 0.065



FIGURE 18. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS NEED HELP", BETWEEN THOSE WHO DO AND DO NOT HAVE CATS (REPRESENTATIVE SAMPLE).

Wildcat Knowledge Score (Figure 19): The responses of those who obtained a wildcat knowledge score of three were significantly different from all other scores, and there were further differences between those who scored zero and either one or two. 49.08% of those scoring zero took a position of agreement, while a majority of all other groups agreed with the statement. Likelihood of agreement increased with knowledge score: 67.25% of those who scored one; 73.83% of those who scored two; and 84.42% of those who scored three.



FIGURE 19. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS NEED HELP", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.4.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, participant gender^{\dagger}, age group[‡] and wildcat knowledge score[§]. In all cases, the effect size was small.

Cat Ownership: A marginally higher percentage of respondents with cats took a position of agreement (88.99%), than those who do not (83.03%). There was a marginally higher proportion that took position of strong agreement among those with cats, and marginally higher levels of disagreement among those who do not.

Gender: There was a statistically significant difference between male and female participants, with more males strongly agreeing (58.05%) than females (48.61%). Overall, a majority of both groups took a position of agreement (86.26% and 84.48%, respectively).

Age Group: There was a statistical difference in responses between those of participants aged 75 and over, and those aged 35-44 or 45-54. At least three quarters of participants in all groups took a position of agreement, but this figure was lowest among those aged 75 and over (75%).

Wildcat Knowledge Score (Figure 20): There was a statistical difference in responses of participants who obtained a wildcat knowledge score of either zero or one, and those of participants with scores of either two or three, with higher scores associated with higher levels of strong agreement.





^{*} W = 214720, p < 0.01, rank-biserial correlation coefficient = -0.09 (95% CI: -0.15 to -0.03).

⁺ X^2 = 9.4129, df = 2, p < 0.01, ϵ^2 = 0.007

⁺X² = 16.236, df = 6, p < 0.05, ε² = 0.013

 $^{^{\$}}$ X² = 62.95, df = 3, p < 0.001, ϵ^{2} = 0.045

2.5.5. "There is a reason wildcats went extinct, so why would be bring them back?"

2.5.5.1. Descriptive Statistics

In both samples, the majority took a position of disagreement (53.4%; 84.5%), while a minority took a position of agreement (21.6%; 8.8%). The remainder had no opinion or were unsure (25.0%; 6.7%)^{*} (Figure 21).

There was a statistically significant difference in responses between the two samples[†]. Here, there was a higher proportion of respondents with 'no opinion' (+18.3%) or who agreed with the statement (+12.8%) in the representative sample. The open sample exhibited much higher levels of strong disagreement (+34.1%).





2.5.5.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡] and wildcat knowledge scores[§]. In both cases, the effect size was small.

⁺ X² = 377.73, df = 4, p < 0.0001

⁺W = 83962, p < 0.001, rank-biserial correlation coefficient = -0.26 (95% CI: -0.33 to -0.19).

 $^{\text{S}}$ X² = 65.118, df = 3, p < 0.001, ϵ^2 = 0.065

^{*} Non-south-west respondents (n=70): Strongly Agree - 2; Agree - 1; No Opinion - 6; Disagree - 18; Strongly Disagree - 43.

Cat Ownership: Among those who do not have cats, 49.0% took a position of disagreement; this figure was 61.54% among those who have cats, who were more likely to strongly disagree (28.77% compared with 16.02% in those without cats).

Wildcat Knowledge Score: The responses of those who obtained a wildcat knowledge score of three were significantly different from all other score levels, and there were further differences between those who scored two and either zero or one. Figure 22 highlights a pattern in which those with lower knowledge scores were more likely to have no opinion or agree, whereas those with higher knowledge scores were more likely to disagree or strongly disagree, with 79.22% of those with a score of three taking a position of disagreement (compared with 35.32% of those with a score of zero).



FIGURE 22. DIFFERENCE IN RESPONSE TO THE STATEMENT "THERE IS A REASON WILDCATS WENT EXTINCT, SO WHY WOULD BE BRING THEM BACK?", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.5.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, participant gender[†], age group[‡], occupation[§] and wildcat knowledge score^{**}. In all cases, the effect size was small.

Cat Ownership: There was a marginal statistical difference observed in relation to whether participants have cats; a higher proportion of those with cats strongly disagreed with the statement (59.29%) than those without (51.70%).

Gender: There was a statistically significant difference observed between male and female participants, with a marginally higher percentage of males strongly disagreeing (57.97%) than females (52.25%).

Age Group (Figure 23): There was a statistical difference in responses from those aged 75 and over and all other age groups, as well as between those aged 25-34 and either 55-64 or 65-74. The highest

^{*}W = 259640, p < 0.001, rank-biserial correlation coefficient = 0.10 (95% CI: 0.04 to 0.17).

 $^{^{+}}$ X² = 7.0299, df = 2, p < 0.05, ϵ^{2} = 0.005

 $^{^{\}ddagger}$ X² = 69.076, df = 6, p < 0.001, ϵ^{2} = 0.049

 $^{^{\$}}X^{2} = 50.615$, df = 23, p < 0.001, $\epsilon^{2} = 0.036$

^{**} X^2 = 45.093, df = 3, p < 0.001, ϵ^2 = 0.032

share taking a position of disagreement was among the 25-34 group (93.17%), with this percentage share decreasing as age increases, reaching its lowest among those aged 75 and over (65.22%).



FIGURE 23. DIFFERENCE IN RESPONSE TO THE STATEMENT "THERE IS A REASON WILDCATS WENT EXTINCT, SO WHY WOULD BE BRING THEM BACK?", BETWEEN AGE GROUPS (OPEN SAMPLE).

Occupation: There was a statistical difference in response between respondents who were Retired and those whose occupation was in either Education or Environment, Nature & Wildlife. Strong majorities of respondents working in Education (65.14%) and Environment, Nature & Wildlife (60.67%) expressed strong disagreement with the statement, while this was proportion was only 44.71% of those who were Retired – although a majority of this group still took an overall position of disagreement (77.65%).

Wildcat Knowledge Score: There was a statistical difference in response among participants who obtained a wildcat knowledge score of three, and all other knowledge scores. In this group, 63.50% strongly disagreed, relative to 50.56% in among those who scored two, and less than half at the other score levels.

2.5.6. "If they were once native, then they should be reintroduced."

2.5.6.1. Descriptive Statistics

In both samples, the majority took a position of agreement (67.8%; 79.7%), while a minority took a position of disagreement (9.5%; 12.6%). The remainder had no opinion or were unsure (22.7%; 7.7%)^{*} (Figure 24).

There was a statistically significant difference in responses between the two samples[†]. Here, there was a higher proportion of respondents with no opinion (+15.0%) in the representative sample. The open sample exhibited higher levels of both overall agreement (+11.9%) and disagreement (+3.1%), but with a marked percentage increase for strong agreement (+15.9%).



FIGURE 24. RESPONSES TO THE STATEMENT "IF THEY WERE ONCE NATIVE, THEN THEY SHOULD BE REINTRODUCED." COMPARED BETWEEN THE TWO SAMPLES.

2.5.6.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡] and wildcat knowledge scores[§]. In both cases, the effect size was small.

Cat Ownership: Respondents with cats were more likely to agree strongly with this statement (31.9% cf. 17.41% among those without cats), driving a higher overall level of agreement in this group.

 $^{+}$ X² = 146.57, df = 4, p < 0.0001

⁺W = 93140, p < 0.001, rank-biserial correlation coefficient = -0.18 (95% CI: -0.25 to -0.11).

 $^{\$}$ X² = 59.182, df = 3, p < 0.001, ϵ^{2} = 0.059

^{*} Non-south-west respondents (n=70): Strongly Agree - 34; Agree - 29; No Opinion - 1; Disagree - 4; Strongly Disagree - 2.

Wildcat Knowledge Score (Figure 25): There were significant differences between every pairing of knowledge score. At all score levels, a simple majority agreed with the statement, but the percentage that took a position of agreement increased with wildcat knowledge score: zero = 52.29%; one = 63.74%; two = 77.13%; three = 85.71%.





2.5.6.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant gender^{*}, age group[†], and wildcat knowledge score[‡]. There was also a statistical significance in relation to occupation[§], however there were no pairwise significances in post-hoc tests. In all cases, the effect size was small.

Gender: There was a statistical difference in responses between male and female participants, with male respondents agreeing more strongly (44.42%) than female (34.10%).

Age Group (Figure 26): Participants aged 55-65 and 75 and over responded significantly differently to the age groups of 18-24 and 25-34. The 35-44 group also responded significantly differently to those aged 75 and over. Figure 26 shows a pattern of decreasing proportions agreeing with the statement as age increases, however, in all age groups at least 67.39% took a position of agreement overall.

 $^{^{*}}$ X² = 12.573, df = 2, p < 0.01, ϵ^{2} = 0.009

 $^{^{+}}$ X² = 36.461, df = 6, p < 0.001, ϵ^{2} = 0.026

 $^{{}^{\}pm}X^{2} = 42.534$, df = 3, p < 0.001, $\epsilon^{2} = 0.030$

 $^{^{\$}}X^{2} = 36.384$, df = 23, p < 0.05, $\epsilon^{2} = 0.026$



FIGURE 26. DIFFERENCE IN RESPONSE TO THE STATEMENT "IF THEY WERE ONCE NATIVE, THEN THEY SHOULD BE REINTRODUCED" IN RELATION TO PARTICIPANT AGE GROUP (OPEN SAMPLE).

Wildcat Knowledge Score (Figure 27): There was a statistical difference in responses between those who obtained a wildcat knowledge score of zero and all other score levels, as well as between the score levels of one and three. Broadly, Figure 27 shows a pattern of increasing levels of agreement as the wildcat knowledge score increases, though all scores at least 58.14% took a position of agreement overall.



FIGURE 27. DIFFERENCE IN RESPONSE TO THE STATEMENT "IF THEY WERE ONCE NATIVE, THEN THEY SHOULD BE REINTRODUCED", BETWEEN WILDCAT KNOWLEDGE SCORES (OPEN SAMPLE).
2.5.7. "Wildcats are an interesting animal, there is a story to be told."

2.5.7.1. Descriptive Statistics

In both samples, the majority took a position of agreement (71.6%; 88.6%), while a minority took a position of disagreement (4.5%; 3.3%). The remainder had no opinion or were unsure (23.9%; 10.1%)^{*} (Figure 28).

There was a statistically significant difference in responses between the two samples[†]. Here, there was a higher proportion of respondents with no opinion in the representative sample (+13.8%). The open sample reported slightly less overall disagreement (-1.2%), and a substantial increase in strong agreement (+20.1%).



FIGURE 28. RESPONSES TO THE STATEMENT "WILDCATS ARE AN INTERESTING ANIMAL, THERE IS A STORY TO BE TOLD." COMPARED BETWEEN THE TWO SAMPLES.

2.5.7.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡], age group[§], and wildcat knowledge scores^{**}. In all cases, the effect size was small.

^{*} Non-south-west respondents (n=70): Strongly Agree - 35; Agree - 30; No Opinion - 4; Disagree - 0; Strongly Disagree - 1.

⁺ X² = 147.35, df = 4, p < 0.0001

^{*}W = 85316, p < 0.001, rank-biserial correlation coefficient = -0.25 (95% CI: -0.32 to -0.18).

 $^{^{\}text{S}}$ X² = 17.92, df = 6, p < 0.05, ϵ^2 = 0.04

^{**} X² = 39.939, df = 3, p < 0.001, ε² = 0.04

Cat Ownership: A majority of participants without cats took a position of agreement (65.79%), but this was higher among participants with cats (82.34%), with 33.05% of the cat owners strongly agreeing with the statement.

Age Group: There was a significant difference between the responses of those aged 25-34 and those aged 65-74. Among the 65-74 group, there was a higher share who reported no opinion (31.55%), and a higher share of strong agreement among 25-34 year olds (29.93%). There is no clear relationship between age and response to this question.

Wildcat Knowledge Score: The responses of those who obtained a wildcat knowledge score of zero were significantly different to all other score levels, exhibiting the highest share of no opinion (39.91%) and the lowest share with strong agreement (14.22%).

2.5.7.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, participant age group[†], and wildcat knowledge score[‡]. In all cases, the effect size was small.

Cat Ownership: Those with cats were observed to agree more strongly with the statement (48.88%) than those who did not have cats (38.15%), but in both groups a strong majority took a position of agreement with the statement (90.49% and 82.20%, respectively).

Age Group (Figure 29): Respondents aged 75 and over responded significantly differently to all other age groups, except for those aged 65-74. At least 77.17% took a position of agreement within all groups, but Figure 29 shows a broad pattern of decreasing levels of agreement as age group increased.



FIGURE 29. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS ARE AN INTERESTING ANIMAL, THERE IS A STORY TO BE TOLD", BETWEEN AGE GROUPS (OPEN SAMPLE).

^{*} W = , p < 0.0, rank-biserial correlation coefficient = 0.00 (95% CI: 0.00 to 0.00).

 $^{^{+}}$ X² = 27.742, df = 6, p < 0.001, ϵ^{2} = 0.020

 $^{^{+}}$ X² = 32.083, df = 3, p < 0.001, ϵ^{2} = 0.023

Wildcat Knowledge Score: Responses from those who had obtained wildcat knowledge scores of one significantly differed from those of knowledge scores two and three. Similarly, responses from those who scored zero significantly differed from those who had scored three. Among those with a score of zero there was a higher level of no opinion (20.93%) and lower levels of agreement. Among those who scored three, there were the highest levels of strong agreement (47.84%).

2.5.8. "I would love to see a wildcat in the wild."

2.5.8.1. Descriptive Statistics

In both samples, the majority took a position of agreement (70.8%; 87.6%), while a minority took a position of disagreement (10.0%; 7.3%). The remainder had no opinion or were unsure (19.2%; 5.3%)^{*} (Figure 30).

There was a statistically significant difference in responses between the two samples[†]. Here, there was a higher proportion of respondents with no opinion (+13.9%) in the representative sample. The open sample demonstrated slightly lower overall disagreement (-2.7%) and a much greater strong agreement (+32.9%).



FIGURE 30. RESPONSES TO THE STATEMENT "I WOULD LOVE TO SEE A WILDCAT IN THE WILD." COMPARED BETWEEN THE TWO SAMPLES.

2.5.8.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡], age group[§], county of residence^{**}, and wildcat knowledge scores^{††}. In all cases, the effect size was small.

^{*} Non-south-west respondents (n=67): Strongly Agree - 50; Agree - 12; No Opinion - 3; Disagree - 0; Strongly Disagree - 2.

⁺X² = 288.55, df = 4, p < 0.0001

 $^{^{*}}$ W = 85128, p < 0.001, rank-biserial correlation coefficient = -0.25 (95% CI: -0.32 to -0.18).

 $^{^{\$}}$ X² = 16.487, df = 6, p < 0.05, ϵ^{2} = 0.017

^{**} X^2 = 14.952, df = 6, p < 0.05, ε^2 = 0.015

⁺⁺ X^2 = 45.999, df = 3, p < 0.001, ϵ^2 = 0.046

Cat Ownership: Those with cats exhibited stronger agreement, with 43.87% strongly agreeing with the statement (as opposed to 24.04% of those without cats).

Age Group (Figure 31): Those in the 25-34 age group agreed significantly more strongly (38.1%) with this statement than those aged 75 and over (22.9%). Figure 31 shows a broad pattern of decreasing strength of agreement with age, though a majority of all age groups agreed overall.





County of Residence (Figure 32): There was a significant difference in responses between respondents from Bristol and Wiltshire. While a majority agreed in both instances there was a higher share among those from Bristol (81.45% and 64.65%, respectively), which also exhibited a higher share of strong agreement (37.9% and 20.2%, respectively).





Wildcat Knowledge Score (Figure 33): The responses of those who obtained a wildcat knowledge score of zero were significantly different to all other score levels, as were those who obtained a knowledge score of three. There was a higher share of those with no opinion among knowledge scores of zero (31.19%), and the highest level of strong agreement was seen in those with scores of three (51.95%).





2.5.8.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, participant gender[†], age group[‡], occupation[§], and wildcat knowledge score^{**}. In all cases, the effect size was small.

Cat Ownership: Although in both groups over 85% took a position of agreement with the statement, a higher proportion of those with cats strongly agreed (68.97%) than among those without cats (60.63%).

Gender: There was a statistical difference in response between male and female participants. In all groups, approximately >70% took a position of agreement, however a higher proportion of males (69.24%) strongly agreed than females (60.05%).

Age Group (Figure 34): There were statistical differences in responses between the three age groups of 55-64, 65-74 and 75 and over, and the two age groups of 18-24 and 25-34. Those aged 75 and over also responded significantly differently to the age groups of 35-44 and 45-54. Broadly, the pattern demonstrates decreasing levels of agreement as age group increases, although least 75% took a position of agreement at all knowledge levels.

^{*}W = 216223, p < 0.001, rank-biserial correlation coefficient = -0.09 (95% Cl: -0.15 to -0.03).

 $^{^{+}}$ X² = 9.3801, df = 2, p < 0.01, ϵ^{2} = 0.007

 $^{^{\}ddagger}$ X² = 39.992, df = 6, p < 0.001, ϵ^{2} = 0.028

 $^{^{\$}}X^{2} = 47.19$, df = 23, p < 0.01, $\epsilon^{2} = 0.033$

^{**} X^2 = 47.148, df = 3, p < 0.001, ϵ^2 = 0.033



FIGURE 34. DIFFERENCE IN RESPONSE TO THE STATEMENT "I WOULD LOVE TO SEE A WILDCAT IN THE WILD" IN RELATION TO PARTICIPANT AGE GROUP (OPEN SAMPLE).

Occupation: There was a significant difference in responses between respondents with an occupation in Environment, Nature & Wildlife and both Farming & Agriculture or Retired respondents. There was also a difference in response between those in Education and Farming & Agriculture. Responses of strong agreement were higher in the sectors of Education (68.18%) or Environment, Nature & Wildlife (70.74%) than in Farming and Agriculture (39.53%) and among retired participants (57.60%). While 69.77% of all groups took a position of agreement, 16.28% of participants working in Farming and Agriculture strongly disagreed, significantly higher than participants working in Education (1.82%) or Environment, Nature & Wildlife (2.22%).

Wildcat Knowledge Score (Figure 35): There were significant differences in responses between those who obtained a wildcat knowledge score of zero or one and those who obtained a score of two or three. Figure 35 shows that the percentage of participants who took a position of strong agreement increased as knowledge score increased.



FIGURE 35. DIFFERENCE IN RESPONSE TO THE STATEMENT "I WOULD LOVE TO SEE A WILDCAT IN THE WILD", BETWEEN WILDCAT KNOWLEDGE SCORES (OPEN SAMPLE).

2.5.9. "I don't know much about wildcats."

2.5.9.1. Descriptive Statistics

In the open sample, a majority took a position of agreement (71.6%), compared with just over half of the representative sample (50.3%). A minority of both samples took a position of disagreement (4.4%; 28.7%). The remainder had no opinion or were unsure (23.9%; 21.0%)^{*} (Figure 36).

There was a statistically significant difference in responses between the two samples[†]. There was a slightly higher proportion of respondents with 'no opinion' in the representative sample. The open sample stated much lower levels of overall agreement (-21.3%), and much higher levels of disagreement (+24.2%). This indicates that the open sample felt as if they knew more about wildcats than the representative sample, and aligns with the conclusions of the wildcat knowledge questions, described in <u>section 2.3</u>.





2.5.9.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡], gender[§], and wildcat knowledge scores^{**}. In all cases, the effect size was small.

^{*} Non-south-west respondents (n=70): Strongly Agree - 4; Agree - 32; No Opinion - 11; Disagree - 19; Strongly Disagree - 4.

⁺ X² = 316.2, df = 4, p < 0.0001

^{*}W = 133097, p < 0.001, rank-biserial correlation coefficient = 0.17 (95% CI: 0.09 to 0.24).

[§]W = 142117, p < 0.001, rank-biserial correlation coefficient = 0.17 (95% Cl: 0.09 to 0.24).

^{**} X² = 23.863=4, df = 3, p < 0.001, ε² = 0.024

Cat Ownership: Participants who have cats were more likely to strongly agree (27.12%) with the statement than those who do not own cats (14.5%).

Gender: Female respondents were more likely to agree strongly (26.86%) than male respondents (18.16%).

Wildcat Knowledge Score (Figure 37): Participants who obtained a wildcat knowledge score of zero were significantly different to those of participants who obtained scores of two or three, with a higher proportion of this group strongly agreeing (34.86%) than all other groups. This identifies that participants with low knowledge tended to recognise this, though it is worth noting that in this sample, even those with high knowledge scores tended to agree with this statement.

FIGURE 37. DIFFERENCE IN RESPONSE TO THE STATEMENT "I DON'T KNOW MUCH ABOUT WILDCATS", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).



2.5.9.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant gender^{*}, occupation[†], and wildcat knowledge score[‡]. In all cases, the effect size was small.

Gender: There was a significant difference in response between male and female participants, with a marginally higher proportion of males disagreeing or having no opinion, and a marginally higher proportion of females agreeing.

Occupation (Figure 38): There were significant differences in response between respondents working in Environment, Nature & Wildlife and Farming & Agriculture or Retired participants. (Those working in Education also responded significantly differently to Farming & Agriculture participants). In the case of Environment, Nature & Wildlife, a comparatively high percentage took a position of disagreement (41.04%) with 5.97% strongly disagreeing.

 $X^{2} = 6.8765$, df = 2, p < 0.05, $\varepsilon^{2} = 0.005$

 $^{^{+}}$ X² = 59.63, df = 23, p < 0.001, ϵ^{2} = 0.042

 $^{^{\}pm}$ X² = 97.532, df = 3, p < 0.001, ϵ^{2} = 0.069



FIGURE 38. DIFFERENCE IN RESPONSE TO THE STATEMENT "I DON'T KNOW MUCH ABOUT WILDCATS", BETWEEN SIGNIFICANTLY DIFFERING OCCUPATIONS: FARMING & AGRICULTURE

Wildcat Knowledge Score (Figure 39): There was a significant difference in response between participants who obtained a wildcat knowledge score of either zero and one, and those who scored three. There was also a difference between the scores of one and two. Among the higher scores, there was a lower level of agreement and a higher level of disagreement, which indicates that those knowledgeable about wildcats are also more confident in this; again, those with scores of zero also tended to recognise their own lack of wildcat knowledge.





2.5.10. "I like the idea of wildcat reintroduction."

2.5.10.1. Descriptive Statistics

In both samples, the majority took a position of agreement (70.8%; 83.4%), while a minority took a position of disagreement (10.0%; 11.1%). The remainder had no opinion or were unsure (19.2%; 5.5%)^{*} (Figure 40).

There was a statistically significant difference in responses between the two samples[†]. There was a higher proportion of respondents with 'no opinion' in the representative sample (+13.7%). The open sample exhibited higher levels of overall agreement (+12.6%) and marginally higher levels of disagreement (+1.1%), with substantially higher levels of strong agreement (+21.2%).



FIGURE 40. RESPONSES TO THE STATEMENT "I LIKE THE IDEA OF WILDCAT REINTRODUCTION." COMPARED BETWEEN THE TWO SAMPLES.

2.5.10.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats[‡], age group[§], and wildcat knowledge scores^{**}. In all cases, the effect size was small.

Cat Ownership: A higher percentage of respondents with cats strongly agreed with the statement (33.90%, as opposed to 18.03% for those without cats), and those without cats were more likely to have no opinion (24.81%) than those with cats (14.81%).

^{*} Non-south-west respondents (n=70): Strongly Agree - 44; Agree - 21; No Opinion - 1; Disagree - 2; Strongly Disagree - 2.

⁺ X² = 177.77, df = 4, p < 0.0001

^{*}W = 87530, p < 0.001, rank-biserial correlation coefficient = -0.23 (95% CI: -0.30 to -0.16).

 $SX^{2} = 17.868$, df = 6, p < 0.01, $\varepsilon^{2} = 0.018$

^{**} X^2 = 53.315, df = 3, p < 0.001, ϵ^2 = 0.053

Age Group (Figure 41): There was a significant difference between the responses of 25-34 year olds and those in the age groups of 65-74, and 75 and over. 78.91% of those aged 25-34 took a position of agreement, whereas this figure was lower for those aged 65-74 (62.50%) and 75 and over (59.05%), respectively. 8.16% of participants aged 25-34 disagreed overall, compared with the 65-74 age group (13.69%) and respondents aged 75 and over (19.05%). Figure 41 reflects a broad pattern of decreasing agreement from the 25-34 age group to the 75 and older age group; agreement among the 18-24 age group is also somewhat less strong, though this finding was not statistically significant.



FIGURE 41. DIFFERENCE IN RESPONSE TO THE STATEMENT "I LIKE THE IDEA OF WILDCAT REINTRODUCTION", BETWEEN AGE GROUPS (REPRESENTATIVE SAMPLE).

Wildcat Knowledge Score (Figure 42): The responses of those who obtained a wildcat knowledge score of zero or one were significantly different to those of all other score levels. There was a further difference between those who obtained knowledge scores of one and three.

Overall agreement increased with knowledge score (Zero = 51.38%; One = 66.67%; Two = 75.76%; 87.01%). However, lower knowledge scores were associated with having no opinion, higher levels of disagreement, and lower levels of agreement.

This is an important finding because it indicates that support for wildcat reintroduction is generally high even where knowledge of wildcats is low. Low knowledge scores might also, however, be associated with more disagreement. This could be due to disagreement with reintroductions generally, or possibly because participants in this sample are confusing wildcat with lynx, which is a larger and more controversial predator; although in both cases the majority agreed, there was a significant difference in the average response between those who had correctly identified the photo of a wildcat in the first question and those who selected the lynx, with the latter scoring lower^{*} (Figure 43).

^{*}Welch's two-sample t-test: t = -2.276, df = 336.51, p < 0.05. Wildcat mean = 3.98, Lynx mean = 3.80.



FIGURE 42. DIFFERENCE IN RESPONSE TO THE STATEMENT "I LIKE THE IDEA OF WILDCAT REINTRODUCTION", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

FIGURE 43. DIFFERENCE IN RESPONSE TO THE STATEMENT "I LIKE THE IDEA OF WILDCAT REINTRODUCTION", BETWEEN THOSE WHO CORRECTLY IDENTIFIED THE PHOTO OF A WILDCAT, AND THOSE THAT SELECTED THE PHOTO OF A LYNX (REPRESENTATIVE SAMPLE).



2.5.10.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, gender[†], age group[‡], occupation[§], and wildcat knowledge score^{**}. In all cases, the effect size was small.

Cat Ownership: Participants with cats were more likely to strongly agree with this statement (57.68%) compared with participants without cats (48.93%). There was also a marginally higher percentage who strongly disagreed among those who do not have cats (6.97%) compared to those who do (2.81%).

^{*}W = 213148, p < 0.001, rank-biserial correlation coefficient = -0.10 (95% Cl: -0.16 to -0.04).

⁺ X² = 8.8472 df = 2, p < 0.05, ε² = 0.006

 $^{^{\}ddagger}$ X² = 57.703, df = 2, p < 0.05, ϵ^{2} = 0.041

 $^{^{\$}}$ X² = 44.918, df = 23, p < 0.01, ϵ^{2} = 0.032

^{**} X^2 = 40.026, df = 3, p < 0.001, ε^2 = 0.028

Gender: There was a significant difference in response between male and female participants. While in both groups just over 83% took a position of agreement, a higher share of male participants agreed strongly (57.84%) compared with females (48.43%).

Age Group (Figure 44): There was a significant difference in response between those aged 18-24, 25-34 or 35-44 (younger participants) and those aged 55-64, 65-74, or 75 and over (older participants). Respondents aged 75 or older also responded significantly differently to those aged 45-54 or 55-64. Broadly, as demonstrated in Figure 44, the percentage of those taking a position of agreement decreases from 96.05% to 66.30%, as age increases.



FIGURE 44. DIFFERENCE IN RESPONSE TO THEE STATEMENT "I LIKE THE IDEA OF WILDCAT REINTRODUCTION", BETWEEN AGE GROUPS (OPEN SAMPLE).

Occupation: There was a significant difference in responses between participants with an occupation in Education and those who were Retired. In both groups a majority who took a position of agreement, but more participants working in Education agreed strongly (59.09%), compared with Retired respondents (42.11%).

Wildcat Knowledge Score (Figure 45): There was a significant difference in responses between those with a wildcat knowledge score of zero or one, and those with a score of two or three. Those with a score of three also differed from those with two. Figure 45 shows that strong agreement increases with knowledge score, from 32.56% to 58.87%. This is an important finding because it indicates that people who know more about wildcats are more likely to like the idea of their reintroduction.



FIGURE 45. DIFFERENCE IN RESPONSE TO THE STATEMENT "I LIKE THE IDEA OF WILDCAT REINTRODUCTION", BETWEEN WILDCAT KNOWLEDGE SCORES (OPEN SAMPLE).

2.5.11. "I'm concerned about disease transmission, to livestock and domestic cats."

2.5.11.1. Descriptive Statistics

In the representative sample, the highest share took a position of agreement (36.3%), then disagreement (33.1%); the remainder had no opinion or were unsure (30.6%). In the open sample, a majority took a position of disagreement (66.4%), and a minority took a position of agreement (13.1%); the remainder had no opinion or were unsure (20.5%)^{*} (Figure 46).

There was a statistically significant difference in responses between the two samples[†]. There was a higher proportion of respondents with no opinion in the representative sample (+10.1%). The open sample expressed much lower levels of agreement (-23.2%) and much higher levels of disagreement (+33.3%) with the statement.

We additionally evaluated responses of key stakeholder groups for this statement (participants working in Farming & Agriculture, and participants with cats), and found that the results for these groups did not statistically differ from those of other occupations or non-cat owners.



FIGURE 46. RESPONSES TO THE STATEMENT "I'M CONCERNED ABOUT DISEASE TRANSMISSION, TO LIVESTOCK AND DOMESTIC CATS." COMPARED BETWEEN THE TWO SAMPLES.

^{*} Non-south-west respondents (n=70): Strongly Agree - 1; Agree - 8; No Opinion - 15; Disagree - 24; Strongly Disagree - 22.

⁺X² = 312.99, df = 4, p < 0.0001

2.5.11.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response to participant age group^{*}, and wildcat knowledge score[†]. In both cases, the effect size was small.

Age Group (Figure 47): There was a significant difference between the responses of those aged 18-24, and responses from the age groups of 45-54, 55-64, and 65-74. A slim majority of those in the 18-24 age group took a position of agreement (54.29%). This significantly differed from other age groups: 45-54 = 27.67%; 55-64 = 27.98%; and 65-74 = 34.29%. Figure 47 shows a broad pattern of decreasing agreement with age, indicating lower concern about disease risk, but excepting the 75 and over age group, where concern rises again (this difference is not statistically significant, however).





Wildcat Knowledge Score (Figure 48): The responses of those who obtained a wildcat knowledge score of three were significantly different to those of all other score levels, as were those of respondents who obtained a score of two. As wildcat knowledge score increases, so too does the percentage that takes a position of disagreement, and the percentage of agreement decreases. There is a higher share of overall agreement among participants scoring zero (45.87%) or one (42.69%), a higher proportion of disagreement for those who scored two (42.42%) and an overall majority taking a position of disagreement among those who obtained a score of three (66.23%). This indicates a relatively clear relationship between knowledge about wildcats and degree of concern about disease risk.

 $^{^{*}}$ X² = 26.399, df = 6, p < 0.01, ϵ^{2} = 0.026

⁺X² = 73.459, df = 3, p < 0.001, ε² = 0.074

FIGURE 48. DIFFERENCE IN RESPONSE TO THE STATEMENT "I'M CONCERNED ABOUT DISEASE TRANSMISSION, TO LIVESTOCK AND DOMESTIC CATS", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).



2.5.11.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant gender^{*}, age group[†], occupation[‡], and wildcat knowledge score[§]. In all cases, the effect size was small.

Gender: A significantly higher number of male participants strongly disagreed (33.51%) with this statement than female participants (20.87%).

Age Group (Figure 49): There was a significant difference in response between respondents aged 75 and over (who expressed least overall disagreement) and the age groups of 35-44 and 45-54 (who expressed most overall disagreement). In all age groups except for 75 and over, at least 64.47% took a position of disagreement. Among those aged 75 and over, this figure was 49.45%, with 29.67% indicating no opinion.

 $^{^{*}\,}X^{2}$ =9.3393 , df = 2, p < 0.01, ϵ^{2} = 0.007

⁺ X^2 = 18.853, df = 6, p < 0.01, ϵ^2 = 0.015

 $^{^{\}ddagger}X^{2}$ = 49.637, df = 23, p < 0.01, ϵ^{2} = 0.035

 $^{^{}S}X^{2} = 41.032$, df = 3, p < 0.001, $\epsilon^{2} = 0.029$



FIGURE 49. DIFFERENCE IN RESPONSE TO THE STATEMENT "I'M CONCERNED ABOUT DISEASE TRANSMISSION, TO LIVESTOCK AND DOMESTIC CATS", BETWEEN AGE GROUPS (OPEN SAMPLE).

Occupation (Figure 50): There was a statistical difference in responses between those with an occupation in Physical & Social Science and those working in Arts, Sport & Media, or Students. While 48-50% took a position of disagreement, this figure was 95.00% among those with an occupation in Physical & Social Science, with 55.00% strongly disagreeing.

FIGURE 50. DIFFERENCE IN RESPONSE TO THE STATEMENT "I'M CONCERNED ABOUT DISEASE TRANSMISSION, TO LIVESTOCK AND DOMESTIC CATS", BETWEEN SIGNIFICANTLY DIFFERING OCCUPATIONS: PHYSICAL & SOCIAL SCIENCE AND BOTH ARTS, SPORT & MEDIA AND STUDENT (OPEN SAMPLE).



Wildcat Knowledge Score (Figure 51): The responses of those who obtained a wildcat knowledge score of three were significantly different to those of all other score levels. In this case, a higher percentage of those with a score of three took a position of disagreement (73.04%), with around one-third (33.61%) strongly disagreeing. A majority of those who scored one or two also took a position of disagreement (57.45% and 64.23%, respectively), while a higher share of those with a score of zero indicated having no opinion (42.86%).



FIGURE 51. DIFFERENCE IN RESPONSE TO THE STATEMENT "I'M CONCERNED ABOUT DISEASE TRANSMISSION, TO LIVESTOCK AND DOMESTIC CATS", BETWEEN WILDCAT KNOWLEDGE SCORES (OPEN SAMPLE).

2.5.12. "It is a problem that domestic cats and wildcats can interbreed."

2.5.12.1. Descriptive Statistics

In the representative sample, the highest share took a position of agreement (40.0%), very closely followed by those with no opinion or uncertainty (38.9%); the remainder took a position of disagreement (21.1%). In the open sample, a majority took a position of agreement (55.7%), then had no opinion or were unsure (38.9%); the remainder took a position of disagreement (19.1%)^{*} (Figure 52).

There was a statistically significant difference in responses between the two samples[†]. There was a higher proportion of respondents with no opinion in the representative sample (+13.8%). The open sample exhibited a slightly lower percentage of disagreement (-2.0%), and a higher percentage of agreement (+15.7%) with the statement, particularly among those that strongly agreed (+11.8%).

We additionally evaluated responses of domestic cat owners for this statement and found that the results for this groups did not statistically differ from those of non-cat owners in the representative sample, but they did so within the open sample (see <u>2.5.12.3</u>).

FIGURE 52. RESPONSES TO THE STATEMENT "IT IS A PROBLEM THAT DOMESTIC CATS AND WILDCATS CAN INTERBREED". COMPARED BETWEEN THE TWO SAMPLES.



2.5.12.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response to participant age group[‡] and county of residence[§]. (There was also significance in the wildcat

⁺X² = 94.621, df = 4, p < 0.0001

 $^{+}$ X² = 15.27, df = 6, p < 0.05, ϵ^{2} = 0.0.015

^{*} Non-south-west respondents (n=70): Strongly Agree - 14; Agree - 27; No Opinion - 17; Disagree - 9; Strongly Disagree - 3.

 $^{^{\}text{S}}$ X² = 17.819, df = 6, p < 0.01, ϵ^2 = 0.018

knowledge score^{*}, but no significant pairings of scores in post-hoc tests). In all cases, the effect size was small.

Age Group: There was a significant difference between the responses of those aged 45-54 and those aged 75 and over, driven by a greater proportion of respondents 75 or over agreeing overall, and a greater proportion of the 45-54 group disagreeing. There is no observable pattern in response by age, however.

County of Residence: There was a significant difference in responses between participants from Bristol, around half of which had no opinion (49.19%), and those from Devon, around half of which agreed (38.4%) or strongly agreed (10.27%) with the statement. It is not clear what might be driving this difference; it is possible, though speculative, that participants from more rural Devon may have more experience of feral cats and therefore be more aware of the possibility of their coming into contact with wildcats.

2.5.12.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based on whether respondent have cats[†], age group[‡], and wildcat knowledge score[§]. There was also a significant effect of occupation^{**}, but no pairwise significances were evident in post-hoc tests. In all cases, the effect size was small.

Cat Ownership: Participants without cats were slightly more likely to strongly agree (21.71%) with the statement than those with cats (16.98%). Conversely, participants with cats were more likely to disagree (18.66%) than those without cats (13.95%).

Age Group (Figure 53): There was a significant difference in response between those aged 75 and over and those within the age groups of 25-34, 35-44, and 45-54. There were also differences between ages 18-24 and 35-44 or 45-54, as well as between ages 35-44 and 65-74. Broadly, Figure 53 shows that there are higher levels of agreement in the younger and older groups, than among the middle age groups.

 $^{^{*}}$ X² = 7.82, df = 3, p < 0.01, ϵ^{2} = 0.008

⁺W = 252675, p < 0.05, rank-biserial correlation coefficient = 0.06 (95% CI: 0.00 to 0.12).

 $^{^{*}}$ X² = 40.602, df = 6, p < 0.001, ϵ^{2} = 0.029

 $^{^{\$}}X^{2} = 49.415$, df = 3, p < 0.001, $\epsilon^{2} = 0.042$

^{**} X² = 108.86, df = 23, p < 0.001, ε² = 0.078



FIGURE 53. DIFFERENCE IN RESPONSE TO THE STATEMENT "IT IS A PROBLEM THAT DOMESTIC CATS AND WILDCATS CAN INTERBREED", BETWEEN AGE GROUPS (OPEN SAMPLE).

Wildcat Knowledge Score (Figure 54): There were statistical differences in response between those who obtained a knowledge score of one and two, as well as between scores of one or two and a score of three. Participants scoring one (39.15%) were more likely to report no opinion than those scoring two (24.25%) or three (19.73%), and there were higher levels of agreement among scores of two or three – with the latter exhibiting the highest percentage of strongly agree (26.20%). Figure 54 shows a broad pattern of increased agreement in relation to knowledge score, and greater strength of opinion among those with most knowledge about wildcats; this is as might be expected, given those knowledgeable about wildcats are more likely to be aware of the challenge of hybridisation in Scotland.





2.5.13. "Wildcats could be a threat to poultry or gamebirds."

2.5.13.1. Descriptive Statistics

In the representative sample, a small majority took a position of agreement (57.2%). 27.6% had no opinion or were unsure; the remainder took a position of disagreement (15.2%). In the open sample, the highest share took a position of disagreement (41.0%), then a position of agreement (32.7%); the remainder had no opinion or were unsure (26.3%)^{*} (Figure 55).

There was a statistically significant difference in responses between the two samples[†]. There was a marginally higher proportion of respondents with no opinion (+1.3%) in the representative sample. The open sample exhibited less agreement (-24.5%) and more disagreement (+25.8%), though strong views were less common than for other statements.

We additionally evaluated responses of key stakeholder groups for this statement (participants working in Farming & Agriculture and Gamekeeping & Shooting) and found that the results for these groups did not statistically differ from those of other occupations.





^{*} Non-south-west respondents (n=70): Strongly Agree - 4; Agree - 24; No Opinion - 15; Disagree - 20; Strongly Disagree - 7.

⁺X² = 215.95, df = 4, p < 0.0001

2.5.13.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response to participant whether participants have cats^{*}, county of residence⁺ and wildcat knowledge score[‡]. In all cases, the effect size was small.

Cat Ownership (Figure 56): There was a significant difference based upon whether participants had cats; the differences here were marginal. Participants with cats were slightly more likely to disagree (14.25%) or strongly disagree (4.27%) than participants without cats (11.4% and 2.00%, respectively); conversely, participants without cats were slightly more likely to strongly agree (10.79%) than those with cats (8.26%)

FIGURE 56. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS COULD BE A THREAT TO POULTRY OR GAMEBIRDS", BETWEEN THOSE WHO DO AND DO NOT HAVE CATS (REPRESENTATIVE SAMPLE).



County of Residence: There was a statistical difference in responses from those who lived in Bristol and Somerset. 42.74% of those from Bristol took a position of agreement, and 34.68% had no opinion. For Somerset, 62.34% took a position of agreement and 23.38% had no opinion.

Wildcat Knowledge Score (Figure 57): There was a difference between respondents who obtained a wildcat knowledge score of one and three. Of those who scored one, a majority (60.82%) took a position of agreement, and 12.87% took a position of disagreement. Of those who scored three, 48.05% took a position of agreement and 31.17% disagreement. This suggests that those with greater knowledge scores were less likely to consider wildcats a risk to game or poultry.

^{*} W = 121926, p < 0.05, rank-biserial correlation coefficient = -0.07 (95% Cl: 0.00 to 0.14).

 $^{^{+}}$ X² = 13.319, df = 6, p < 0.05, ϵ^{2} = 0.013

 $^{^{+}}$ X² = 10.108, df = 3, p < 0.05, ϵ^{2} = 0.010



FIGURE 57. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS COULD BE A THREAT TO POULTRY OR GAMEBIRDS", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.13.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant age group* and wildcat knowledge score[†]. In both cases, the effect size was small.

Age Group (Figure 58): There was a statistical difference in response between those aged 75 and over and all other age groups, except the 18-24 age group. Those aged 18-24 also responded differently to the 25-34 and 45-54 age groups. Figure 58 indicates that fewer respondents in the oldest and youngest age groups took a position of disagreement.



FIGURE 58. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS COULD BE A THREAT TO POULTRY OR GAMEBIRDS", BETWEEN AGE GROUPS (OPEN SAMPLE).

^{*} $X^2 = 35.696$, df = 6, p < 0.001, $\varepsilon^2 = 0.025$

⁺ X^2 = 48.585, df = 3, p < 0.001, ϵ^2 = 0.034

Wildcat Knowledge Score (Figure 59): Respondents who obtained a wildcat knowledge score of three responded significantly differently to all other score levels. Figure 59 indicates that, proportions taking a position of disagreement increased from 16.67% to 50% as knowledge score increases from zero to three.



FIGURE 59. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCATS COULD BE A THREAT TO POULTRY OR GAMEBIRDS", BETWEEN WILDCAT KNOWLEDGE SCORES (OPEN SAMPLE).

2.5.14. "Many farmers would tolerate wildcats."

2.5.14.1. Descriptive Statistics

In both samples, the highest share took a position of disagreement (42.8%; 37.8%), followed by having no opinion or uncertainty (37.4; 33.9%). The remainder took a position of agreement (19.8%; 28.3%)* (Figure 6o).

There was a statistically significant difference in responses between the two samples[†]. There was a marginally higher proportion of respondents with no opinion (+3.5%) in the representative sample. The open sample exhibited more agreement (+8.5%) and lower disagreement (-5.0%), but these differences were marginal in the strongly agree and strongly disagree categories.

We additionally evaluated responses of the key stakeholder group for this statement (participants working in Farming & Agriculture), and found that the results for this group did not statistically differ from those of other occupations.



FIGURE 60. RESPONSES TO THE STATEMENT "MANY FARMERS WOULD TOLERATE WILDCATS." COMPARED BETWEEN THE TWO SAMPLES.

2.5.14.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response in relation to whether participants have cats[‡]; the effect size was small.

^{*} Non-south-west respondents (n=70): Strongly Agree - 2; Agree - 20; No Opinion - 26; Disagree - 17; Strongly Disagree - 5.

⁺X² = 26.669, df = 4, p < 0.0001

^{*}W = 121926, p < 0.05, rank-biserial correlation coefficient = -0.03 (95% Cl: -0.11 to -0.04).

Cat Ownership: Although there was a statistical difference based on whether respondents had cats, the difference was marginal. Respondents with cats were slightly more likely to agree (19.94%) or strongly agree (3.99%) than those who did not (15.41% and 2.16%). A higher share of those without cats had no opinion (39.91%) compared to those with cats (23.93%).

2.5.14.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon wildcat knowledge score^{*}, although the effect size was small. There was also an association with participant occupation[†], but no pairwise significances were evident in post-hoc tests.

Wildcat Knowledge Score: There was a statistical difference in response between participants who obtained a wildcat knowledge score of one, and those who scored either two or three. Among participants who scored one, a marginally higher proportion took a position of disagreement (42.98%) than those scoring two or three, but with a higher share responding that they strongly disagree (14.47%, cf. 6.98-8.05% in other groups). There was no clear relationship between knowledge score and agreement, however.

^{*} X² = 12.907, df = 3, p < 0.05, ϵ^2 = 0.009

⁺ X^2 = 36.537, df = 23, p < 0.05, ϵ^2 = 0.026

2.5.15. "Wildcat reintroduction would probably help rural businesses and holiday businesses."

2.5.15.1. Descriptive Statistics

In the representative sample, the highest share took a position of agreement (40.0%), closely followed by no opinion or uncertainty (39.2%); the remainder took a position of disagreement (20.8%). In the open sample, a small majority took a position of agreement (58.4%), then had no opinion or were unsure (39.2%)^{*}. The remainder took a position of disagreement (16.9%) (Figure 70).

There was a statistically significant difference in responses between the two samples[†]. A higher proportion of respondents had no opinion (+14.5%) in the representative sample. The open sample reporter more agreement (+18.4%) and slightly less disagreement (-3.9%) than the representative sample.

We additionally evaluated responses of key stakeholder groups for this statement (participants working in Business & Finance, Hospitality, and Tourism), and found that the results for these groups did not statistically differ from those of other occupations.



FIGURE 70. RESPONSES TO THE STATEMENT "WILDCAT REINTRODUCTION WOULD PROBABLY HELP RURAL BUSINESSES AND HOLIDAY BUSINESSES." COMPARED BETWEEN THE TWO SAMPLES.

^{*} Non-south-west respondents (n=70): Strongly Agree - 16; Agree - 32; No Opinion - 17; Disagree - 3; Strongly Disagree - 2.

⁺X² = 110.6, df = 4, p < 0.0001

2.5.15.2. Relationships with demographics: Representative Sample

In the representative sample, there were found to be significant differences in response based upon whether respondents have cats^{*}, age group[†], and wildcat knowledge scores[‡]. In all cases, the effect size was small.

Cat Ownership: Those who had cats exhibited higher levels of agreement (48.43%) and lower levels of disagreement (15.67%) than those who did not have cats (35.44% and 23.57%, respectively).

Age Group: There was a significant difference between respondents aged 35-44 and those aged 75 and over, driven by a higher portion of the latter (27.62%) taking a position of disagreement than the former (12.68%).

Wildcat Knowledge Score (Figure 71): Respondents who obtained a wildcat knowledge score of zero responded in a significantly different manner to those who obtained scores of two or three. 47.71% of those who scored zero selected no opinion, and 29.36% took a position of agreement. There were lower levels of no opinion among scores of two (30.85%) or three (33.77%), and more overall agreement (45.73% and 51.95%, respectively). This pattern – of those with higher knowledge scores being more likely to agree – is observable in Figure 71

FIGURE 71. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCAT REINTRODUCTION WOULD PROBABLY HELP RURAL BUSINESSES AND HOLIDAY BUSINESSES", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).



^{*}W = 95522, p < 0.001, rank-biserial correlation coefficient = -0.16 (95% Cl: -0.23 to -0.09).

 $^{^{+}}$ X² = 16.22, df = 6, p < 0.05, ϵ^{2} = 0.016

 $^{^{*}}X^{2} = 12.254$, df = 3, p < 0.01, $\epsilon^{2} = 0.012$

2.5.15.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, participant gender[†], age group[‡], county of residence[§], occupation^{**}, and wildcat knowledge score^{††}. In all cases, the effect size was small.

Cat Ownership: There was marginally more agreement among those with cats (60.19% cf. 57.34%), and marginally more disagreement among those without cats (19.98% cf. 11.78%). 28.04% of those with cats indicated having no opinion, compared with 22.69% of those without cats.

Gender: There was a statistical difference in response between male and female participants. 21.12% of male participants strongly agree, compared with 13.58% of female participants; and female participants were more likely to have no opinion (27.88% cf. 19.49% of male participants).

Age Group (Figure 72): There was a statistical difference in response between those aged 75 and over and all other age groups, except 65-74 year-olds. This latter age group responded differently to those aged 18-24, 25-34, and 35-44. There was a further difference between 25-34 and 55-64 year-olds. Figure 72 shows that broadly, there was a pattern of decreasing levels of agreement as age increased, from 72.37% to 37.36%.

FIGURE 72. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCAT REINTRODUCTION WOULD PROBABLY HELP RURAL BUSINESSES AND HOLIDAY BUSINESSES", BETWEEN AGE GROUPS (OPEN SAMPLE).



^{**} $X^2 = 78.619$, df = 23, p < 0.001, $\epsilon^2 = 0.056$

^{*}W = 222979, p < 0.05, rank-biserial correlation coefficient = -0.06 (95% Cl: -0.12 to 0.00).

 $^{^{+}}$ X² = 14.222, df = 2, p < 0.001, ϵ^{2} = 0.010

 $^{^{+}}$ X² = 63.325, df = 6, p < 0.001, ϵ^{2} = 0.045

 $^{^{\$}}X^{2} = 20.371$, df = 6, p < 0.01, $\varepsilon^{2} = 0.014$

⁺⁺ X^2 = 39.368, df = 3, p < 0.001, ϵ^2 = 0.028

County of Residence (Figure 73): There was a statistical difference in response between participants resident in Bristol, and residents in both Cornwall & Isles of Scilly, and Devon. A much higher level of participants from Bristol took a position of agreement (88.37%) compared to participants from Devon (57.85%), and Cornwall & Isles of Scilly (49.18%).





Occupation (Figure 74): There was a statistical difference in response between those who were Retired, and participants whose occupation was in Education; Environment, Nature & Wildlife; or Transport. Figure 74 indicates that broadly, there were comparatively higher levels of disagreement, and lower agreement, among those who were Retired compared with other groups. The Transport group had no disagreement, but this may be an artefact of small sample size.

FIGURE 74. DIFFERENCE IN RESPONSE TO THE STATEMENT "WILDCAT REINTRODUCTION WOULD PROBABLY HELP RURAL BUSINESSES AND HOLIDAY BUSINESSES", BETWEEN SIGNIFICANTLY DIFFERING OCCUPATIONS: RETIRED AND EDUCATION, AND ENVIRONMENT, NATURE & WILDLIFE, AND TRANSPORT (OPEN SAMPLE).



2.5.16. "There is not enough habitat for wildcats here."

2.5.16.1. Descriptive Statistics

In the representative sample, the highest share took a position of disagreement (39.1%), followed by no opinion or uncertainty (36.2%); the remainder took a position of agreement (24.7%). In the open sample, the majority took a position of disagreement (55.4%), then had no opinion or were unsure (22.7%), closely followed by those who took a position of agreement (22.0%)^{*} (Figure 75).

There was a statistically significant difference in responses between the two samples[†]. There was a higher proportion of respondents with no opinion (+13.5%) in the representative sample. The open sample expressed higher levels of disagreement (+16.3%). There was a small decrease in the percentage that took a position of agreement overall (-2.7%), but a marginal increase in those that strongly agreed (+1.4%).





2.5.16.2. Relationships with demographics: Representative Sample

In the representative sample, there were significant differences in response based upon gender[‡], age group[§], county of residence^{**}, and wildcat knowledge scores^{††}. In all cases, the effect size was small.

^{*} Non-south-west respondents (n=70): Strongly Agree - 4; Agree - 9; No Opinion - 14; Disagree - 33; Strongly Disagree - 10.

⁺ X² = 87.107, df = 4, p < 0.0001

 $^{^{\}ast}$ W = 133922, p < 0.05, rank-biserial correlation coefficient = 0.07 (95% CI: 0.00 to 0.14).

 $^{^{\$}}$ X² = 18.37, df = 6, p < 0.01, ϵ^{2} = 0.018

^{**} X^2 = 16.393, df = 6, p < 0.05, ϵ^2 = 0.016

⁺⁺ X^2 = 37.533, df = 3, p < 0.001, ϵ^2 = 0.038

Gender: A higher percentage of male participants took a position of disagreement (42.24%) than females (36.08%), and a higher percentage of female participants took a position of agreement (26.47%) than males (22.86%).

Age Group: There was a difference in response between respondents in the age groups of 25-34 and 65-74. A higher percentage of the younger group took a position of agreement (37.41% cf. 17.86%), and a smaller percentage took a position of disagreement (34.69% cf. 47.02%) than the older group. There was no observable pattern in responses by age, however.

County of Residence: There was a difference in response between respondents who lived in Cornwall & Isles of Scilly and Wiltshire. Among those from Wiltshire, there were higher levels of agreement (32.32%) and lower levels of disagreement (24.24%) than respondents from Cornwall & Isles of Scilly (16.82% and 49.53%, respectively). These differences may be attributable to differences in participants' perception of their local area and interpretation of 'here'.

Wildcat Knowledge Score (Figure 76): Respondents who obtained a wildcat knowledge score of three responded significantly differently to all other knowledge scores, as did respondents who obtained a score of zero. A small majority (57.14%) of those scoring three disagreed with the statement, whereas 50% of those scoring zero reported having no opinion. Figure 76 indicates that broadly, as knowledge score increases, so does likelihood of disagreement; comparatively few respondents across all groups strongly agreed.



FIGURE 76. DIFFERENCE IN RESPONSE TO THE STATEMENT "THERE IS NOT ENOUGH HABITAT FOR WILDCATS HERE", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.16.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant gender^{*} and occupation[†]. There was also an association with age group[‡], but no pairwise differences were observed in post-hoc tests. In all cases, the effect size was small.

Gender: There was a significant difference in response between male and female participants. While a majority of both groups took a position of disagreement, a higher share of male participants strongly disagreed (20.00%) than female participants (8.48%).

Occupation: There was a statistical difference in response among those in the occupation of Gamekeeping & Shooting, and all other occupations. This was the only instance of such a difference among all nineteen statement questions. In this case, no participants disagreed, and 77.78% strongly agreed. The sample size is small (n=11), but nevertheless, the strong viewpoint among this group is worth noting.

 $^{^{*}}$ X² = 14.457, df = 2, p < 0.001, ϵ^{2} = 0.011

 $^{^{+}}X^{2} = 49.152$, df = 23, p < 0.001, $\epsilon^{2} = 0.035$

 $^{^{+}}$ X² = 16.079, df = 6, p < 0.05, ϵ^{2} = 0.012
2.5.17. "You don't want too many wildcats, so you'd need a form of control."

2.5.17.1. Descriptive Statistics

In the representative sample, the majority took a position of agreement (55.1%), followed by no opinion or uncertainty (30.9%); the remainder took a position of disagreement (14.0%). In the open sample, a slim majority took a position of disagreement (52.2%), followed by no opinion (24.8%); the remainder took a position of agreement (23.0%%)^{*} (Figure 77).

There was a statistically significant difference in responses between the two samples^{\dagger}. There was a higher proportion of respondents with no opinion (+6.1%) in the representative sample. The open sample exhibited much lower levels of agreement (-32.1%), and much higher levels of disagreement (+38.2%) with the statement.



FIGURE 77. RESPONSES TO THE STATEMENT "YOU DON'T WANT TOO MANY WILDCATS, SO YOU'D NEED A FORM OF CONTROL." COMPARED BETWEEN THE TWO SAMPLES.

^{*} Non-south-west respondents (n=69): Strongly Agree - 3; Agree - 12; No Opinion - 11; Disagree - 27; Strongly Disagree - 16.

⁺ X² = 413.99, df = 4, p < 0.0001

2.5.17.2. Relationships with demographics: Representative Sample

In the representative sample, there were significant differences in response based on whether participants have cats^{*}, gender[†] and wildcat knowledge scores[‡]. In all cases, the effect size was small.

Cat Ownership (Figure 78): Respondents who do not have cats (57.47%) were slightly more likely to take a position of agreement than those who do (50.71%). This relationship is visualised in Figure 78

FIGURE 78. DIFFERENCE IN RESPONSE TO THE STATEMENT "YOU DON'T WANT TOO MANY WILDCATS, SO YOU'D NEED A FORM OF CONTROL", BETWEEN THOSE WHO DO AND DO NOT HAVE CATS (REPRESENTATIVE SAMPLE).



Gender: Female respondents were slightly more likely to take a position of agreement (58.82%) than male respondents (51.22%), and slightly less likely to take a position of disagreement (12.35% cf. 15.71%).

Wildcat Knowledge Score (Figure 79): There were higher levels of disagreement among participants scoring three than in all other groups (33.77%). This was also the only group in which there was not a majority taking a position of agreement (41.56%).

FIGURE 79. DIFFERENCE IN RESPONSE TO THE STATEMENT "YOU DON'T WANT TOO MANY WILDCATS, SO YOU'D NEED A FORM OF CONTROL", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).



^{*} W = 128255, p < 0.001, rank-biserial correlation coefficient = 0.13 (95% CI: 0.05 to 0.20).

 $^{^{+}}W = 134252$, p < 0.05, rank-biserial correlation coefficient = 0.07 (95% Cl: 0.00 to 0.15).

 $^{^{+}}$ X² = 14.138, df = 3, p < 0.01, ϵ^{2} = 0.014

2.5.17.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant gender^{*}, age group[†], occupation[‡], and wildcat knowledge score[§]. In all cases, the effect size was small.

Gender: There was a statistical difference in response between male and female participants. Marginally more male participants took a position of disagreement (55.15%) than female participants (50.24%), driven by a higher proportion of males strongly disagreeing (25.14% cf. 14.68%).

Age Group (Figure 8o): There was a statistical difference in response between the age groups of 65-74 and 75 and over, and both age groups of 25-34 and 35-44. There was also a difference between those aged 75 and over and the age groups of 45-54 and 55-64. Figure 80 shows that broadly, there was less disagreement in the youngest and oldest age groups compared with the groups in between.



FIGURE 80. DIFFERENCE IN RESPONSE TO THE STATEMENT "YOU DON'T WANT TOO MANY WILDCATS, SO YOU'D NEED A FORM OF CONTROL", BETWEEN AGE GROUPS (OPEN SAMPLE).

Occupation: Retired participants were less likely to take a position of disagreement (62.08%), than participants working in Environment, Nature & Wildlife (46.18%).

Wildcat Knowledge Score (Figure 81): There was a statistical difference in response between the responses of those who obtained a wildcat knowledge score of three and all other score levels, as well as between the responses of those who scored two and those who scored either one or two.

 $^{^{*}}$ X² = 9.3167, df = 2, p < 0.01, ϵ^{2} = 0.007

 $^{^{+}}$ X² = 36.044, df = 6, p < 0.001, ϵ^{2} = 0.026

 $^{{}^{\}ddagger}X^{2} = 51.206$, df = 23, p < 0.001, $\epsilon^{2} = 0.036$

 $^{^{\$}}X^{2} = 81.332$, df = 3, p < 0.001, $\epsilon^{2} = 0.058$

Figure 81 shows that broadly, as wildcat knowledge score increases there is more disagreement with the statement, and stronger disagreement.



FIGURE 81. DIFFERENCE IN RESPONSE TO THE STATEMENT "YOU DON'T WANT TOO MANY WILDCATS, SO YOU'D NEED A FORM OF CONTROL", BETWEEN WILDCAT KNOWLEDGE SCORES (OPEN SAMPLE).

2.5.18. "There would need to be a clear conflict management plan in place right at the start of the programme."

2.5.18.1. Descriptive Statistics

In both samples, the majority took a position of agreement (76.5%; 85.2%), while a minority took a position of disagreement (3.9%; 4.0%). The remainder had no opinion or were unsure (19.4%; 11.0%)* (Figure 82).

There was a statistically significant difference in responses between the two samples[†]. There was a higher proportion of respondents with no opinion (+8.4%) in the representative sample. The open sample exhibited higher levels of strong agreement (11.7%) and a very marginal increase in strong disagreement (0.5%).

FIGURE 82. RESPONSES TO THE STATEMENT "THERE WOULD NEED TO BE A CLEAR CONFLICT MANAGEMENT PLAN IN PLACE RIGHT AT THE START OF THE PROGRAMME." COMPARED BETWEEN THE TWO SAMPLES.



^{*} Non-south-west respondents (n=70): Strongly Agree - 27; Agree - 33; No Opinion - 8; Disagree - 1; Strongly Disagree - 1.

⁺ X² = 57.158, df = 4, p < 0.0001

2.5.18.2. Relationships with demographics: Representative Sample

In the representative sample, there were significant differences in response based upon participant counties of residence^{*} and wildcat knowledge scores[†]. In both cases, the effect size was small.

County of Residence: A higher proportion of respondents from Cornwall & Isles of Scilly (85.98%) agreed with the statement compared with Bristol (67.74%); and a higher proportion of participants from Bristol reported no opinion (27.42%) compared with Cornwall & Isles of Scilly (10.28%).

Wildcat Knowledge Score (Figure 83): There was a difference in response between those who obtained a wildcat knowledge score of three, and those who obtained scores of one or zero. In this case, there were higher levels of agreement among those with scores of three. Particularly, 30.84% of those scoring three strongly agreed, compared to 22.48% of those scoring zero and 21.93% of those scoring one. There were higher levels of no opinion among those with scores of zero (27.98%) or one (20.47%). Figure 83 indicates that broadly, as scores increase so does likelihood of agreement.



FIGURE 83. DIFFERENCE IN RESPONSE TO THE STATEMENT "THERE WOULD NEED TO BE A CLEAR CONFLICT MANAGEMENT PLAN IN PLACE RIGHT AT THE START OF THE PROGRAMME", BETWEEN WILDCAT KNOWLEDGE SCORES (REPRESENTATIVE SAMPLE).

2.5.18.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon participant age group[‡], occupation[§], and wildcat knowledge score^{**}. In all cases, the effect size was small.

Age Group (Figure 84): There was a statistical difference in response between the age groups of 45-54 and both 18-24 and 75 and over. There were also differences between the age groups of 18-24

 $^{^{*}}$ X² = 18.996, df = 6, p < 0.01, ϵ^{2} = 0.019

 $^{^{+}}$ X² = 18.664, df = 3, p < 0.001, ϵ^{2} = 0.019

 $^{^{+}}$ X² = 23.644, df = 6, p < 0.001, ϵ^{2} = 0.017

 $^{^{\$}}X^{2} = 59.374$, df = 23, p < 0.001, $\epsilon^{2} = 0.042$

^{**} X^2 = 8.5448, df = 3, p < 0.05, ϵ^2 = 0.006

and 55-64. Figure 84 indicates that broadly, there were higher levels of agreement in the older and younger age groups. However, at least 80.58% took a position of agreement in all age groups.





Occupation: There was a statistical difference in response between the occupations of Arts, Sport & Media, and Environment, Nature & Wildlife, with a higher proportion of the latter strongly agreeing (47.21% cf. 22.45%), and a higher proportion of the former having no opinion (18.37% cf. 7.06%).

Wildcat Knowledge Score: There was a statistical difference in response from participants who had obtained wildcat knowledge scores of one and two. Among those scoring one, 16.17% indicated having no opinion relative to 9.2% of those with two, and a higher share of those with two indicated strong agreement. There is no apparent relationship more generally between knowledge score and response.

2.5.19. "I'm concerned that there is always the possibility of unintended consequences."

2.5.19.1. Descriptive Statistics

In the representative sample, the highest share took a position of agreement (58.5%), followed by no opinion or uncertainty (28.6%); the remainder took a position of disagreement (12.9%). In the open sample, the highest share also took a position of agreement (48.7%), then a position of disagreement (27.3%); the remainder had no opinion or were unsure (24.0%)^{*} (Figure 85).

There was a statistically significant difference in responses between the two samples[†]. There was a slightly higher proportion of respondents with no opinion (+4.6%) in the representative sample. The open sample exhibited lower levels of agreement (-9.8%), and higher levels of disagreement (+14.4%), with the statement.





2.5.19.2. Relationships with demographics: Representative Sample

In the representative sample, there were significant differences in response based on whether participants have cats[‡], participant gender[§], and age group^{**}. In all cases, the effect size was small.

Cat Ownership: A slightly higher proportion of participants with cats agreed with the statement (59.48%) than those without cats (56.70%), however, respondents without cats were more likely to strongly agree (15.10% cf 9.97%).

^{*} Non-south-west respondents (n=70): Strongly Agree - 8; Agree - 19; No Opinion - 20; Disagree - 16; Strongly Disagree - 7.

⁺ X² = 74.476, df = 4, p < 0.0001

^{*}W = 122063, p < 0.05, rank-biserial correlation coefficient = 0.07 (95% CI: 0.00 to 0.15).

[§]W = 135870, p < 0.05, rank-biserial correlation coefficient = 0.09 (95% CI: 0.02 to 0.16).

^{**} X² = 19.163, df = 6, p < 0.01, ε² = 0.007

Gender: A slightly higher proportion of females took a position of agreement (62.55%) than males (54.29%).

Age Group: There was a difference in responses found between participants aged 18-24, and all age groups between 35 and 74. While a majority agreed with the statements across all age groups, this was more pronounced among the 18-24 group, with 73.33% taking a position of agreement with the statement.

2.5.19.3. Relationships with demographics: Open Sample

In the open sample, there were found to be significant differences in response based upon whether respondent have cats^{*}, participant age group[†], and wildcat knowledge score[‡]. In all cases, the effect size was small.

Cat Ownership: There was a marginal difference in response between those who do and do not have cats, with more participants without cats taking a position of agreement (50.79% cf. 45.30%), driven by a higher proportion of strong agreement among those without cats (11.17% cf. 6.77%).

Age Group: There was a significant difference in response between those aged 75 and over, and all age groups from 25 to 64. A majority of those in the oldest age group took a position of agreement (60.87%) while less than half of the other age groups did so.

Wildcat Knowledge Score (Figure 86): There was a significant difference in response between those who had obtained a wildcat knowledge score of three, and all other knowledge score levels. Participants scoring three reported a higher level of disagreement, and lower level of agreement, than all other groups. Figure 86 shows that broadly, as knowledge score decreases, likelihood of strong agreement increases, and as knowledge score increases, likelihood of disagreement also increases. This indicates that those with low knowledge scores are generally more concerned about unintended consequences than those with high scores.





^{*}W = 256125, p < 0.01, rank-biserial correlation coefficient = 0.09 (95% CI: 0.02 to 0.15).

⁺X² = 1.283, df = 6, p < 0.01, ε² = 0.014

 $^{^{*}}X^{2} = 24.238$, df = 3, p < 0.001, $\epsilon^{2} = 0.017$

Part 3: Researcher reflections

This report has presented detailed results of a multi-method social feasibility study into the possibility of wildcat reintroduction in south-west England. This has investigated key interest group perspectives using Q-Methodology (with the design informed by prior stakeholder interviews); the relationship between these perspectives and demographics through public surveys; and public perceptions through a public survey with both a representative and open (self-selecting) sample.

Following these activities and review of the results, the research team have four reflections to highlight in relation to the social feasibility of wildcat reintroduction. In this section, each of these reflections is outlined in turn, prior to concluding remarks.

As a reminder of that which is outlined in <u>section iii</u>, the authors of this report are not members of the South West Wildcat Project and are neither supporting nor opposing the notion of wildcat reintroduction.

3.1. Reflection 1: Why here, why now? A clear project justification.

Should a wildcat reintroduction project be developed, careful attention would need to be given to the project's justification. The current study identified how motivations towards reintroducing wildcats can interact within a wider belief matrix, and this could inform justification for a wildcat reintroduction.

Among the perspectives described in <u>section 1.3</u>, two could be considered favourable towards reintroduction, while two adopted a more cautious stance. The Restoration Advocate perspective supports reintroduction for conservation gain (with a question on whether this is a good use of conservation resource). However, neither the Environmental Guardian nor Sceptical Pragmatist agreed that 'If they were once native, then they should be reintroduced', and there is disagreement as to whether there would be benefits of wildcat reintroduction for tourism and rural businesses. While a project framing grounded in an ethical motivation or for wildlife tourism may have merits for some people (or play a role as supplementary potential benefits), they are unlikely to provide a sufficient grounding for garnering support from groups that are less favourable and have concerns.

A common thread that ran through the four perspectives was value being placed on wildlife, nature, and local ecosystems. Environmental Guardians believed the conservation of existing wildlife should be a priority; Sceptical Pragmatists agree and felt the ecosystem has changed since wildcats were here before, which is linked to their rejection of the belief that wildcats belong because they were once native. To respond to these voices and reduce potential for concerns to escalate, we suggest a justification would be more successful if framed around the contribution wildcats could make to a healthier ecosystem (thereby also responding to the Restoration Naturalists' support on the grounds of conservation gain and the wildcats' role in creating wilder landscapes). Coupled with this, a monitoring plan may be expected to evidence where these outcomes would be realised.

67% of the representative survey sample of south-west residents agreed that <u>"Wildcats need help"</u> (as well as 85.3% of the open survey sample). While there is therefore likely to be some support for a reintroduction framed around conserving wildcats specifically, the local ecosystem is seen as the priority for others, in particular those adhering to the Environmental Guardian perspective; wildcats were seen from this perspective as a species for which help is not required as "*they occur elsewhere*" in Europe.

To respond to these locally orientated conservation values and minimise potential for marginalisation of communities with these views, we suggest a project would be more feasible if placing benefits to the local ecosystem at its core. While wildcat conservation could be a supporting narrative, the central thread would be best framed as highlighting what wildcats could be expected to contribute towards a healthier ecosystem, **locally**.

As an additional note, for some groups this will in part require outlining why available habitat has been deemed suitable for wildcats to achieve this outcome. For example, while there was an indication of a possible association between the <u>Wildlife Advocate</u> perspective and the occupation of Gamekeeping & Shooting, there was also strong agreement within this group that <u>there is not</u> <u>enough habitat for wildcats here</u>'. Furthermore, justification may be strengthened by highlighting if and where habitat suitability has improved since wildcat extinction in the southwest in the mid-1800s, through, for example, increasing size and health of woodland cover across the region. This may help to address concerns around 'There's a reason they went extinct'. This approach may also reassure the Sceptical Pragmatist, who felt that the wildcats' prior native status held little justification because changes in the ecosystem.

Reflecting upon the results presented, we suggest a feasible justification narrative would be best anchored within a conservation or ecological framing. Such a framing speaks to the value given towards nature and local ecosystems across all four perspectives, while also relating to specific concerns of those sceptical to a wildcat reintroduction. Thus a conservation and local ecological framing could create a compelling justification narrative with a wide reach.

3.2. Reflection 2: There is presently little knowledge of wildcats.

In the south-west, there is little familiarity with wildcats at present. In the representative survey sample, only 18.9% correctly identified the photo of a wildcat from a choice of four (with a further 13.8% selecting the arguably visually similar domestic cat), and over half misidentified the species by selecting the photograph of a lynx (section 2.3.1). Further, across all three multiple-choice questions about wildcats, fewer than half correctly answered more than one correctly (see section 2.3.4) and over 50% of both the representative and open survey sample agreed with the statement that they 'don't know much about wildcats'.

Throughout the individual survey questions (section 2.5), there were many occasions when statistical differences were observed in responses in relation to these wildcat knowledge scores, and responses from the open sample – where the respondents exhibited greater knowledge of wildcats – were often statistically different to those of the representative sample. This is also true when measuring Q perspectives against wider population demographics (section 2.4); wildcat knowledge score was the variable that most commonly associated (either strongly or moderately) with a perspective, with these relationships observed across both samples. The research team posits that this demonstrates that viewpoints are likely to vary in relation to the degree of knowledge that people have about wildcats.

Hence, it will be vital for any project to include plans for educational engagement and outreach, to familiarise communities with wildcats: the species, their behaviours, their habitat, and local history. This is a key part of the process of renewing coexistence⁶ with reintroduced species, as people may have little familiarity with a species, even if it was historically present within their local landscape.

Further, during the Q-Study, it was notable that participants were drawing upon their experiential knowledge of living within the south-west today to describe their viewpoints, giving examples that related to other species with which they were more familiar in the absence of lived experience with wildcats. For example, a domestic cat owner that associated with the Wildlife Advocate viewpoint suggested there was sufficient prey as they had experience of their own domestic cat surviving for thirteen months before returning home. For another, a participant associated with the Environmental Guardian perspective that had some concern for local wildlife and poultry described experiences of predation events from other species such as goshawk or fox.

While it is normal and understandable for individuals to develop opinions informed by their lived experiences, these have nonetheless been developed in the absence of locally extinct wildcats. Therefore, we suggest that, in a sensitive and constructive manner that is responsive to the lived experience of local people, efforts to familiarise people with wildcats should also seek to draw distinctions between wildcats and other species. By proactively encouraging knowledge of the characteristics and behaviours of wildcats as a species specifically, the researchers suggest this can better enable local people to informed judgements in preparation for potential future coexistence.

Furthermore, establishing opportunities for local communities to be part of generating knowledge of wildcats in a local context may be a highly effective means to enhance their familiarity while developing wildcat specific experiential knowledge. For example, should the SWWP conclude conditions are favourable for a wildcat reintroduction, this could include: inviting members of the public to process monitoring data; ongoing work with stakeholder groups to capture and retell their own experiences of wildcats in their respective areas; and ensuring that at each stage of the reintroduction (from implementation to coexistence) the most up-to-date information is shared in both on- and offline fora. Given the levels of agreement that 'Wildcats are an interesting animal, there's a story to be told', we would expect a high degree of public engagement, given the opportunity.

3.3. Reflection 3: Consensus for a conflict management plan to be in place, right at the start of any programme.

In the Q-study (Part 1), there was a statement with statistical consensus, which highlighted general agreement that "There would need to be a clear conflict management plan in place right at the start of the programme." Hence, this statement was reflected across all four perspectives, often with links drawn to trust and honesty being a key component.

By including this statement in the public surveys, there was an opportunity to test whether this consensus persists within the wider population and, in both samples, over three-quarters of participants took a position of agreement (see <u>section 2.5.18</u>). Thus, it is a clear expectation among both key interest groups and the wider public that such a conflict management plan would be required in the project. This conclusion is supported by prior work investigating social dimensions of reintroductions, such as other south-west reintroductions of beaver^{6–8,10} and pine marten¹². If the South West Wildcat Project proceeds with the development of a reintroduction, the researchers advocate for development of a conflict management plan as a vital component of the project development process, if renewed coexistence with wildcats is to be possible.

A conflict management plan may be expected by stakeholders to include preventative or mitigative actions for conflicts that may occur between humans and wildcats (such as that discussed in <u>section</u>

3.3.1), as well as monitoring strategies or mitigative actions related to interactions between wildcats and other protected species. The latter will be particularly key in response to the Environmental Guardian viewpoint, whereby wildcat interactions with local wildlife may be the primary source of human-human conflict with this group. It may be worth highlighting how, despite being a predator species, the four perspectives were unanimous in the view that wildcats would not cause trouble for people or children. Additionally, we found mixed views from farmers and game keepers, highlighting that this is a heterogenous group. Thus, different views may exist between groups and even individuals, which will require ongoing engagement at a very local level to ensure place-based risk is properly understood and addressed.

Wherever a reintroduction may progress, the research team also advocates for the involvement of local actors in the region of a release during conflict management plan development. This is likely to facilitate processes that are more likely to enable trust between parties through constructive dialogue, in turn increasing the likelihood of project success; collaborative processes are recognised as likely to increase the likelihood of a successful outcome^{6,8,19,30–32}. As examples, recent insights demonstrate the value of local stakeholder engagement during the stages *prior to* hen harrier translocation in southern England³⁰, and collaborative discussions were reported favourably by Steering Group stakeholders in the development of a proposed 'Beaver Management Strategy Framework' during the a south-west beaver reintroduction trial – the 'River Otter Beaver Trial^{76,33}. The earlier in the process that efforts are made to overcome potential conflicts (whether 'real' or 'perceived'), the lesser the likelihood of conflicts between people escalating about the reintroduction to a point that is more challenging to resolve^{5,7–9,30,32,34}.

The researchers further advocate for proactive consideration of ongoing fora for engagement beyond this point, throughout the process of renewing coexistence with the species. Over half (58.5%) of the representative sample indicated that they were concerned about the possibility of unintended consequences (section 2.5.19), and there was agreement with this sentiment among both the Environmental Guardian and Sceptical Pragmatist viewpoints (section 1.3). While it is possible negative unintended consequences may not come to fruition, it is also possible that they might - or might be perceived to have arisen. The research team thus suggest approaches that provide ongoing fora for engagement are in place throughout the transition of wildcats as 'reintroduced' to one that is part of the native fauna. There will be different ways in which this could be achieved, whether through localised engagement officers or the formation of a species-specific management group (such as those being developed in beaver reintroductions⁸). Regardless of the approach, a clear mechanism for discussion and response to circumstances that arise may instil greater confidence where there are uncertainties about the future of wildcats in the south-west.

3.3.1. Conflict management for poultry and game birds

Within the need for a conflict management plan, there are participants who believe there to be a risk of wildcat predation on poultry or gamebirds. Where this exists, the integration of preventative or mitigative solutions within a conflict management strategy will be required. In this study however, it is worthy of mention that the potential scale of predation on game or poultry was not perceived to be as considerable as had been anticipated. In the Q-study (Part 1), both gamekeeping and farming participants reported predation as a potential risk, but primarily as one of small scale. For example: "*I keep chickens, so I might lose chickens, but it won't be exceptional" (P8)*. In addition, in the open public survey, 27.6% agreed that wildcats could pose a risk for poultry or gamebirds, and neither the Farming & Agriculture nor Gamekeeping & Shooting occupations responded in a manner

that statistically differed to the wider participant pool (for example, 48.8% of Farming & Agriculture participants in the open sample [n=43] agreed).

This being said, a newly identified and potentially greater concern was raised for poultry and gamebirds - as well as domestic cats - during the Q-Study; would wildcats increase risk of disease transmission? At this stage, disease risk was raised as a question rather than as a direct suggestion that wildcats would increase transmission, yet two diseases of concern for poultry and game industries were cited that have higher economic consequence when they reach livestock; toxoplasma (raised by a participant who aligned with the <u>Sceptical Pragmatist</u> perspective and a potential risk to poultry or sheep) and avian flu (raised in discussion by a farmer during the Q-participant recruitment process). In both cases, there was uncertainty and questions raised as whether wildcats could have an influence in either case.

Having been raised, the research team queried the prevalence of disease risk as a concern among the wider public by including a statement in the public surveys to the effect of: "<u>I'm concerned</u> <u>about disease transmission, to livestock and domestic cats</u>." In both survey samples, positions of agreement were taken by approximately a third of participants, and there was no statistically significant difference in response among those whose occupation was in Farming & Agriculture. While numerically this does not appear to be a concern for the majority, it is notable that a small number of survey participants strongly agreed with the statement and (with reflection upon our experience of discussions through the Q-method process) we suggest this has potential to be or become an important issue where the concern exists.

As the notion of wildcat reintroduction is at an early stage, there is opportunity to proactively address these questions, and the researchers advocate for active consideration to minimise potential of the escalation of concerns to a point whereby they could prove consequential for a reintroduction programme. A disease risk assessment is required as part of both the IUCN and DEFRA translocation requirements^{3,15}, and it is proposed that - within dialogue for any conflict management plan - the evidence underpinning conclusions on risk levels identified (including where there is no risk or uncertainty) are transparently outlined so that worry can be overcome if there is an unlikely risk and, where necessary, consideration can be given towards a monitoring plan for disease risk if there is any identification of a disease risk of concern.

3.4. Reflection 4: Responding to divergent views on hybridisation risk.

Through the four perspectives described in <u>section 1.3</u> it is notable that, despite general agreement that hybridisation between wildcats and domestic cats poses a risk, there was an observable divergence in scale to which this risk is perceived to exist:

- For the Restoration Naturalist viewpoint, hybridisation was seen as an issue that could be overcome through programmes of trapping, neutering, and returning feral cats, or with a view that releasing wildcats in high enough numbers may prevent them from outbreeding.
- For the Environmental Guardian perspective, overcoming hybridisation was seen as something that is unlikely to be possible, primarily due to scepticism around the ability to achieve a high uptake of neutering from domestic cat owners.
- For the Sceptical Pragmatist viewpoint, hybridisation was a challenge of scale; the cat welfare professionals that associated with this view highlighted there were already feral cat

neutering programmes in place, but also that they believe there to be a high number of feral cats in the region.

- For the Wildlife Advocates there was uncertainty over whether this was an issue, but agreement that cat owners would need to be more on top of neutering if the project were to be successful.
- Additionally in the public surveys there were mixed responses to the statement <u>"It is a</u> <u>problem that domestic cats and wildcats can interbreed</u>; just over half of the open sample agreed (with 19.9% strongly agreeing), while fewer than half of the representative sample did so (and 38.9% indicated having no opinion).

With differing views on the ability to overcome hybridisation risk, questions should be anticipated on the likelihood of success, or even on the expense that overcoming hybridisation may entail; it is notable that a participant associated with the Restoration Naturalist viewpoint (which was broadly favourable to wildcat reintroduction) viewed a neutering programmes as expensive and this underpinned their question of whether wildcat reintroduction would be a good use of conservation resource.

If a project is deemed feasible and is to be developed, the research team recommends evidencebased communication of why and how the feasibility assessment concludes that it is possible to overcome a hybridisation risk. Further, if this is likely to entail management actions that require further resource, we suggest these communications should be strongly linked to the ecologicallygrounded justification for the project (as discussed in <u>Reflection 1</u>) to demonstrate why the project believes this to be a proportionate use of resource for the issue.

3.5. Concluding Remark

This study has provided a comprehensive, early insight into the perspectives and opinions of key stakeholders and interest groups, as well as wider publics throughout the south-west.

The research team's reflections have been outlined in this final section which consider the justification of a project, familiarity with the species, conflict management planning, and response to divergent views on the risk of wildcat-domestic cat hybridisation. As an independent research team we argue that, alongside the ecological requirements, these are the primary social aspects that will require attention at this early stage, if the South West Wildcat Project wishes to proceed and develop a reintroduction proposal.

We recognise that responding to these reflections may be challenging. It is also unlikely that a reintroduction could take place that would be entirely conflict-free. Yet this should not necessarily be a blocker to a reintroduction and problems can be tolerated when a project has community support. At this stage, wildcat reintroduction is not unanimously endorsed but there is broadly favourable opinion and public support, and it is usual for sustainable coexistence with wildlife to involve actions that prevent or alleviate conflicts, alongside opportunities and benefits for ecosystems and/or society³⁵.

If the reflections outlined above are effectively responded to and their principles integrated into the development of and planning for reintroduction, with the involvement of local actors in a release zone, it is conceivable that a wildcat reintroduction is a socially feasible prospect.

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