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Lynx UK Trust - A National Stakeholder Consultation: An Interim Consultation Document

Lynx UK Trust / Clifford Chance / University of Cumbria

Prepared by: Darrell Smith (University of Cumbria) and Ian Convery (University of Cumbria)

Reviewed by: Paul O'Donoghue (Lynx UK Trust), Steve Piper (Lynx UK Trust), Adam Eagle (Clifford Chance), Chris White (AECOM)



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Suggested citation: Smith, D.J., O'Donoghue, P., Convery, I., Eagle,
A., Piper, S. & White, C. (2016). Lynx UK Trust A National
Stakeholder Consultation: An interim consultation document

Photography by: Erwin van Maanen and Neville Buck

Design and graphics by: Coffee Design

Contents

1. Introduction	1
1.1 Public Survey	3
1.2 Consultation Documents	4
1.3 Interim Document	5
1.4 Direct Engagement Period	5
2. Themes Identified from Stakeholder Responses	7
2.1 Consultation Legitimacy	8
2.2 Timescale	9
2.3 Site Selection	10
2.4 Lynx Management	10
2.5 Source of Lynx	11
2.6 Economic Benefits	11
2.7 Consultation	13
2.8 Release / Exit Strategy	14
2.9 Compensation	14
2.10 Welfare / Disease	15
2.11 Trial Support	15
3. Next Steps	16

List of Appendices

Appendix 1 List of stakeholder organisations contacted in England and Scotland	17
Appendix 2 AECOM cost-benefit analysis and specific concerns that relate to methodology	25



1. Introduction

The Lynx UK Trust CIC (the "**Trust**") is seeking licences to conduct a highly regulated scientific trial, studying the effects of Eurasian lynx on a selected site or sites in Scotland and England. This will involve a time limited trial reintroduction of lynx to those sites in order to observe, measure and analyse the effects of lynx on various aspects of the United Kingdom's social, economic and natural environments.

Public consultation is a key element of our trial reintroduction proposal. The International Union for Conservation of Nature (IUCN) Reintroduction Guidelines (the "**IUCN Guidelines**"), Directive 92/43/EEC Conservation of Natural Habitats, Wild Flora and Fauna (the Habitats Directive) (the "**Directive**") Article 22 and The Scottish Code for Conservation Translocations (2014) (the "**Scottish Code**") state that a

reintroduction should only take place after proper consultation with the public concerned. Our consultation process has been designed to address the criteria contained within the IUCN Guidelines and the Scottish Code.

A chronological outline of the process we have adopted (this "**Consultation**"), as illustrated by figure 1, is as follows:

- March 2015 – Collection of nearly 10,000 responses to an online public survey plus 1,042 ‘representative’ responses collected using an independent national omnibus research company ("**Public Survey**") to gauge the national sentiment towards a trial lynx reintroduction.
- October 2015 - Provision of consultation documents ("**Consultation Documents**") to national stakeholder organisations in England and Scotland.
- October 2015 to April 2016 – Collection of responses to the Consultation Documents.
- April 2016 – Analysis of stakeholder consultation responses.
- May 2016 - Publication of this document, highlighting points which appear to be key points for discussion based on responses received by stakeholders ("**Interim Document**"). This Interim Document will be available in the 'interim' prior to the Final Consultation Report becoming available at a later date, after the Consultation has come to an end.
- May to July 2016 – Ongoing discussions with all stakeholder organisations to shape our proposals ("**Direct Engagement Period**").
- June 2nd 2016 – Stakeholder forum event to discuss and further shape our proposals ("**Forum Event**").
- June to July 2016 – Formation of a national stakeholder steering group and move on to the local stakeholder consultations ("**Local Consultation**").
- Late summer/early autumn 2016 – Bring local stakeholder consultation process to an end.
- Application date (if any) – provision of a full and detailed scientific and statistical analysis of the entire Consultation, including all responses and communications with stakeholder organisations and individuals at the local

level (the "**Final Consultation Report**"). The Final consultation Report will be made publically available, with stakeholder responses given suitable anonymity.

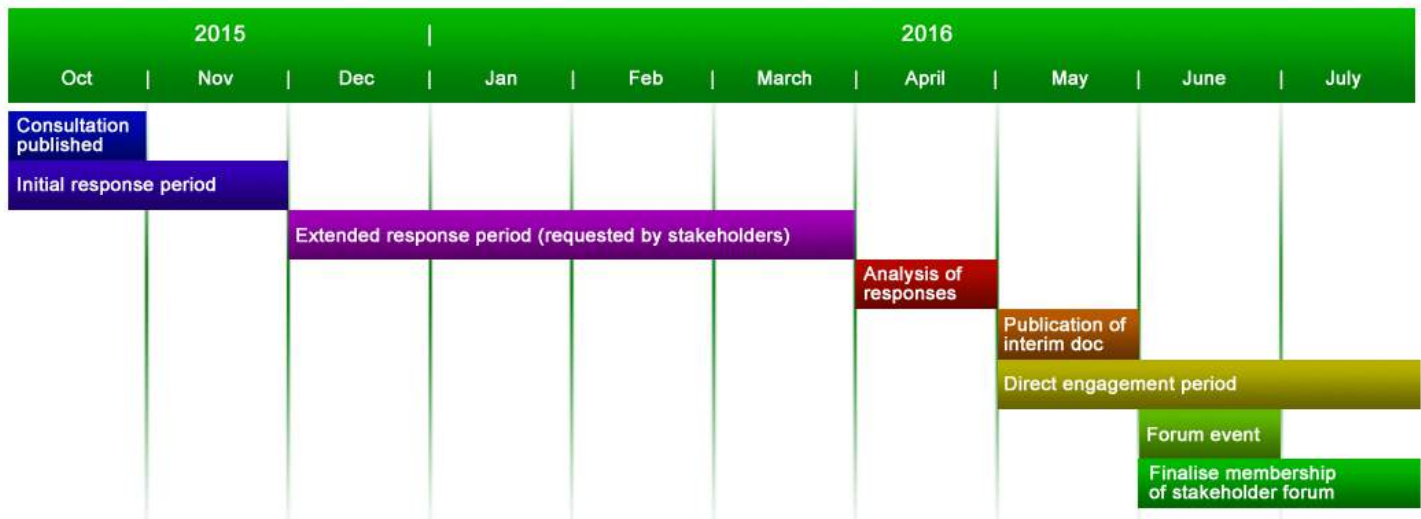


Figure 1 *Timeline of national consultation*

1.1 Public Survey

The initial public survey sought to provide a better understanding of public opinion on a trial lynx reintroduction as a precursor to more focused national and local stakeholder consultation exercises. There were two components to this survey: a 'pro-active' on-line survey and a 'passive' representative group of respondents.

The results were strongly in favour of a trial reintroduction but can be seen in full, including specific analysis and presentation of primary data collected, at www.lynxuk.org/survey.html

1.2 Consultation Documents

Building on the Public Survey, the Trust produced Consultation Documents for both

Scotland and England. These documents set out the initial details of the proposal for a controlled, scientific and monitored trial reintroduction of lynx, including details of this Consultation and scientific references supporting the facts and figures used within the documents.

The initial stage of the Consultation ran for six weeks, from the end of October 2015 to the beginning of December 2015 during which the views of national stakeholder groups were sought. A number of stakeholders requested further time to respond, for varying reasons, resulting in a 1st April 2016 end date to this process (although any response sent at a later date will be reviewed and taken account of as far as possible).

The Consultation Documents sought views on five specific areas:

- 1. Pre-project assessment of desirability and feasibility;**
- 2. Socio-economic and ecological considerations;**
- 3. Location of trial sites;**
- 4. Planning, preparation and release stages; and**
- 5. Post-release activities**

Respondents were able to provide comments either directly to the Trust or through a web-based survey response collection site. This ensured not only that the views of targeted stakeholders would be received but also those of any other party interested in contributing to the consultation process. All Consultation Documents are freely available through the Trust's website (www.lynxuk.org/consultation).

The Scottish Consultation Document and the English Consultation Document were both sent to a wide range of organisations, groups and individuals for comment. Over 200 invitations to respond were sent to nationally relevant stakeholders. In total, 83 organisations in England and 137 organisations in Scotland received the Consultation Documents, primarily in electronic format. We have received 56 responses in total, 60 stakeholder organisations have declined to respond and 104 stakeholder

organisations are either planning to respond (but have not yet done so) or have not responded to our communications (and so are of unknown status).

See Appendix I for a full list of invited stakeholders. A full list of stakeholders invited to respond is also available through the Trust's website (www.lynxuk.org/consultation).

1.3 Interim Document

This Interim Document continues to demonstrate our commitment to an open dialogue, with the dual aim of informing stakeholders and ensuring that all issues raised are appropriately addressed by the Trust.

The key concerns voiced by stakeholders, based on the content of responses received to the Scottish and English Consultation Documents, will be discussed thematically in this Interim Document. The concerns can be broadly split into two categories: (1) simpler themes and misconceptions which will be clarified in this Interim Document, and (2) other themes which would benefit from further detailed discussions with stakeholders.

The Direct Engagement Period of the Consultation will build upon the key themes highlighted in this Interim Document. However, it must be noted that this Interim Document does not limit ongoing discussions to the themes highlighted within it, but aims to focus stakeholders, statutory agencies and the Trust on the themes which a majority of stakeholders have expressed interest in

1.4 Direct Engagement Period

The next stage of the Consultation, following publication of this Interim Document, will involve direct engagement and discussions with national stakeholders. This Direct Engagement Period will extend into July and will involve a national stakeholder forum event on 2nd June, individual discussions in person and over the telephone, and further written correspondence by any method chosen by the stakeholders (at the

Trust's reasonable discretion).

It should be noted that all stakeholder groups will be offered further opportunities to engage in the Consultation even if they have declined or omitted to respond to date. However, we will respect the wishes of those stakeholders who have specifically requested that we make no further contact with them.

For those interested parties reading this interim report who have concerns from a local perspective, rather than at the national level, please note that a separate Local Consultation will be launched at a slightly more developed stage of this Consultation.

Local Consultation will form a cornerstone of the project's development and the Trust assures local stakeholders that the local process will become a priority once a shortlist of potential sites is identified later in this Consultation



2. Themes Identified from Stakeholder Responses

As stated above, this Interim Document intends to summarise responses to the consultation exercise and to initiate the Direct Engagement Period of the Consultation. In this Interim Document we have taken an overview approach to the presentation of participant's comments in order to illustrate key points. We have used a constant comparison technique to analyse and represent the broad range of positive and negative responses received

We have grouped responses thematically in the following sections of the Interim Document to highlight important areas of agreement, interest and concern. These key themes provide a framework around which on-going conversations, at both the

national and local level, can be shaped.

It should be noted that there will be a separate analysis paper produced for the purposes of any formal application, to either Natural England (“**NE**”) and/or Scottish Natural Heritage (“**SNH**”), for a licence to trial the reintroduction of lynx to England and/or Scotland. This will, of course, disclose all responses to the consultation and all data collected, whilst also providing statistical analysis and analytical commentary on such data – that analysis document will also be made publically available to ensure complete transparency.

This Interim Document is not intended to be such a document, but instead is intended to lay the foundations for the discussions to be had during the Direct Engagement Period of the Consultation

The Lynx UK Trust are committed to ensuring an open two-way dialogue, the sharing of knowledge and experiences and identifying potential concerns as the Consultation process progresses. We look forward to engaging in constructive conversations, at both the national and local level, with all stakeholders over the full course of the Consultation process.

2.1 Consultation Legitimacy

Concerns were raised regarding the legitimacy of the Consultation process, with respondents' comments suggesting two distinct areas of uncertainty. Firstly, our adherence to the IUCN and Governmental guidelines for reintroductions was questioned, and secondly the legitimacy of the Consultation process itself, as managed by the Trust rather than a government institution, was questioned.

The Trust has assiduously followed the IUCN Guidelines and the Scottish Code, and has taken these documents, along with discussions with SNH and NE, as the starting point for its Consultation process. In particular, Section 1.5, ‘The Consultation Process’, of each Consultation Document has been developed with Section 9 of the

IUCN Guidelines and Chapter 8 of the Scottish Code as its benchmark.

There are no legal requirements, under the Directive or under national law, for a consultation in relation to such a project to be led by the government or by a government agency rather than by the party proposing the project. It should be noted that, in many areas where public or stakeholder consultations are performed in relation to large scale projects, it is best practice for consultations to be performed by parties which have no link to the government or to relevant agencies. Examples can be found in numerous privately led past and present species reintroduction projects and, also, infrastructure projects, such as the Wylfa Newydd project.

It should be further noted that we have received confirmation from SNH and NE that it is appropriate, correct and even expected that a non-governmental-organisation, such as the Trust, which is making a proposal such as this one, would conduct the substantial elements of stakeholder consultation with minimal involvement from the licensing authority or government.

The Trust would be very happy to explain the above in further detail to any stakeholder who still has concerns regarding the legislative/policy contexts of the proposed trial.

2.2 Timescale

The suggestion that lynx may potentially be reintroduced to the UK landscape in 2016 prompted stakeholders to request that adequate time for consultation was provided. The Consultation period was felt to be limited and a longer period of time needed for full stakeholder engagement.

The Trust recognises the importance of the role that consultation has in the project's development and is not bound by any specific date for commencing the trial. We are committed to a process of full engagement with stakeholders, supporting the development of a successful trial lynx reintroduction plan. We fully acknowledge that the process could take us beyond 2016 and will be guided by our interactions with

national and local stakeholders in developing a suitable timeframe.

Evidence of this willingness can be seen in the extension of the response period to the Consultation Documents from six weeks to over five months.

2.3 Site Selection

Responses reflected a clear desire for greater understanding of the potential site-specific ecological, socio-cultural and economic interactions. We envisage that, following on from the Direct Engagement Period, we will be in a position to narrow down the selection of preferred site(s). This will inform the direction and commissioning of detailed feasibility assessments conducted by professionals in the relevant field.

With regard to the question of suggested release areas, no one site in either England or Scotland has been identified by the majority of stakeholders as a preferred option. However, stakeholders did identify 'less preferred' sites as those in the Thetford and Cumbria areas. As such, we feel confident to state that any initial trial reintroduction of lynx to England and/or Scotland will not occur in either of these areas, although this is in no way to say that the Trust no longer believes that these sites would be appropriate.

2.4 Lynx Management

A number of important questions have been raised regarding the 'day to day' site management of lynx post-release. Comments received related to the management and maintenance of: GPS collars, lynx interaction with the local ecosystem, and costs associated with capture and health monitoring. The current management strategy is based on the experience and evidence of European lynx reintroduction projects. The Trust has built close working relationships with projects in Germany and Romania, in particular. Their experiences, alongside a wealth of academic literature, provide a platform upon which we can develop a UK specific approach.

We intend to consider these issues in greater detail during the further stages of the Consultation and build on the existing evidence and information base as we proceed with project development and planning. In this manner the specific knowledge gained from European lynx reintroduction experiences in continental Europe can be considered alongside local and regional stakeholder knowledge throughout the project.

2.5 Source of Lynx

Many stakeholders expressed concern in relation to the proposed source populations of lynx. Eurasian lynx will be the founders of any UK trial and will only be sourced from robust populations. Discussions with European advisers and senior members of the IUCN Cat Specialist Group have identified robust lynx populations in the Baltics, Romania, Slovakia, Russia and Scandanavia.

The Trust is currently working with partner NGOs across Europe who are experienced in the capture and transportation of lynx and will work with them to source lynx, following all legal and best practice requirements (please see Section 3.1.5 of each Consultation Document).

2.6 Economic Benefits

A broad range of views have been expressed in response to the AECOM cost-benefit analysis. Comments reflect positive reactions where public engagement with lynx and wildlife in general provide important alternative economic activities. Others recognised the potential for economic benefit through deer control and natural forest regeneration alongside a general increase in tourist activity and visitor numbers. These views were tempered by views that the cost-benefit analysis findings overstated the potential benefit, understated potential costs and questioned the credibility of the AECOM report. It is important to note that AECOM were commissioned to provide an objective analysis of the potential costs and benefits of the scheme on the basis of their extensive experience in this area. AECOM were not financially compensated for the work and do not stand to benefit if the trial goes ahead.

AECOM's analysis provides an initial UK wide overview of the potential economic costs and benefits of lynx reintroduction. As the Consultation progresses, further work will be undertaken to produce a more specific socio-economic analysis once a preferred site or sites have been identified. This approach follows HM Treasury's guidance on cost-benefit analysis which states, *'at the early stages of identifying and appraising a proposal, only summary data is normally required, while at the later stages of an assessment, data should be refined to become more specific and accurate'*¹.

The AECOM analysis² adopted a conservative interpretation of the available evidence, and the scope was limited to those impacts for which sufficient evidence was available to develop a quantitative estimate of the potential impacts. The analysis erred on the side of caution and the results are neither exaggerated nor inflated, but instead are likely to provide an underestimation of the potential scale of the benefits. Full workings of all calculations, assumptions, and data sources are provided in the cost-benefit analysis reports³.

Furthermore, the Trust would like to emphasise that the trial reintroduction itself has the purpose of confirming the accuracy of the economic modelling. Indeed, any trial would effectively act as a data collection exercise in order to allow the government(s), SNH and NE to quantify the likely economic costs and benefits, amongst numerous other factors, of lynx reintroduction to England and/or Scotland. As such, the Trust and AECOM both continue to believe that the report published at the beginning of this Consultation process is robust, and are happy to discuss any specific concerns with stakeholders directly.

1

HM Treasury (2013), *'The Green Book: appraisal and evaluation in central government'*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf

2

White, C., Convery, I., Eagle, A., O'Donoghue, P., Piper, S., Rowcroft, P., Smith, D., & van Maanen, E. (2015). *Cost-benefit analysis for the reintroduction of lynx to the UK: Main report, Application for the reintroduction of Lynx to the UK government*, AECOM. Available at: <http://www.aecom.com/uk/wp-content/uploads/2015/09/Cost-benefit-analysis-for-the-reintroduction-of-lynx-to-the-UK-Main-report.pdf>

3

Ibid.

A number of specific concerns that related to methodology were raised in the Consultation responses, specifically:

- **Questions on the approach to estimating impacts on deer populations.**
- **Questions on the scale of the potential impact on tourism, particularly given that people are unlikely to see a wild lynx.**
- **Questions on whether the risks and uncertainties are understated in the analysis.**

A detailed response to these questions, with references to the underlying literature can be found in Appendix II.

2.7 Consultation

There were a number of responses which criticised the Trust's approach to the Consultation, particularly in relation to Local Consultation. The majority of comments emphasised the need for consultation to be conducted at a level which expressly involves those stakeholders who have the potential to be directly affected by the project. It was felt that there was an absence of dialogue with communities who live and work in the landscapes under consideration.

As outlined in section 1, 'Introduction', above, we agree that this is a critical step in the Consultation process. Local consultation will be undertaken once we have analysed all discussions with stakeholders and once a preferred site or sites have been identified. We clearly articulate our policy towards Local Consultation in Section 1.5, 'The Consultation Process', of each Consultation Document, attention is drawn to the detail in Sections 1.5.3 and 1.5.5. Where specific comments or advice has been given in relation to aspects of Local Consultation, this will be followed up with the relevant individuals, communities and organisations at the appropriate time.

There were also some suggestions of a consultation bias in favour of supportive organisations and a lack of engagement with organisations that represent farming

interests. We believe that the perceived lack of direct communication with individuals and communities in potential release sites lies at the heart of these concerns. The Trust would like to take this opportunity to confirm its commitment to full engagement with stakeholders at a local level following dialogue at a national level.

We strongly refute any assertion that only positively inclined stakeholders, or even a majority of such stakeholders, have been asked to take part in this Consultation, the list of stakeholders contacted is attached to this report, Appendix I, and throughout this Consultation an open invitation for stakeholders to actively participate is expressly extended. However, please let us know if you feel that we have missed any specific nationally relevant stakeholder groups.

2.8 Release / Exit Strategy

Whilst there was broad agreement that our release strategy was ‘sensible’ and ‘achievable’, a number of respondents requested more detail regarding our exit strategy. In particular, the need to define an objective set of criteria by which failure could be measured and which would consequently trigger the use of any exit strategy was identified. The Trust is aware of the importance of developing operational procedures for an exit, and this is an area that the Trust will be working on, with stakeholders, during the course of the ongoing project planning and development stages.

2.9 Compensation

The Trust is aware of the importance of developing a fair compensation policy for any damage which might be caused by lynx and this will be in place before any release. A number of respondents commented on the lack of ‘*concrete proposals*’. The view of the Trust is that a compensation policy can only be developed with significant input from stakeholders, and in particular the farming community. This is an area that the Trust will be working on during the course of the ongoing project planning and development stages, including during the course of this Consultation and the Local Consultation.

2.10 Welfare / Disease

Animal welfare is of primary importance to the Trust. All relevant information on how we will address issues related to welfare and disease can be found in each Consultation Document at sections 3.1.6 and 3.1.7. The Trust has been in contact with the Imports Team at the Animal and Plant Health Agency and undertakes to implement all measures necessary to ensure the identified requirements, including all quarantine requirements, are fully complied with.

2.11 Trial Support

A trial reintroduction at a limited number of sites was broadly seen as an important mechanism to help inform decision-making. Importantly, the trial itself must be well-designed and carefully regulated.

It must be stressed that, at this stage, the Trust is not making decisions relating to events beyond the proposed five year trial period, and any future management decisions would be based on evidence gathered during the trial period.



3. Next Steps

We will be contacting national stakeholders over the coming weeks, in order to involve them in the Direct Engagement Period of the Consultation. This includes the invitations to a stakeholder forum event which should have been received by all engaged national stakeholders along with this document in an email from the Trust. This event will take place at the University of Cumbria on 2nd June 2016, from 12:30 to 18:00. Further details will follow upon receipt of written acceptance of that invitation.

In some cases, the Direct Engagement Period will also include individual meetings and conference calls with national stakeholders, as well as further written communications.



Appendix 1 – List of Stakeholder Organisations Contacted in England and Scotland

Representatives from the list of organisations below have been asked to formally comment on our trial reintroduction proposals, they are in no way affiliated or partnered with us, and are listed here for reference.

England

Agriculture and Horticulture Development Board Beef and Lamb

Angling Trust

Birdlife International

Botanical Society of the British Isles

British Association for Shooting & Conservation (BASC)

British Association of Nature Conservationists
British Big Cats Society
British Deer Farms and Parks Association
British Deer Society
British Ecological Society
British Mountaineering Council
British Trust for Conservation Volunteers
British Trust for Ornithology
British Veterinary Association
Buglife
Bumblebee Conservation Trust
Butterfly Conservation
Campaign to Protect Rural England (CPRE)
Church of England
Country Land and Business Association
Countryside Alliance
DEFRA
The Deer Initiative
English Heritage
Environment Agency
Farming and Wildlife Advisory Group (FWAG)
Flora and Fauna International
Forestry Commission
Friends of the Earth
Game and Wildlife Conservation Trust
Greenpeace UK
Historic England
Institute of Environmental Management and Assessment
International Union for Conservation of Nature (IUCN)
Joint Nature Conservation Committee
John Muir Trust
Lake District National Park

Landscapes for Life
Linking Environment and Farming (LEAF)
MOD
Moorland Association
National Farmers' Union (NFU)
National Federation of Young Farmers' Clubs
National Gamekeepers Organisation
National Parks UK
National Sheep Association
National Trust
Natura 2000
Natural England
Natural History Museum
Norfolk Broads National Park
Northumberland National Park
Peoples Trust for Endangered Species (PTES)
Plantlife
Ramblers
Rare Breed Survival Trust
Rewilding Britain
Royal Society for the Prevention of Cruelty to Animals (RSPCA)
Songbird Survival
The Game Conservancy Trust
The Mammal Society
The Royal Society for the Protection of Birds (RSPB)
The Wildfowl and Wetland Trust
The Wildlife Trusts
Tree Heritage
UK Big Cats
UK Land and Farms
UK National Wildlife Crime Unit
United Utilities

UPM Tilhill (UK)
Vincent Wildlife Trust
Visit England
Wildlife and Countryside Link
Wildlife Heritage Foundation
Wildwood Trust
Woodland Trust
WWF

Scotland

Association for the Protection of Rural Scotland
Association of Deer Management Groups
Association of Salmon Fishery Boards (ASFB)
British Association for Shooting and Conservation (BASC)
Beaver-Salmonid Working Group (BSWG)
Biological Recording in Scotland Campaign (BRISC)
Birdlife International
Blackface Sheep Breeders' Association
Botanical Society of Scotland
Botanical Society of the British Isles
British Association of Nature Conservationists
British Big Cats Society
British Deer Farms and Parks Association
British Deer Society
British Growers Association
British Mountaineering Council
British Trust for Conservation Volunteers
British Veterinary Association
Buglife
Bumblebee Conservation Trust
Butterfly Conservation Scotland
Cairngorms National Park Authority

Central Scotland Forest
Central Scotland Green Network
Centre for Ecology & Hydrology
Confederation of Scottish Local Authorities
Country Land and Business Association
C-N-Do Scotland
Community Woodlands Association
Confederation of Forest Industries
Contours Walking Holidays
Countryside Alliance
Countryside Management Association
Crofting Commission
Defence Deer Management
Eadha Enterprises
Farming Futures
Flora and Fauna International
Forestry Commission Scotland
Forestry Contracting Association
Friends of the Earth Scotland
Game and Wildlife Conservation Trust
Glenmore Lodge
Greenpeace Scotland
Highlands and Islands Enterprise
Highland Birchwoods
Highland Foundation for Wildlife
Hillwalk Tours Scotland
Historic Scotland
Institute of Chartered Foresters
Institute of Environmental Management and Assessment
Invasive Non-Native Specialist Association (INNSA)
IUCN Scotland
John Muir Trust

Joint Nature Conservation Committee
Keep Scotland Beautiful
Landscapes for Life
Linking Environment and Farming (LEAF)
Loch Lomond and the Trossachs National Park Authority
National Farmers' Union of Scotland (NFU)
National Gamekeepers Organisation
National Museums of Scotland
National Parks Authority
National Parks UK
National Sheep Association
National Trust for Scotland
Native Woods Cooperative Scotland
Natura 2000
Natural History Museum (Aubrey Manning Gallery)
Outdoor Capital of the UK
Peoples Trust for Endangered Species (PTES)
Plantlife
Quality Meat Scotland
Ramblers Scotland
Rare Breed Survival Trust
Reforestation Scotland
Royal Association British Dairy Farmers (RABDF)
Royal Botanic Garden Edinburgh
Royal Highland and Agricultural Society of Scotland (RHASS)
Royal Scottish Forestry Society
Royal Society for the Protection of Birds Scotland (RSPB)
Royal Zoological Society of Scotland (RZSS)
Scotland Game and Wildlife Conservation Trust
Scotland's Bird Club
Scotland's Finest Woods Awards
Scotland's National Nature Reserves

Scotland's Soils
Scottish Agricultural Organisation Society
Scottish Anglers National Association
Scottish Animal Welfare
Scottish Association of Young Farmers Club
Scottish Canals
Scottish Countryside Ranger Association
Scottish Country Sports Tourism Group
Scottish Crofting Federation
Scottish Dairy Cattle Association
Scottish Enterprise
Scottish Environment LINK
Scottish Environment Protection Agency (SEPA)
Scottish Forestry Trust
Scottish Gamekeepers Association
Scottish Government
Scottish Landowners' Federation
Scottish Natural Heritage
Scottish Government
Scottish Land and Estates
Scottish Society for the Prevention of Cruelty to Animals (Scottish SPCA)
Scottish Upland Sheep Support Scheme
Scottish Water
Scottish Wildcat Association
Scottish Wildlife Trust
Songbird Survival
The Conservation Volunteers (Scotland)
The Game Conservancy Trust
The Heather Trust
The Highland Council
The Mammal Society
The Scottish Ornithologists' Club

The Wildfowl and Wetland Trust
Trees for Life
UK National Wildlife Crime Unit
UPM Tilhill
Vincent Wildlife Trust
Visit Scotland
Walkabout Scotland
Walk Wild Scotland
Wildcat Haven
Wilderness Scotland
Wildlife Heritage Foundation
Wild Scotland
Wildwood Trust
Woodland Trust
WWF Scotland



Appendix 2 – AECOM Cost-Benefit Analysis and Specific Concerns that Relate to Methodology

Questions over the approach to estimating impacts on deer populations

The potential impacts of lynx on deer populations were estimated using a bottom up approach. This involved looking at the amount of food required to support the proposed lynx populations at each site and the typical prey species targeted by lynx based on a wide range of academic studies of European lynx. Data on the types of deer species at each site were then used to estimate the quantity of each species that would likely need to be consumed to support the lynx populations.

- The results are broadly in line with the findings of a recent report by the British

Deer Society⁴; which provided a high level estimate that a lynx would kill around 50 roe deer per year in the UK. This compares to a more conservative estimate of around 30 roe deer per year in Kielder Forest and 13 roe deer in Thetford Forest used in the AECOM cost-benefit analysis.

- The results were cross-checked against findings from European studies in the academic literature and were found to be broadly consistent with the available evidence. The AECOM cost-benefit analysis estimates that lynx would lead to a reduction of around 4.9% of the deer population in Thetford Forest, which compares to estimates of an impact of, '*4% on roe deer in high density populations reported by Wilson (2004) and around 6 to 9% of roe deer in the Swiss Alps.*'⁵
- The economic impacts of the reduction in deer populations were then estimated using the results of a comprehensive analysis of the economic costs of deer in Thetford Forest undertaken by White *et al.* (2004).⁶ The analysis focused on quantifiable economic benefits of reducing deer populations i.e. reduced damage to crops, lower risk of deer related traffic accidents, and reduced damage to forestry operations. Wider benefits in terms of woodland regeneration, improved biodiversity habitat, and the provision of ecosystem services were not included in the analysis due to a lack of quantifiable economic evidence, although could potentially be significant.

It should also be noted that the AECOM cost-benefit analysis assumes that the impacts of lynx on deer populations are strictly limited to the numbers of deer killed by lynx. A number of studies, however, have suggested that the reintroduction of

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Milner, J.M. & Irvine, R.J. (2015). *The potential for reintroduction of Eurasian lynx to Great Britain: a summary of the evidence*. British Deer Society Commissioned Report.

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Wilson, C.J. (2004). Could we live with reintroduced large carnivores in the UK? *Mammal Review*, 34 (3): 211–232.

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White, P.C.L., Smart, J.C.R., Böhm, M., Langbein, J. & Ward, A.I. (2004). *Economic impacts of wild deer in the east of England*. Report to the Forestry Commission and English Nature.

predators can have additional impacts on deer populations due to '*landscapes of fear*'. This can lead to greater expenditure of energy on predator avoidance, and thereby less expenditure on feeding, higher levels of stress, and lower rates of reproduction. Due to a lack of quantifiable evidence on the potential impacts for lynx in a UK context this was not included in the analysis, but it should be noted that such impacts could potentially be significant. A more complete discussion of the methods, data sources, and assumptions used in the analysis are provided in the reports.

Questions over the scale of the potential tourism impact, particularly given that people are unlikely to see a wild lynx

The estimate of the potential tourism impact of lynx reintroduction was broken into two distinct phases in the cost-benefit analysis: Phase 1) The initial five years of the trial where visits are likely to focus on a visitor centre and lynx enclosure offering direct interactions with the lynx such as guided walks and feeding events organised through the centre; and Phase 2) a twenty year period following the end of the trial where the site becomes known as a lynx tourism destination and is supported with associated facilities, where visits are likely to focus on less direct interactions with wild populations of lynx in the area through guided or self-guided walks along '*lynx trails*', as is the case in the Harz Mountains reintroduction scheme in Germany.

- Estimates of the potential number of tourism visits during Phase 1 were based on the results of a representative survey of 1,000 people undertaken by an independent national omnibus polling company. This survey found that 47% of people agreed and 18% strongly agreed with the statement, '*If lynx were returned to the UK landscape and viewing facilities were available, I would visit the facilities to see the lynx*'. It was conservatively assumed that 18% of people would visit the lynx trial and further assumed that this 18% only applies to people living within a reasonable travel distance of the pilot sites who don't already visit the pilot sites for wildlife watching.
- For Phase 2, a review was undertaken of visitor numbers to a range of wildlife watching destinations in the UK including whales, beavers, osprey, sea eagles,

and a number of other bird species. It was assumed that the number of people visiting sea eagles in Mull, 78,000 people per year, would provide a reasonable approximation of visitor numbers for lynx. Estimates were also undertaken for chough in Cornwall, 18,000 visitors per year, to provide an assessment of the sensitivity of the results to the assumption.

The potential economic impact of these visits was strictly limited to data on the direct expenditure for recreational visits to woodlands in the pilot areas and did not include impacts on local economies or opportunities for new tourism enterprises, which are significant in the case of the Harz Mountains scheme. As such, it is considered a conservative approach.

The results, estimated a net spend of around £4.5 million per year at Kielder Forest during Phase 1, for example, and around £800,000 per year over the longer term. This compares to the amount that tourists are estimated to spend watching wolves in Yellowstone Park, a species which are also hard to see in the wild, £10.6 million per year, dolphins in the Moray Firth, £7 million per year, ospreys across the UK, £4.2 million per year, and sea eagles on Mull, £3.6 million per year. Further details can be found in the cost-benefit analysis reports.

Questions over whether the risks and uncertainties are understated in the analysis

The cost-benefit analysis adopted a strictly conservative interpretation of the available evidence and the scope was limited to those impacts for which sufficient evidence was available to develop a quantitative estimate of the potential impacts.

- For example, a number of impacts were excluded from the analysis as, although evidence suggested they may be significant, the evidence was not considered to meet the stringent standards for robustness. This included: (1) potentially positive benefits that lynx could have in terms of restoring ecosystem functioning and supporting wild species diversity; (2) potentially positive impacts on sheep due to a reduction in fox predation rates; (3) consumer surplus from recreational visits, indirect expenditure, potential for

business opportunities, such as branding, merchandising, safari tours, or volunteer and educational opportunities; (4) potential impacts of lynx on deer populations due to the landscapes of fear effect; and (5) the existence value of a lynx reintroduction scheme.

In addition, sensitivity testing was undertaken for each impact to explore the potential costs and benefits under a best and worst case scenario. This ensured that the analysis considered a wider range of possibilities beyond the headline figures. The results were then ground-truthed against the findings of other similar studies where possible.

- For example, in the case of calculating the potential predation rate of lynx on sheep in the UK, an analysis of predation rates across Europe was undertaken. A conservative estimate was used in the main analysis which was also supplemented by best and worst case scenarios using estimates of the upper and lower limits of potential predation rates. Evidence was found which suggested that lynx may have an indirect positive impact on sheep through reductions in fox populations, however, this was not included in the analysis due to a lack of strong, quantifiable data.
- The economic impacts of each sheep lost were assumed to be double the maximum market price of a live sheep in order to account for any additional costs, risks, or distress associated with lynx predation. The results were then compared to findings from the Harz Mountain scheme and were found to be in line with their observations. This process ensured that the results of the analysis took into account issues of risk and uncertainty. Further details are available in the cost-benefit analysis report.