



Social Research for Red Squirrels United

Annual Progress report from Forest Research

February 2017





Introduction

A number of activities have taken place in A5, D2 and E2. A summary is provided below.

A.5 Preparation of a socio-economic evidence baseline (FR)

- 🍷 **Socio-economic evidence baseline report compiled and shared with Project Management Board**
- 🍷 **Evidence database produced to collect socioeconomic evidence throughout the project**
- 🍷 **First evidence Evidence Review Group (ERG) organised – focussed on updating knowledge of grey squirrel control**

A **nationwide survey of public stakeholders** in the UK was conducted to generate primary data on public attitudes to specific methods used to manage grey squirrels. The survey was produced in collaboration with Toluna Group Ltd, a specialist panel survey company, and administered via their online panel survey tool. The survey collected data from 3,758 individuals over the age of 18 and a representative sample was achieved by gender, age group, and region according to UK census statistics.

Forest Research produced a procurement brief which was distributed to three survey companies. The survey was delivered online, using a survey tool purpose built by Toluna Group Ltd (<http://eu.tolunagroup.com/>). The questions were developed by Forest Research social scientists, Forest Research economist and Scuriosity partners and were then subsequently refined and tested with specialists at Toluna (see summary report for survey questions).

The sample was drawn from Toluna's panel of registered respondents and two collaborative partners over a two-week period in October 2015. The survey was carried out in two parts with a national overview and a boost sample within and around case study areas. The case studies in this project are typically in low-population areas and so the return rates were lower than anticipated using an online survey approach. The sample will be boosted in the delivery phase through distribution of survey forms in person and through community-based groups in case study areas

Questions concentrated on four key areas: (i) general interest and involvement in nature woodlands; (ii) attitudes towards wildlife; (iii) attitudes towards management methods for grey squirrels; and (iv) opinions about who should take responsibility for management, and who is trusted to perform certain key management tasks.

Final data was provided in MS Excel format, although much initial analysis (descriptive statistics and cross-tabulations) was completed using the survey company's online analytic tool ('Toluna Analytics'). The demographic information collected, as well as respondent's answers to questions on awareness, concern and attitude, was cross-tabulated with responses to selected questions about management acceptance in order to explore potential effects of these on opinions on grey squirrel management. The demographic



groups used to partition and explore different sets of the data were primarily gender, age, profession and case study location.

A draft summary report was produced in September 2015 and placed on the Red Squirrels United web forum for comments. Minor comments were received and a revised version was completed in November 2015.

As the sample was relatively low in the case study areas, we set up the same survey ourselves via **SmartSurvey** and provided a link to all partners to circulate in their case study areas. The following returns have been received and will be added to our analysis of attitudes in case study areas.

	Survey numbers (smart survey) (No)
Northern Ireland- Mourne	0
Northern Ireland - Glens of Antrim	0
Northern Ireland – (London)Derry	0
Northern Ireland- Fermanagh	0
Merseyside	0
Northern England-Kielder	146 (61 from NE postcode; 51 from NW)
North Wales –Gwynedd	98 (80 from Welsh postcodes)
North Wales – Clocaenog	
Mid Wales	14 (7 from Welsh postcodes)

Table 1: Smart Survey results

An Evidence Review Group was held with scientific experts at FR on 17th Feb 2017 to discuss current available guidance regarding grey squirrel ecology and grey squirrel control. The group unanimously agreed that *FC Practice Note 4: Controlling Grey Squirrel Damage to Woodlands* is in need of revision, having last been revised in 2007. This is perhaps most clearly evidenced by the note’s guidance on the use of the now banned poison Warfarin, and its reference to - and images of - a number of traps which are no longer being manufactured. In additional it was felt that the note could be improved with the inclusion of further information on topics such as:

- Damage to bird populations and (specific) tree species by grey squirrels (as informed by research)
- Predictors of bark stripping damage such as phloem, density and tree species (as informed by research)
- Advancements in trapping designs and technology including e-notifications from triggered traps
- Bait selection and designs/strategies to minimise bait wastage (and thus expense)





- Inclusion of BASC's codified baiting and shooting procedure
- A summary of the strengths, weaknesses and costs of the methods and in which circumstances they are most appropriate (perhaps illustrated with a table and flowchart). Determinants of a method's suitability would likely include presence/absence of red squirrels and public use of the site(s)
- Recognition of ongoing research and developments in the fields of immunocontraception, toxins, lures, and biological controls e.g. pine marten and goshawks
- The impact of squirrels on neighbouring property and forest certification, and by extension, the importance of landscape level coordination during control efforts
- Biosecurity information encompassing hygiene, disease transmission, as well as guidance on disinfecting traps, hoppers and bait stations
- A revision of the Statutory Acts and Orders (to include website info)
- A revision of the organisations and agencies to contact for further advice or to report particular incidents (to include website info)

More general recommendations for the Practice Note included a call to cite the relevant source when specific figures are used in the guidance; to develop a more logical layout of the information (e.g. incorporate tunnel trapping into the existing live capture section); and to ensure that guidance is consistent with the practices and recommendations of other bodies (for example, CIEH's recommendations on vertebrate traps and the frequency for which checks should be carried out). The group noted that the type of information covered in Practice Note 4 is often relevant to the readership of other Practice Notes, namely *Practice Note 5: Red Squirrel Conservation* (1998) and *Practice Note 11: Practical Techniques for Surveying and Monitoring Squirrels* (2009). However, at present these Notes do not refer to one another which may lead to knowledge gaps. For example, Practice Note 5 on Red Squirrel Conservation makes no reference to grey squirrel controls. Thus, unless grey squirrel damage to woodland (Practice Note 4) was a specific concern to the red squirrel conservationist, guidance on controls could easily prove elusive. Moreover, the timing and respective effort dedicated to controlling grey squirrels can be expected to differ depending on whether the objective is to conserve red squirrels or minimise damage to woodlands, yet this issue is not addressed in any of the current Practice Notes. Other topics the group thought ought to feature somewhere in the Practice Notes included:

- Guidance on assessing squirrel abundance, particularly the challenge of detecting a small number of grey squirrels (i.e. during successful efforts to control a population or in areas of encroachment). This guidance could encompass rafts (as used with mink), camera monitoring and electronic notification systems



- Advice on poor trapping success. For example, in those cases where the number of grey squirrels has already been reduced so that continued trapping success may require additional time and effort, as well as continued motivation

Further discussions with Forestry Commission and relevant bodies has moved forward and the resulting updated guidance will be in the form of a Squirrel Control Technical Note.

D2 – Socio-economic impact evaluation in local population and economy (FR)

- Initial evidence gathering visits completed to Northern Ireland, Wales and England
- Interviews with partners/team members to understand objectives and activities of study sites
- Development of an evaluation framework for assessing social impact of project e.g.
 - Improved awareness of red squirrels/conservation activities
 - Attitudinal change towards management practices
 - Increasing volunteer involvement
- FR liaising with teams to organise surveys/interviews/focus groups at community events, volunteer training days or individual visits (e.g. local authority, parks)

Following the successful HLF funding bid, FR social scientists visited case studies in North Merseyside (August 2016), Northumberland and Northern Ireland (September 2016) and Wales (October 2016). These visits signal the start of a detailed programme for evaluating the impacts of the project on volunteer/community beliefs, attitudes and motivations. The first step was to interview the teams to understand more clearly the objectives and activities of each case study. Questions revolved around the aims of the project, background to the case study site and information about volunteers/community involvement and attitudes. The interviews were recorded and have been transcribed. The interviews were used as a basis for a tailor-made evaluation framework (see Table 2) for each case study to allow teams to assess whether the project has improved awareness of red squirrel conservation objectives; any attitudinal change towards conservation/management practices; increasing community volunteer engagement with red squirrel conservation. Next steps involve each case study team compiling a list of community events being run in 2017 and identifying which ones could usefully involve data collection by FR social scientists. We will also explore the opportunities for creating community learning labs or building on existing networks.

Evaluation Questions (Kielder)	Target group	Event and date	Potential methods
Awareness of RSU	Local community		Survey (extent of awareness), Interviews (source of awareness)



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Awareness/experience of squirrels and management measures. Understanding factors that lead to support for squirrel management (even if not involvement)	Volunteers, Local community		Interviews, Focus group, Case study survey data
Identifying different ways in which local people are involved and can/want to contribute to red squirrel conservation	Project staff, Volunteers		Interviews, Focus group, Shadowing in the field
Understand why there may be a lack of interest from local community in specific areas (e.g. state owned woodlands; geographical proximity; place attachment; environmental knowledge).	Local community, Landowners		Interviews, Focus group
Do volunteers/local communities/team members have an understanding of the 'bigger picture' (wider conservation goals)?	Project staff, Local community, Volunteers		Interviews, Focus group, Shadowing in the field
What are the barriers to becoming involved in red squirrel conservation?	Local community, Land owners, Volunteers		Interviews, Focus group, Online forum/discussion (e.g. Facebook group)
What are the barriers to leadership and sustainability of volunteer groups	Project staff, Volunteers		Interviews, Focus group
How to better cooperate with others who have the same objectives (e.g. SSRS) – what governance mechanisms are needed, which networks are important, how to build collaborative relationships?	Project staff, Partners, Other agencies		Interviews



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Which engagement efforts have had the most 'success' (e.g. more people interested in red squirrels, more volunteers intending to commit long-term...)	Project staff		Interviews, Event evaluation/feedback forms
Has the bigger scale of RSU improved community volunteer attitudes and participation (e.g. knowing red squirrels are elsewhere, meeting people through knowledge fairs etc.)	Volunteers		Interviews, Focus group, Shadowing in the field, Online forum/discussion (e.g. Facebook group)
Learning lessons from self-supported volunteer groups (e.g. south Cumbria). What works? What do you need to do?	Volunteers (successful groups)		Interviews
What is the relationship between volunteer groups? Does this help squirrel management?	Project staff, Volunteers		Interviews

Table 2: Evaluation framework developed for each case study

In addition, FR social scientists have organized a series of interviews with volunteers and other stakeholders. They have engaged volunteers/key stakeholders in Cumbria (Northern England volunteers) and Merseyside around (i) their aspirations for red squirrel conservation and key challenges, (ii) background to their involvement in volunteering and lessons learned. The results from the Cumbria event involving over 50 volunteers was summarised (see below):

1) Aspirations for red squirrel conservation in Northern England

Aspirations chiefly centered on the maintenance and expansion of red squirrel populations into new areas, and the complementary eradication of grey squirrels. Achieving these aspirations would help to realise other hopes, such as 'securing the future of reds', 'being able to see reds most days, not just in [current] strongholds' and 'putting reds back in peoples' gardens'. For some volunteers aspirations are very localised (e.g. Grasmere) where a desire to ensure that grey squirrels can never gain a foothold was expressed. In other cases, volunteers thought more about the landscape level, hoping that greys could be controlled or removed from all areas and counties, including the public parks. Similarly, aspirations for more corridors between red strongholds emerged, as well as a hope that one day only reds could be found to the north of an east-west line across the country. Occasionally aspirations went beyond squirrel conservation and control, reflecting not only





a desire to remove invasive species but to re-wild uplands so that tree cover could increase and species such as the pine marten could return.

Away from the ecological aspirations, volunteers also aspired to reach a point where the general public were aware of the issues concerning squirrels, for example through education. Particular topics to emerge included the damage caused by greys, the fact that greys are non-native, and the ecology of reds.

Volunteers also wish for wider and more regular publicity for their work, as well as celebrity endorsement. Similarly, there is a desire for RSNE to continue acting as a focus for volunteer efforts and to provide the scientific evidence to quantify volunteers' effectiveness. Such measures could help to raise the groups' profile, gain recognition and assist in educating the general public about the issues at hand.

In order to sustain efforts and effectiveness it is widely recognised that resources (some combination of time, money and people) must be maintained, or preferably increased. Long-term funding dedicated to controlling grey squirrels and an increase in institutional funding were both suggested aspirations. Without this, volunteers recognised that their numbers would need to be increased, through for example the expansion of the volunteer network (with more help from government bodies) and/or greater youth involvement. Finally, it was noted that an increase in landowner participation would prove extremely beneficial, with some volunteers going so far as to wish that all landowners should be required by law to allow squirrels to be controlled on their land.

2) Key Challenges for red squirrel conservation in Northern England

A lack of funding and resources were the most commonly reported challenges for conserving red squirrels in Northern England. These shortfalls are perceived to undermine grey squirrel control and the retention of rangers – both of which are considered necessary for red squirrel conservation. Such challenges are perceived to be exacerbated by Brexit and the continued governance by the Conservative Party. More broadly, it is felt that these political circumstances will lead to a wide range of environmental issues being ignored or underfunded. Additionally, there is concern about how land use will change as a result of pressure from housing and fracking. Such pressures parallel challenges to red squirrel habitat suitability and connectivity (i.e. a lack of corridors).

Participants also regarded the extent of the grey squirrel's distribution as a substantial challenge to conserving reds. The sheer scale of the grey's coverage means that there is a need for constant control, leading some to conclude that there are in fact so many greys that eradication is unrealistic, despite this being an aspiration for many. The challenge of controlling greys is further complicated by a lack of access and control in large woodlands and private estates. It is thought that if such large areas are allowed to remain as havens for grey squirrels, efforts to stem their dispersal into red strongholds will remain a constant battle. In the same way, the apparent absence of a coordinated effort at the national level raises questions over the sustainability of one region's efforts. In contrast to concerns



about the presence of too many greys, some volunteers also warned against complacency in areas where reds are thriving and greys are absent.

The other key challenges to emerge centred on raising public awareness around the need for red squirrel conservation and grey squirrel control. In some cases the public are described as apathetic about such issues, whereas in others there is opposition, particularly around the use of lethal controls. Those with a lack of exposure to red squirrels are thought to be the most challenging group from which support can be garnered, whether that is the younger generation, or those from grey dominated areas (e.g. urban areas). Educating these people about the non-native, invasive status of the grey squirrel and its impacts on native red squirrels, woodland and birds so that they 'recognise grey squirrels as the enemy' was a similar challenge to emerge. Active engagement and leadership from key agencies (FC, National Trust, National Park Authorities etc.) is considered one means of addressing this issue, but this is said not to be happening, much to the volunteers frustration. Relatedly, it was suggested that if the public were better informed about the accessibility of sites further interest in red squirrels may be generated.

3) Reasons for starting to volunteer

The most common reasons why people begin to volunteer are underpinned by an interest in protecting red squirrels, which they hold dear. For some of the older volunteers it is possible to remember a time when only reds were present in the area. The influx of greys has in these cases been directly observed as a threat to something they do not wish to lose. These observations range from a reduction in red sightings and the apparent loss of all reds in an area due to SQPDV, to more direct conflicts such as witnessing greys fighting with reds. Wider impacts of greys were also forthcoming, including a report of greys killing long-tailed tits, robins and wren chicks in a volunteer's garden. While contact and exposure to red and grey squirrels proved an impetus for many of the volunteers, one also got involved with the aim of seeing a red squirrel for the very first time (wanting to do so before turning 50 years old). For others, there is pleasure to be had in helping others (e.g. youths) to experience the thrill of seeing reds.

The fact that the grey is an alien, invasive species and the red is a threatened native species further cements people's conviction on the issue. Many volunteers noted their desire to make a positive contribution (conservation conscience), a belief that they could make a difference, and the need to 'remove intruders'. A couple of volunteers perceived themselves to be particularly well placed to act owing to their sizable landholdings. One of these was already controlling greys before officially joining as a volunteer, demonstrating that they and the Red Squirrel Group shared a common goal. Another volunteer sought out a group in order to receive advice about how to conserve reds on their land. While some volunteers are primarily concerned with the conservation of reds at a very local level (i.e. their own land or individual village) others reported wider interests in the countryside and increasing biodiversity.



A number of volunteers reported the influence of others in their decision to get involved. For example, conversations with the rangers on the ground, and a chairman of one of the groups. Others were attracted by hearing a talk by RSNE staff, which struck a chord because of the presence of red squirrels in their garden. Some volunteers described that they were not exclusively dedicated to working for red squirrels, but the groups' aims were found to overlap of those with their volunteering roles elsewhere (e.g. for Cumbria Wildlife Trust and in the Yorkshire Dales).

Aside from wanting to make a difference to the conservation of red squirrels, volunteers also commented on personal benefits brought about by starting to volunteer. These included keeping fit and active, having contact with others who share similar views and the opportunity to put their hunting hobby to good use.

4) Drivers of continued motivation among volunteers

A majority of volunteers noted that their motivation to continue in the role corresponded to their initial reasons for becoming involved, i.e. primarily their passion for securing or expanding the endangered red population, and anger towards greys which they feel must be removed. The fact that their aspirations for these issues had not yet come to fruition – and a belief that they someday might - was often deemed ample motivation for volunteers to continue with their efforts. One volunteer proudly described this as 'cussedness'. Continued or increased sightings of red squirrels also emerged as a factor - in some cases volunteers are regularly enjoying seeing and feeding reds. Similarly, increased awareness and exposure to the problems caused by grey squirrels plays a role. Experience of successes has served to boost the volunteers' morale, for example, the expansion of reds into new or historic areas as greys have been removed. Observing the results of their efforts and having these recognised is important to some volunteers, as is witnessing examples of public interest in the issue.

Volunteers expressed a range of additional reasons for why they continue to stay active in their role. Some simply expressed their enjoyment for and interest in the work. Others reflected on the satisfaction they gained from knowing they were doing a good job (e.g. in controlling greys). This belief that they are making a difference echoed comments about feeling useful, believing they are making a positive contribution, or perceiving themselves to be putting something back into the community. Beyond this volunteers remarked that nobody else appears willing to get involved, and so others come to rely on their contributions. Thus, a sense of duty develops. Meeting with other passionate and enthusiastic volunteers emerged as an important motivator for many volunteers, while a few also mentioned their eagerness to support the well-regarded rangers.

5) Challenges faced in volunteering role

Many of the challenges volunteers reportedly face in their role are iterations of the challenges described in conserving red squirrels in Northern England. For example, attempting to overcome public apathy or opposition, particularly in respect of lethal controls, and the fact that the many people would rather see grey squirrels than no



squirrels at all. Gaining traction in the public arena was specifically brought up as a challenge, and one that was undermined by the comments of influential figures including Chris Packham (of BBC's Springwatch et al.). Some volunteers even referred to the challenge of communicating to friends and family that they are involved in culling. Another volunteer remarked that there was a lack of reassurance and correspondingly a lack of confidence that they were doing the right thing.

The lack of support shown by agencies was a further reiteration of an aforementioned challenge. Volunteers repeatedly pointed to the lack of interest (RSPB) and support (Cumbria Wildlife Trust), along with comments that agencies need to realise that volunteers are helping them to achieve the policies they allege to embrace. Similarly, there are claims that funders are reluctant to support killing (of greys), when this is currently the only effective means of preventing spread into new areas. As a result it is difficult to get backing from all agencies. Furthermore, a lack of cooperation between organisations is regarded as a challenge. The issue of restricted access brought about because of a lack of landowner participation or cooperation also reemerged.

Expressions of the challenges more specific to the volunteers themselves were dominated by the issue of insufficient time to carry out their duties, or similarly, a lack of people to share the workload. For some, time is an issue because of competing demands for their involvement in other volunteer groups. In one sense volunteers recognised that they could become victims of their own success; their hard efforts could result in fewer greys, which could result in a perception that less subsequent action would then be required. Ultimately this could result in fewer volunteers, less public interest and a resurgence of grey squirrels. Volunteers also noted the demoralisation brought about by the spasmodic reappearance of greys when they believed that reds were 'winning'.

Elsewhere, receiving feedback on how their data fits into the wider landscape was said to be a challenge, as was the broader issue of keeping in touch with others involved.

6) Improvements to volunteering experience

Relatively few comments were received about how the volunteers' experiences could be improved. Unsurprisingly there were once again calls for more encouragement and support of agencies including the Forestry Commission and RSPB. In parallel to the challenge volunteers face in allocating time, and the benefits volunteers gained from interacting with others of the same ilk, there were suggestions that getting more people involved would positively impact their experience. On a related note, volunteers expressed their desire for more social networking and interaction within and between groups.

E3 – Dissemination for IAS policy makers and scientists (FR)

- 🍷 FR produced a summary report on the public attitudes survey which has been distributed widely. Forestry Commission Scotland requested a further analysis of the Scottish sample



- Journal article on the survey prepared and will be submitted to Biological Conservation
- FR presented survey results to the UK Squirrel Accord (Jan 2017) with a request from RFS to submit an article.