

# Grey Squirrels and England's Woodlands:

## Policy and Action



## Background

- 1 The Sustaining England's Woodlands Review<sup>1</sup> (SEW) report committed the Forestry Commission (FC) to 'develop, with partners, a clear modern policy towards grey squirrels, backed by appropriate practical management strategies'. The report said that the FC would work with the England Squirrel Forum (ESF), and ask for its advice in developing policy and practice in this area. The FC has now prepared this statement of policy and action with advice from Defra, particularly in relation to non-native species policy. This document, supported by Defra, sets out actions the FC will take over the next 3 years to support effective grey squirrel control. It will guide the management of grey squirrels on the public forest estate managed by Forest Enterprise (FE) and the provision of advice and grant support related to the control of grey squirrels in England's woodland. The full document, including an Annex prepared in conjunction with the ESF, involved consultation with over 25 organisations and can be found on the Forestry Commission England website [www.forestry.gov.uk/england](http://www.forestry.gov.uk/england)
- 2 It is recognised that a stand-alone England grey squirrel approach within the UK context may have shortcomings, particularly with regard to the long-term future of red squirrels and the delivery of the UK Biodiversity Action Plan (UKBAP). However, the situation and priorities with regard to grey squirrels are different in all four countries. This policy is being developed alongside work in the other countries in order to avoid any risks arising from a fragmented approach.

## Rationale Underpinning Policy and Action

- 3 The grey squirrel represents a serious and growing threat to the sustainable management of English woodlands. It has been seen primarily as a threat to economic sustainability but the adverse impact on the environmental and social values is increasingly recognised. In many instances the willingness of landowners to manage their existing woods for public benefit, and to create new ones, is being eroded as a consequence of the damage caused by grey squirrels. The native red squirrel has been lost from most of its natural range in England, primarily due to increases in the range and population of grey squirrels.
- 4 Current methods of controlling grey squirrels are expensive and of variable efficacy unless best practice is applied. Whilst trapping is effective, the use of warfarin is generally considered to be the most cost-effective method of control, but is prohibited in areas where red squirrels or pine martens may be present. Following a recent review by the European Commission, continued use of warfarin for controlling grey squirrels after April 2007 will be on condition that only pre-prepared products or baits are marketed rather than concentrates. Whatever means are used, effective control requires the co-operation of neighbours. This is often difficult to achieve with the large number of woodland owners in England, some of whom are unwilling to kill squirrels.

- 5 Some argue that we should seek to eradicate the grey squirrel. For example, the introduction to *The Grey Squirrel Review*<sup>2</sup> states:

'If the fragile red squirrel and accompanying traditional broadleaved woodland . . . are to survive and thrive, eradication of the grey squirrel may ultimately be the only option.'

But is eradication a feasible, let alone desirable, option? The Working Group on the Government Review of Non-Native Species Policy<sup>3</sup> concluded that grey squirrels will, for the foreseeable future, remain part of the fauna of England (and GB). Grey squirrels are enjoyed by many as part of our wildlife and eradication would require a substantial shift in public attitudes.

- 6 If we are to achieve cost-effective control of grey squirrels we must remain open to new methods of control. One possible new approach is immuno-contraception. This technique is being studied in several countries, notably the USA and New Zealand, and offers prospects for non-lethal population control in a range of mammals. Defra and the FC will keep in close contact with research abroad and are already funding work in the UK. They will be prepared to investigate its application for the control of grey squirrels in Britain. Growing concern about the expansion of grey squirrel populations in Europe means that the opportunities for collaboration and joint funding are enhanced.
- 7 The primary responsibility for controlling grey squirrels must lie with landowners. The FC and Defra have a significant role to play in terms of research, advice, targeted grant aid, partnership support, and applying best practice on the public forest estate.

<sup>1</sup> *Sustaining England's Woodlands*. Forestry Commission, 2002.

<sup>2</sup> *The Grey Squirrel Review: Profile of an Invasive Alien Species*. Louise Huxley, ESI Dorset, 2003.

<sup>3</sup> *Review of Non-native Species Policy: report of the Working Group*. Defra, UK, 2003.

## Policy and Action by the Forestry Commission

- 8 Given this rationale we have developed the following framework for policy and action by the FC in England. Overall, we see our role as being:
- To support and encourage the effective and humane control of grey squirrels, focusing resources on locations where they are causing the greatest threat to the sustainable management of woodland, and the associated public benefits.
  - To fund, in partnership with others, research into methods of control and silvicultural techniques, which offer effective damage control and management.
  - To continue to monitor and evaluate the damage caused by grey squirrels and the threat they pose to sustainable woodland management.
  - To raise awareness of the need for targeted grey squirrel damage control.
  - To work in partnership with other organisations, at local, England, GB and international levels, to achieve the policy objectives.
- 9 Over the next 3 years we will take specific action in the following areas:

### Research into New Methods of Control

The FC will continue research into improving existing methods of control and developing new methods. In particular the FC will support a review of the potential of immuno-contraception, including developing multi-national collaboration in this work, and research into the wider biodiversity impacts of grey squirrels.

### Advice on Best Practice

The FC has been providing advice on grey squirrel control for over 30 years, and regularly publishes revised versions of a Practice Note<sup>4</sup>. We will publish an updated version in 2006. Many woodland owners are very aware of grey squirrel damage and what to do to control it. However, to encourage more effective grey squirrel control we propose to run a series of regional seminars over the next 2 years for woodland owners and wildlife managers aimed at disseminating best practice on grey squirrel control techniques. We will also encourage owners to form Grey Squirrel Control Groups (where these do not already exist) in vulnerable areas where sustainability and public benefits are threatened at a landscape scale.

### Grants to Woodland Owners

The FC has been grant-aiding squirrel control for many years, but the development of the English Woodland Grant Scheme (EWGS) provides the opportunity to focus grant support where it is most beneficial. To this end we have developed the concept of 'critical threat', which will guide the provision of EWGS grants and partnership support for squirrel control. Applications for grant support for squirrel control under the EWGS must, however, first meet the eligibility criteria of the grant scheme. The decision support guidance for determining 'critical threat' is set out in Tables 1–3.

### Supporting Partnerships and Encouraging Co-operative Action

The protection of red squirrel populations and the effective control of grey squirrels are only likely to be effectively achieved through co-operative action over large areas. The FC will continue to support existing partnerships where these are effective and will encourage the creation of new ones in red areas threatened by grey colonisation and in grey-only areas where woodland sustainability and public benefits are threatened. In particular we will suggest innovative ideas for successful partnerships and co-operative approaches to controlling grey squirrels. We will also continue to support the England Squirrel Forum and seek advice from the Forum at both strategic and operational levels.

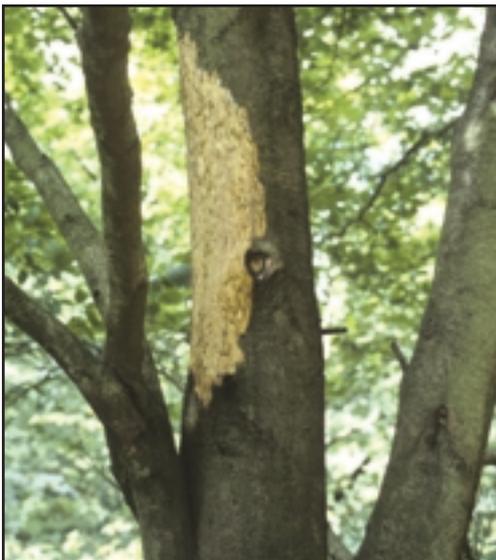
### Applying Best Practice on the Public Forest Estate

Forest Enterprise manages nearly 20% of England's woodlands, although proportionately less of the particularly vulnerable broadleaf woodland. FE will use the same decision support guidance (Tables 1–3) in deciding priority areas for grey squirrel control and will play an active part in the collective effort to conserve the remaining viable red squirrel populations in England. Where it has a land holding FE will also actively engage with Grey Squirrel Control Groups.

<sup>4</sup> *Controlling Grey Squirrel Damage to Woodlands*. FC Practice Note 4 (Revised), 2004.

## Critical Threat: Decision Support Guidance

- 1 The FC will target its resources on grey squirrel control in areas where public benefits are **critically threatened** by grey squirrel impacts. Whether or not a **critical threat** exists will be determined on a site or landscape scale by Conservators (or, on the public forest estate, by District Managers), based on supporting evidence and data and by reference to the rationale and the decision support guidance in Tables 1–3.
- 2 Control may be grant-aided by the FC where **critical threat** is evident and the recommended method is used, but is dependant on funding availability and eligibility criteria for EWGS being met. Other legal means of killing grey squirrels, e.g. shooting or spring traps, may be carried out by owners at their own expense.
- 3 However, in and around red squirrel refugia in northern England and the Isle of Wight, variation of recommended methods, together with other legal options (including shooting), will be supported by FC grant aid and partnership funding. Best practice for such purposes is being developed.
- 4 Partnership funding and other support may also be available to encourage co-ordinated multi-ownership/partnership control where values are **critically threatened** at a landscape scale and particularly in the priority red squirrel areas.
- 5 Targeted FC grant and partnership support for addressing **critical threat** will mean a greater level of funding availability and support in areas where it is really needed, rather than our former approach of spreading a similar level of support more thinly over all the country's vulnerable woodland to questionable effect.
- 6 **Critical threat** may be avoided by silvicultural techniques, manipulation of woodland structure, tree species choice and other measures aimed at discouraging bark-stripping damage. Controlling damage solely by killing grey squirrels may fail and owners will need to show that they have also considered and tried appropriate alternative measures.



## Decision support guidance for determining 'critical threat' of grey squirrel impacts and FC support

Table 1: Economic impacts of grey squirrels

The resource	The impact	Rationale for FC support	What can be done to reduce or remove impact	Conditions for FC support	Support from the FC
Woodland where production of quality timber is likely and where this is a long-term objective of management.	Stripping of bark leading to loss of timber value through deformation, decay, or occasionally death of trees.	Lack of economic underpinning for management activities may lead to neglect of woodland management – with consequent reduction in public benefits provided.	<ul style="list-style-type: none"> <li>species choice manipulation</li> <li>planting less vulnerable species</li> <li>silviculture, including free-growth thinning</li> <li>encouragement of shrub layer structure</li> <li>reduce/prevent supplementary feeding of squirrels (feed put out for gamebirds/wildbirds)</li> <li>control of grey squirrels</li> </ul>	The woodland must show clear potential for producing quality timber, and the manager must show a long-term commitment to squirrel control. Support will be judged on a case-by-case basis, to include: consideration of appropriate tree species, evidence of appropriate silvicultural intervention, suitable access for harvesting, long-term aim and tradition of growing quality timber, evidence of successful grey squirrel management programme over a sufficiently large area being effective, and degree and type of public benefits provided.	Grant aid towards the costs of control in high risk years. Advice and best practice guidance. Assistance with setting up a Grey Squirrel Control Group <b>where appropriate</b> . Grant aid for improving stand structure in certain AWS situations, including deer management.
New woodlands planted with grant aid from the FC.	Bark stripping which kills trees and/or threatens viability as woodland.	The FC provides grant aid support for woodland expansion. It is important that the woodland is protected and maintained beyond the establishment phase.	<ul style="list-style-type: none"> <li>planting less vulnerable species</li> <li>manipulation of species in planted woodland including thinning to favour less vulnerable species</li> <li>early free-growth thinning to encourage development of structure, ground vegetation and shrub layer</li> <li>control of grey squirrels</li> </ul>	Where grey squirrel damage is shown to be threatening the survival or viability of the woodland as a whole. Note that decaying wood habitats are valuable and the presence of a certain amount of decaying wood is to be encouraged in all woods. Intervention may encourage bark-stripping damage in some situations.	Contribution to the costs of habitat manipulation and management aimed at minimising damage risk. Contribution to the costs of grey squirrel control where woodland survival or viability is threatened.

**Table 2: Biodiversity impacts of grey squirrels**

The resource	The impact	Rationale for FC support	What can be done to reduce or remove impact	Conditions for FC support	Support from the FC
Red squirrel populations.	Competition and squirrelpox virus.	The FC has a duty to further the conservation of the red squirrel, a priority UKBAP species and a Forestry Target Species in England for proactive FC action.	<ul style="list-style-type: none"> <li>manipulation of habitat to make it less suitable for grey squirrels, such as removal of large-seeded broadleaves and forest structure planning</li> <li>agreeing land-use strategy with other authorities within priority area buffer zones</li> <li>control of grey squirrels</li> </ul>	Where red squirrel populations have a reasonable chance of survival, i.e. in priority sites and associated buffer zones within the agreed priority regions of northern England, the Isle of Wight and Brownsea Harbour Islands.	Funding, advisory and support services to prevent grey squirrels from colonising priority sites, including management planning and contribution to costs of monitoring and grey control. Partnership funding and staff support in priority area initiatives.
Regeneration in ancient semi-natural woodland.	Bark stripping which kills trees and damages regeneration potential.	Ancient semi-natural woodlands are our most important woodlands and the FC has a duty and key role under the UKBAP in championing their protection and enhancement. The lowland beech and yew woodlands are particularly susceptible to damage from bark stripping in some situations.	<ul style="list-style-type: none"> <li>protect natural regeneration to ensure its survival</li> <li>where necessary, diversify native tree species composition by planting using local stock</li> <li>control grey squirrels</li> </ul>	Where grey squirrel damage is shown to be imminently threatening the survival condition and overall biodiversity value of the woodland. Note that deadwood habitats are valuable in most kinds of woodland, and presence of a certain amount of decaying wood in living trees is to be encouraged.	Contribution to the costs of regeneration. Contribution to the costs of grey squirrel control.
Woodland birds and other priority species.	Predation of birds nests and competition with priority species.	The FC target to reverse long-term declines in populations of woodland birds. There is some evidence (as yet mainly anecdotal) which suggests that grey squirrels could be impacting on populations of woodland birds and competing for food with other priority species (e.g. the common dormouse).	<ul style="list-style-type: none"> <li>improving the habitat for birds and common dormice, e.g. increasing the proportion of the woodland in early and over-mature successional growth stages, including protecting and encouraging diverse shrub layers and decaying wood habitat</li> <li>control grey squirrels</li> </ul>	Where grey squirrels are shown to be threatening populations of woodland birds or priority species, support for grey squirrel control is conditional upon other specific work being in place to enhance the condition and habitat for priority woodland birds and other priority species present.	Contribution to the costs of improving the habitat for woodland birds and priority species, including deer management. Contribution to the costs of grey squirrel control where priority species are shown to be threatened by excessive grey squirrel impact.

**Table 3: Environmental and social impacts of grey squirrels**

The resource	The impact	Rationale for approach of the FC to that impact	What can be done to reduce or remove impact	Conditions for FC support	Support available from the FC
Culturally important landscapes.	Certain landscapes, such as the Chiltern Hills, are strongly associated with woodlands of a particular type and nature which are particularly susceptible to grey squirrel damage.	Those managing beech and beech/oak/conifer mixtures may be discouraged from managing their woodlands by continuing grey squirrel damage. This could lead to changes in the wooded character of the landscape but not woodland loss. However, landscapes are subject to change. (In the Chiltern Hills, for example, the beech woods planted in the 18th century for the furniture industry do not necessarily represent the naturally occurring woodland habitat.) For the FC to consider support, there would need to be additional reasons for conserving the present character of a particular landscape, such as unique biodiversity or socio-economic values.	<ul style="list-style-type: none"> <li>• add the feature species in question (e.g. beech) to woodlands through planting</li> <li>• encourage natural regeneration</li> <li>• accept a more dynamic species composition</li> <li>• control grey squirrels</li> </ul>	<p>Where particular stands of trees are culturally important; for example at 'honeypot' sites for public use of woodlands in a culturally important landscape, then it may be appropriate to control grey squirrels if they are threatening the viability of such stands.</p> <p>The FC will not support blanket control of grey squirrels for the purpose of safeguarding and 'setting in stone' a culturally important landscape feature. We consider that such landscapes could gradually evolve without loss of woodland cover in the presence of grey squirrels whilst not having significant detrimental impact on environmental values.</p>	Contribution to the cost of controlling grey squirrels at culturally important 'honeypot' sites where they are threatening continuity of feature trees at that site.
Woods managed for public access.	Crown damage and blown tops creating extra risks to the public.	The FC wishes to encourage public access to woodlands. Occasionally, grey squirrel damage to tree crowns means that woodlands become more hazardous for public access and the costs of management increase (additional tree inspections and tree surgery or tree felling required).	<ul style="list-style-type: none"> <li>• tree safety inspections, tree surgery or felling of hazardous trees</li> <li>• woodland closure during periods of high winds</li> </ul>	Public access (in addition to the Public Rights of Way network) is encouraged in a woodland, people use the woodland for access, and there is good evidence that crown damage by grey squirrels is creating a hazard for those using the wood.	Contribution to costs of tree safety inspections, tree surgery, felling of hazardous trees or removal of crowns.
Special sites.	Certain arboretum collections are susceptible to damage by grey squirrels.	The FC has a role in conserving important tree collections for the nation. Private arboreta are invariably run as enterprises or are not open to the public.	<ul style="list-style-type: none"> <li>• free-growth and individual protection of specimen trees</li> <li>• control grey squirrels</li> </ul>	The FC will only fund protection from grey squirrel damage for the collections which it manages.	Advisory, support and research information will continue to be available to all woodland and National Arboreta owners.



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