



6.4 Species

Targeted action to conserve or manage particular species of wildlife takes a number of forms. These include control and management of potentially damaging works through licensed activities, action to manage impacts of invasive species, and action to promote recovery of target species populations.

6.4.1 Licensing

Legislation that gives legal protection to species has been introduced in England for a variety of reasons. These include game management and poaching, managing wildlife exploitation, managing pests and vermin, reducing animal cruelty, managing non-native and destructive imported animals and nature conservation. Natural England, as a licensing authority, has a remit to administer species conservation legislation. This involves:

- Administering wildlife legislation to enable appropriate management, scientific studies, and nature conservation.
- Providing sound, science-based advice on wildlife and management to assist those wishing to undertake works that might threaten protected species, while maintaining and enhancing the natural environment.
- Issuing licences, where a valid justification exists, for scenarios including damage to property, enabling scientific research projects, protecting public health and undertaking positive nature conservation projects including reintroduction schemes. The application of strict conditions and guidance is aimed at ensuring minimal impact on populations.

In the financial year 2006/07, Natural England issued 7,724 licences, which is a 14% increase on the previous year's figures. The majority of licences are issued to enable surveys and monitoring of protected species, which provide data and inform the development and planning sector. Where development impacts on protected species, licences are issued to undertake mitigation to ensure that species are not negatively affected. In 2006/07, 1,620 licences were issued that involved mitigation in relation to development or other works.

Great crested newts and development

Local and national surveys have established rates of great crested newt colony loss in England at between 0.5% and 4% a year during the 1960s to 1990s. In the past, development destroyed both great crested newt ponds and surrounding habitat and caused remaining habitat to become increasingly fragmented.

The provisions within the Wildlife and Countryside Act 1981 and the Habitats Regulations 1994 mean that undertaking development that has direct impacts on great crested newts is an offence. Natural England issues licences for mitigation works to ensure that development is not detrimental to the newt population.

The number of licences issued concerning great crested newts has risen dramatically over the last decade, from fewer than 50 licences in 1995 to over 400 in 2005. However, pond loss with the movement of large numbers of newts is now less common (Edgar & Griffiths, 2004). More and smaller newt populations are now being found prior to development and appropriate conservation action is being taken.

Legislation, combined with targeted communication that clearly explains both the legislation and best practice solutions, has resulted in greater public awareness and better protection for great crested newts.



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Bats and timber treatment industry

Many bats rely on buildings for shelter and this, together with their colonial habits, make them vulnerable to a wide range of human activities. *In situ* remedial timber treatment with organochlorine insecticides and some fungicides has been a significant cause of bat mortality in England. Research (eg Racey & Swift 1986; Boyd *et al.* 1988) has shown that bats kept in wooden cages treated with lindane, formerly a common insecticide in treatment fluids, died within a few days even if the cage had been treated two weeks previously.

The Wildlife and Countryside Act 1981 afforded protection to bats against the killing or injuring of bats and damage or destruction of their roosts. This legislation, combined with an effective publicity campaign about bats and their protection, means that timber treatment companies are now aware of both the legislation and alternative treatments (synthetic pyrethroids) which are known to be relatively harmless to bats. This dramatic shift in awareness and practice, including work at appropriate times of the year, has ensured that timber treatment is no longer a major factor impacting on bat populations.

6.4.2 Practical action for species

6.4.2.1 Invasive species

Practical action to conserve or enhance native species populations takes a number of forms. The threat to native species from invasive species (see Section 5.3) can be effectively addressed through control or eradication of invasive species, as illustrated by the Lundy seabird recovery project (below).



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Lundy seabird recovery project

Burrow-nesting seabird populations on the island of Lundy have declined dramatically with no Manx shearwater *Puffinus puffinus* chicks found since 1959 or Atlantic puffin *Fratercula arctica* for 20 years (Lock 2006). Predation on eggs and chicks by rats *Rattus* species was one of the key reasons for the decline. A rat eradication programme for the island using poison bait stations was initiated in 2002 for two winters. No evidence of rats has been found since February 2004.

There are early signs that the breeding seabirds will return: in 2006, the first puffin fledgling was observed on the island in 20 years.

Control of Australian swamp stonecrop at Brown Moss SAC, Shropshire

Brown Moss SSSI, part of the internationally important West Midlands Meres and Mosses, is a series of shallow pools that support an important suite of marginal and wetland plant species, including the rare aquatic plant, floating water-plantain *Luronium natans* for which the site is designated an SAC. The site has suffered from a number of pressures, such as scrub encroachment, nutrient enrichment and excessive goose grazing. By 2002 the most obvious problem was the extensive growth of the Australian swamp stonecrop *Crassula helmsii*, an introduced invasive plant. The shallow margins and fluctuating water levels that characterise the site and provide such a good habitat for native plant species proved ideal for the spread of this weed which soon covered extensive areas of the shore in mats up to 15 cm thick.

During the winters of 2003 and 2004, the *Crassula* problem at Brown Moss was tackled through a combined mechanical and chemical approach with a three-fold purpose: to reduce or remove the impact of *Crassula* upon native plants, to recover floating water plantain (not seen for some years), and to trial a new approach to management. Work was undertaken during the winter to minimise the risk of herbicides affecting native species. Machinery was used to remove as much *Crassula* from the site as possible and any remaining fragments of *Crassula* were spot-treated with herbicide at regular intervals. By removing most of the material mechanically, the amount of chemical used was much reduced.



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Initial results were very encouraging with a range of desirable plants recolonising the newly exposed substrate. Then, in 2006, floating water plantain was recorded at the site for the first time in a number of years. The longer term success of the work is unpredictable: *Crassula* is still present though at much lower abundance and, although regular management will be required, this should be at a much reduced level. The work has demonstrated that even with this most aggressive of weeds, it is possible to mitigate impacts by careful management – but this is likely to be costly and ongoing.

6.4.2.2 Species recovery

By the early 1990s, it had become clear that, despite decades of conservation work, many plants and animals had continued to decline in numbers, and it was feared that several species would disappear completely, even some that were once numerous. A new strategy had to be developed to tackle this concern and attempt to reverse these declines.

In 1991 English Nature, now Natural England, launched its Species Recovery Programme (SRP) and developed plans that aimed to achieve the recovery of threatened species to a point where their populations were self-sustaining in the wild. In 1994 the UK BAP was published and this included a commitment to develop action plans for threatened species. Using the SRP model, 391 UK Species Action Plans were published by 1999. These plans set targets for the recovery of a wide range of species including less charismatic groups such as fungi, lower plants and marine invertebrates. The action plans have been delivered through national steering groups and local biodiversity partnerships and have captured the public's imagination and brought new resources into biodiversity conservation.

Notable successes include the reintroduction of the large blue butterfly *Maculinea arion* and the red kite *Milvus milvus*, and more recently the pool frog *Rana lessonae* and the interrupted brome *Bromus interruptus*, all of which had become extinct in the wild in England. The BAP recovery targets have also been exceeded for a range of species including the lesser horseshoe bat *Rhinolophus hipposideros*, bittern *Botaurus stellaris* and Deptford pink *Dianthus armeria*. In general, the targeted approach has been more successful in achieving the recovery of species that have become restricted in range than those that are widespread. BAP work in the future will aim to achieve better integration of species into habitat-based delivery to secure better outcomes for more species.

Red kite re-introduction

In the mid 1980s, the red kite was one of the three globally threatened bird species found in Britain, and hence one of our highest conservation priorities. It was lost as a breeding species from England in the late 1800s as a direct result of human persecution. A small population survived in remote parts of central Wales but the bird remained vulnerable as long as it was restricted to just one small area. There were no signs of natural recolonisation of suitable lowland countryside in central and eastern Britain and so the Nature Conservancy Council and the RSPB embarked on an ambitious reintroduction programme. The first young birds, imported mainly from Spain, were released between 1989 and 1994 in the Chiltern Hills, where the red kite is now well established in the wild. Following this success, additional breeding populations have now been established at three new sites: Rockingham Forest in Northamptonshire, Harewood House in Yorkshire and the Derwent Valley, close to the edge of urban Gateshead in north-east England. There are now well over 400 pairs of red kites in England and numbers are increasing rapidly.

The latest release project in north-east England has made great efforts to involve the community in the work of re-introducing the red kite, using the popularity of this spectacular species to raise awareness of local conservation issues. For example, local primary schools have adopted individual birds released as part of the project, often giving them popular names to go with their wing-tag number. This has helped to highlight some of the serious problems that red kites

and other birds of prey still face in England. The death of one adopted bird as a result of illegal poisoning had a huge impact when reported in the local media, and has done much to focus attention on this problem. In another initiative, a local bus company has introduced a 'red kite' bus service, running from Newcastle city centre through the red kite release area in the Derwent valley to Consett. The buses are covered with larger than life red kite images, and it is hoped they will encourage more people to get out and see the birds for themselves using public transport.

Following on from the success of the red kite project, Natural England is now also involved with re-introductions to help restore populations of corncrake and curlew to parts of their former ranges, and a new project to re-introduce the white-tailed eagle to East Anglia is currently being developed.



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