

Woodland conservation and pheasants

A practical guide produced by
The Game Conservancy Trust
for game managers and
woodland owners



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Introduction



Game management for shooting provides the incentive for planting, retaining and managing woodlands.

Pheasant shooting is a widespread winter activity in lowland Britain. Although there are wild pheasant populations in many areas, autumn stocks are commonly supplemented by the release of hand-reared birds in summer. Shooting takes place mainly between November and January when birds are driven over the guns from areas of cover. Woodland is the most important habitat for pheasants during winter; so releasing and shooting are centred here.

Woods where pheasant releasing and shooting takes place may also be important for nature conservation. Many are identified in English Nature's Inventories of Ancient Woodland and some are designated Sites of Special Scientific Interest (SSSIs).

Historically, pheasant shooting has been an important motivation for the planting of new woods and the retention and management of existing ones. It increasingly provides the incentive for some private owners to do habitat management. Much of this management can, if sensitively carried out, benefit both pheasants and other wildlife. There are concerns, however, about pheasant release pens, the treatment of woodland rides and open areas and the introduction of non-native shrubs for cover in semi-natural woods.

The purposes of this leaflet are to:

1. Highlight conservation issues in relation to gamebird releasing.
2. Explain the reasons for certain game management activities.
3. Discuss areas of potential conflict and suggest how they can be avoided.
4. Encourage integrated nature conservation and pheasant management in woodlands.



Many woods where pheasant shooting takes place may be important for nature conservation.

Woodlands for pheasants



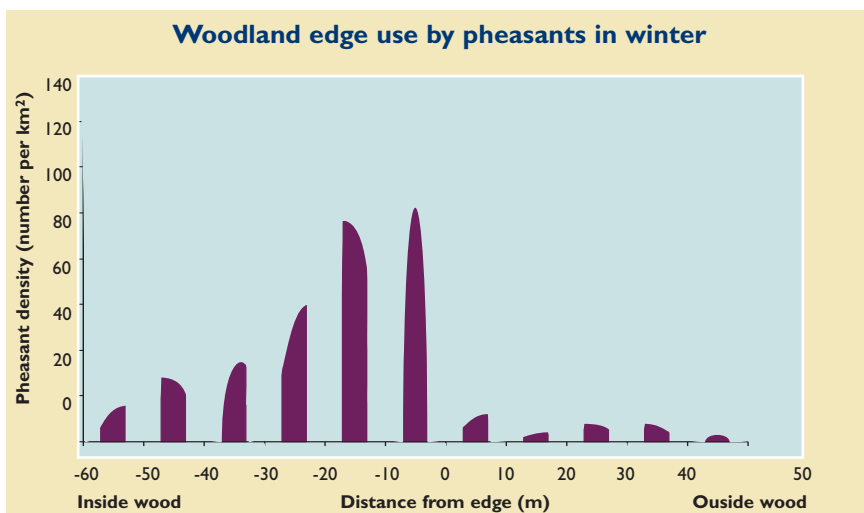
Pheasants are usually released in small woods or near to the edge of larger woodland blocks. This is because pheasants prefer the woodland fringe, an area up to 50 metres from the edge. Pheasants require regular access to open areas for sunning and feeding during winter. In spring, males hold breeding territories in open habitats along the woodland edge where they display and attract females. This association with woodland edge means that more pheasants are supported in a long thin wood or several small blocks than in one square block of a similar overall size. Likewise, the maximum number of pheasants supported in a landscape drops if woodland occupies more than half of the area.

Within the woodland edge zone, pheasants look primarily for shrubby cover. As ground-dwelling birds, they require shelter and protection from predators. This is provided by patches of thick cover from ground level to head height and a few larger shrubs or low trees for roosting at night. Evergreens such as holly, yew and conifers make good roost trees and are often planted for this reason. However, low shrubs comprise the key component of the habitat (see pages 4 and 7). Wildlife strips and game cover crops next to the woodland edge, particularly on the south side of woods, increase pheasant holding capacity and wildlife value.

The best way to improve cover in ancient semi-natural and some planted woodland is to encourage the regeneration of existing plants and dormant seeds. This is achieved by allowing more light to reach the woodland floor. Creating small gaps by felling, cutting of coppice areas and maintaining wide rides also provides additional sunny sheltered conditions. Where natural regeneration fails to produce sufficient cover because of deer browsing or heavy shading, shrubs can be planted in newer woodlands or on previously unwooded sites. Non-native species should not be planted in ancient semi-natural woodland (see page 7). New woodland for pheasants is best created by planting a variety of tree and shrub species mixed with open space areas (see pages 4 and 7).



A Game Conservancy Trust researcher tracking pheasants in an area of recently coppiced hazel woodland. Coppice re-growth provides excellent cover for pheasants for many years after coppicing.



Left: During the winter pheasants spend most time within 30 metres of the woodland edge.

Woodland conservation



Above and right: Many woods in the UK that contain pheasants, but particularly ancient semi-natural woodlands, are also important habitats for many rare or declining wildlife species.



A woodland edge should have a graded profile from mature trees through scrub and young trees to a mixture of these and the habitat outside. Woodlands bounded by cultivated or grazed land (as shown above) do not usually have this feature.

Most woods have some wildlife value, but some are better than others. Around 38% of woodland is ancient (originating before 1600AD). Inventories of Ancient Woodlands in England are available from English Nature. Many of these woods survived because they were retained for timber or the soils were unsuitable for cultivation, but now game management plays an increasing role in their maintenance. Ancient semi-natural woods are our closest link to the wildwoods of 7,000 years ago and contain native plants and animals that are often very slow to spread to new woodlands. They also support habitats rare in other woods, such as decaying wood needed by fungi and beetles, or patches of undisturbed wetland. Some of the most valuable woods have been protected through designation as Sites of Special Scientific Interest (SSSIs) and there is a legal requirement to consult English Nature over 'Operations Likely to Damage' (OLDs), which may include some aspects of game management. Ancient woodlands are irreplaceable and hence of particular importance. However, many other woods also contain habitats and wildlife communities of conservation interest.

The woodland edge

In England, three quarters of woods are 10 hectares or less and have a proportionally large edge zone. A natural woodland edge commonly has a graded profile from mature trees, through scrub and young trees, to a mixture of these and the habitat outside. Such natural edges are rare in our modern countryside but can be created and maintained along roads and ridesides or open spaces within woods. Edges are diverse and many animals and plants use them, including pheasants. Valuable edge can be created by leaving a buffer of uncultivated, ungrazed field edge alongside the wood allowing the woodland areas to spread by natural colonisation.

New woodlands

New woods for pheasants are best located alongside existing woodland. Avoid planting woods on semi-natural habitats of value such as unimproved pasture and wetlands or as isolated blocks within open landscapes important for species such as grey partridge and stone curlew. Always seek advice from the Forestry Commission (FC) when planning new woodlands. The FC's discretionary planting grant scheme supports the establishment of woodland habitat, including shrubs and open space, as appropriate. Game Conservancy Limited's Advisory Service can provide additional advice on new woods.

Release pens

Six-week-old pheasant poults are usually placed in release pens in July or August, where they remain for three to six weeks before dispersing into the surrounding habitat. The release of large numbers of pheasants into a pen over a long period can lead to changes in the ground flora, in some instances up to 15 metres around the pen. Characteristic woodland flowers, especially long-lived herbs, tend to drop in number, whereas 'weed species' increase. Once lost, many characteristic woodland plants are slow to recolonise, particularly if soil has been enriched.

Recommendations

- Where possible, site new pens in woodland of low conservation value, such as plantations. If a pen has to be placed in ancient semi-natural woodland, site it in an area without a sensitive ground flora. Plants most affected in and around release pens are winter green perennials which propagate vegetatively, eg. violets, speedwells and yellow archangel.
- Build large pens to support a stocking density of no more than 700 pheasants per hectare (300 birds per acre). A low pheasant stocking density limits damage to the ground flora in the pen and the wood as a whole, as well as minimising husbandry problems such as feather pecking and the build-up of disease.
- In ancient semi-natural woodlands, pens should not extend into adjacent fields. Nor should they take up more than a third of the woodland area, so birds have room to spread after release.
- To prevent pollution and silt run-off, wide buffer zones should be used between pens, watercourses and slopes prone to erosion. If a herbicide is used to keep vegetation away from the pen fence keep the sprayed zone to a minimum - better still, use a strimmer.
- For heavily shaded pens, thin the canopy trees to let in more light (check first with FC before tree felling, as a licence may be required). Pheasants prefer an open, sunny pen and the ground and shrub vegetation will recover from any damage more quickly. If light falls on only a part of the release pen, birds tend to congregate there, increasing damage in that part of the pen. Leave some felled trees for cover. Fallen deadwood will quickly be broken up by foraging pheasants, but decaying wood is a valuable habitat for a host of insects and other animals and should be left.

Game Conservancy Limited's Advisory Service can provide specific advice on pen siting, design and management.



This release pen has plenty of open areas and shrubs and is stocked at around 700 birds per hectare.



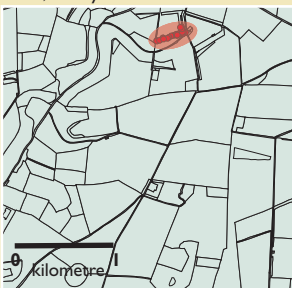
This sort of damage is extreme but can happen when stocking densities are too high. Slopes are particularly vulnerable.

The sequence below is based on a sample of radio-tagged released pheasants. It shows how increasing the density of pheasants released into a pen can increase dispersal distances and the rate of dispersal of the released birds - two things the game manager wants to avoid.

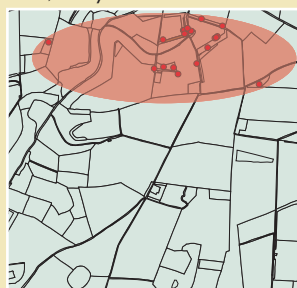
Effect of stocking density on dispersal from pheasant pen

Low density pheasant stocking

Tagged pheasant locations September 2001, 32 days after release



Tagged pheasant locations November 2001, 95 days after release



High density pheasant stocking

Tagged pheasant locations September 2002, 32 days after release



Tagged pheasant locations November 2002, 95 days after release



Feeding and the use of rides



Straw rides like this are less commonly used these days.



Winter feed hoppers can be moved to the woodland edge in spring where they are used by breeding pheasants.

Supplementary feeding is important for pheasants throughout the autumn and winter. This is often done by scattering grain along short sections of woodland rides. Sometimes parts of the ride are covered with straw to encourage foraging behaviour. This practice should not take place on herb-rich rides in ancient woodland, where valuable plant communities can be smothered.

Recommendations

- Feed birds from hoppers rather than on the ground. Game Conservancy Limited's Advisory Services recommend many small hoppers in clusters rather than large single hoppers. This reduces competition between pheasants and hence straying.
- Encourage birds out of the woods by providing edge habitat and associated game crops. Game crops can be planted alongside the woodland edge or some distance away depending on the management objectives.
- In many woods, leaf litter from broadleaf trees should create the same effect as straw and work just as well.
- If straw is used, avoid herb-rich areas and rake up and remove it at the end of winter. Locate strawed areas in areas of low conservation value, cutting new rides if necessary. New rides should not be created within ancient woods without first seeking advice. Widen rides to create a strip where no straw is used.
- To encourage released birds to breed and hence contribute to wild stocks, move feed hoppers outside the woodland edge or along nearby hedgerows in spring. Spread them out into the territories of displaying males ensuring that all breeding females have access to them.
- Minimise damage and disturbance to woodland soils. Vehicles using rides on a regular basis during a wet winter may do greater damage than the pheasants.
- Avoid straw in all areas of nature conservation interest. If bales have to be used for shelter, site them in adjacent fields rather than the woodland edge.



Right: Game crops for pheasants planted alongside woodlands provide excellent cover and foraging habitat for farmland birds.

Shrub management



Natural re-growth of native shrubs (left) can provide excellent habitat for pheasants and other wildlife.

The planting of non-native evergreens like this laurel (below) is no longer recommended in most woodlands.



Good woodland habitat for pheasants should contain plenty of shrubs (see page 3). Shrubs also create flushing points so that birds fly out at a suitable height for shooting. Natural re-growth of native shrubs is best but, where this is not possible, shrubs may be planted. Maintaining a shrub layer may require deer control. In many situations this will require co-operative control of deer numbers at the landscape scale. If deer damage is expected, do not attempt to coppice existing shrub layers or plant new shrubs without first seeking advice from the Deer Initiative or the FC. In the past, non-native evergreens were widely used as game shrubs, partly because shrub planting was not grant aided. In most circumstances these are inappropriate because they support fewer animal species than native shrubs (particularly insects) and can out-compete the native flora.

In certain circumstances, straw bales are used to provide shelter for pheasants along the edges of woods or rides as a temporary measure while newly planted shrubs establish. The dense shade and mulch created by the bales can damage the woodland flora and should be avoided.

Recommendations

- To encourage natural regeneration allow sunlight to reach the ground by coppicing or by 'skylighting'. Scarifying the soil surface can encourage natural regrowth further. Coppicing or shrub cutting where deer browsing is heavy is not recommended.
- Avoid planting non-native shrubs. There are many native species that are good for pheasants. Use species that suit the local soil type and climate as these are the most likely to thrive. The FC's Bulletin 112 (see *Further reading* on page 8) provides advice on matching species to sites.
- Non-native and invasive species should not be planted in ancient woodland. Restrict non-native shrubs to areas that are already predominantly composed of introduced trees and shrubs. Even here avoid the use of invasive species, such as rhododendron and snowberry. Indeed these should be cleared to favour native shrubs. Grant support is available to help eradicate them from ancient woodlands.
- Effective deer control is important to sustain a dense shrub layer. Advice is available from the Deer Initiative. Protection of cut coppice with tops can help. Brambles also help protect forest regrowth so are worth encouraging.
- FC Bulletin 112, *Creating new native woodlands*, provides more details of appropriate shrubs, trees and ground plants.
- Encouraging a shrub layer to develop will reduce predation on released pheasants.

WOODLAND GRANTS

Advice, support and grants for woodland creation and management are available from the Forestry Commission. Particular support is available for the restoration of ancient woodlands and their sustainable management and the expansion of native woodlands. Woodland Improvement Grants (WIGs) can contribute to the costs of many management recommendations given in this leaflet.

NATIVE SHRUBS GOOD FOR PHEASANTS

Hawthorn
Dogwoods
Native privet (not Japanese)
Bramble (easy to transplant)
Hazel (coppice regularly)
Box
Holly



Registered Charity No. 279968

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Game Conservancy Limited's Advisory Service provides professional advice on all aspects of game and pheasant management.

**For more information contact:
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Further reading

Ferris, R & Carter, C (2000) *Managing rides, roadsides and edge habitats in lowland forests*. Forestry Commission Bulletin 123.

Robertson, PA (1992) *Woodland management for pheasants*. Forestry Commission Bulletin 106.

McCall, I (1988) *Woodlands for pheasants*. Advisory Guide 15. Game Conservancy Limited, Fordingbridge.

Warren, MS & Fuller, RJ (1990) *Woodland rides and glades: their management for wildlife*. JNCC, Peterborough.

Fuller, RJ & Warren, MS (1990) *Coppice woodlands: their management for wildlife*. JNCC, Peterborough.

Rodwell, J & Patterson, G (1994) *Creating new native woodlands*. Forestry Commission Bulletin 112.



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Sources of advice:

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