



Woodland creation and management for pheasants – a best practice guide





Introduction

The pheasant is one of the most iconic woodland birds in the UK. Woodland offers habitat for pheasants during winter and in summer it can provide release habitat, where they are actively managed as a quarry species with most drives being located within or around key woods. Although there are wild pheasant populations in many parts of the UK, autumn stocks for shooting are often created or supplemented by the release of hand-reared birds.

Conventionally, these are first introduced into release pens in woodland where young birds acclimatise and from which they are encouraged to disperse into the surrounding habitats to facilitate driving and shooting from October-January.

The existence of many of our lowland woods is owed to a long history of game management. Woods where pheasant releasing and shooting continues may also be important for nature conservation. Pheasant shooting continues to be an important motivation for the planting of new woods and management of existing ones. It increasingly provides the incentive for private owners to undertake habitat management.

This management can, if sensitively carried out, benefit both pheasants and other wildlife in woodland. Research by the Game and Wildlife Conservation Trust (GWCT) has demonstrated how woodland management for shooting can improve habitat for a broad range of woodland wildlife¹.

However, pheasant release pens in particular can be a source of damage to woodland. The treatment of woodland rides and open areas and the introduction of non-native shrubs for cover in semi-natural woods can also cause conflicts with nature conservation interests. This guide aims to explain the reasons for these game management activities, discusses the main areas of potential conflict with conservation objectives and suggests how these can be minimised or avoided.

Like any other use of woodland, whether recreational or economic, the underlying objective in creating or managing woods for game is to provide an overall conservation balance which is positive, i.e. where the wider benefits of woodland management for game to wildlife and their habitats are maximised and not outweighed by any potentially negative impacts.

¹ See Woodland research and surveys on the GWCT website @ <http://www.gwct.org.uk/researchsurveys/biodiversityecosystems/woodlandbiodiversity/default.asp>





Pheasants are birds of the woodland edge.

Woodland for pheasants

Most accurately a pheasant can be described as a bird of the woodland edge. They are usually released within and naturally occupy small woods or the shrubby edges of larger woodland blocks. In England, three quarters of woods are 10 hectares or less and have a proportionally large edge zone.

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.

Within the woodland edge, 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 sheltered areas containing 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. Wildlife strips and cultivated game cover crops next to the woodland edge, particularly on the south side of woods, increase pheasant holding capacity and wildlife value.

A natural woodland edge commonly has a graded, sloping profile from mature trees, through scrub and young trees. Owing to the pressures of adjacent land use, most commonly farming, such natural edges are rare in the modern countryside but can be created and maintained along roads and ride-sides or open spaces within woods. Edges are diverse and many animals and plants use them, including pheasants. Valuable edge can be further enhanced through agri-environment schemes which encourage uncultivated buffer strips alongside the wood allowing the woodland areas to spread by natural colonisation.



“Edges are diverse and many animals and plants use them, including pheasants...”

Providing a buffer strip along the woodland edge is valuable for the pheasants and for other woodland wildlife.



“New small woodland established on farmland can provide valuable habitats for pheasants and other wildlife...”

New woodland should include plenty of low to medium height shrubs to provide warmth and shelter in the wood.

New small woodland established on farmland can provide valuable habitats for pheasants and other wildlife. During the 80's and 90's these were strongly encouraged and widely funded under forestry grant schemes. Such planting can have important landscape impacts and proposals should be weighed against possible impacts on other conservation objectives, such as farmland birds.

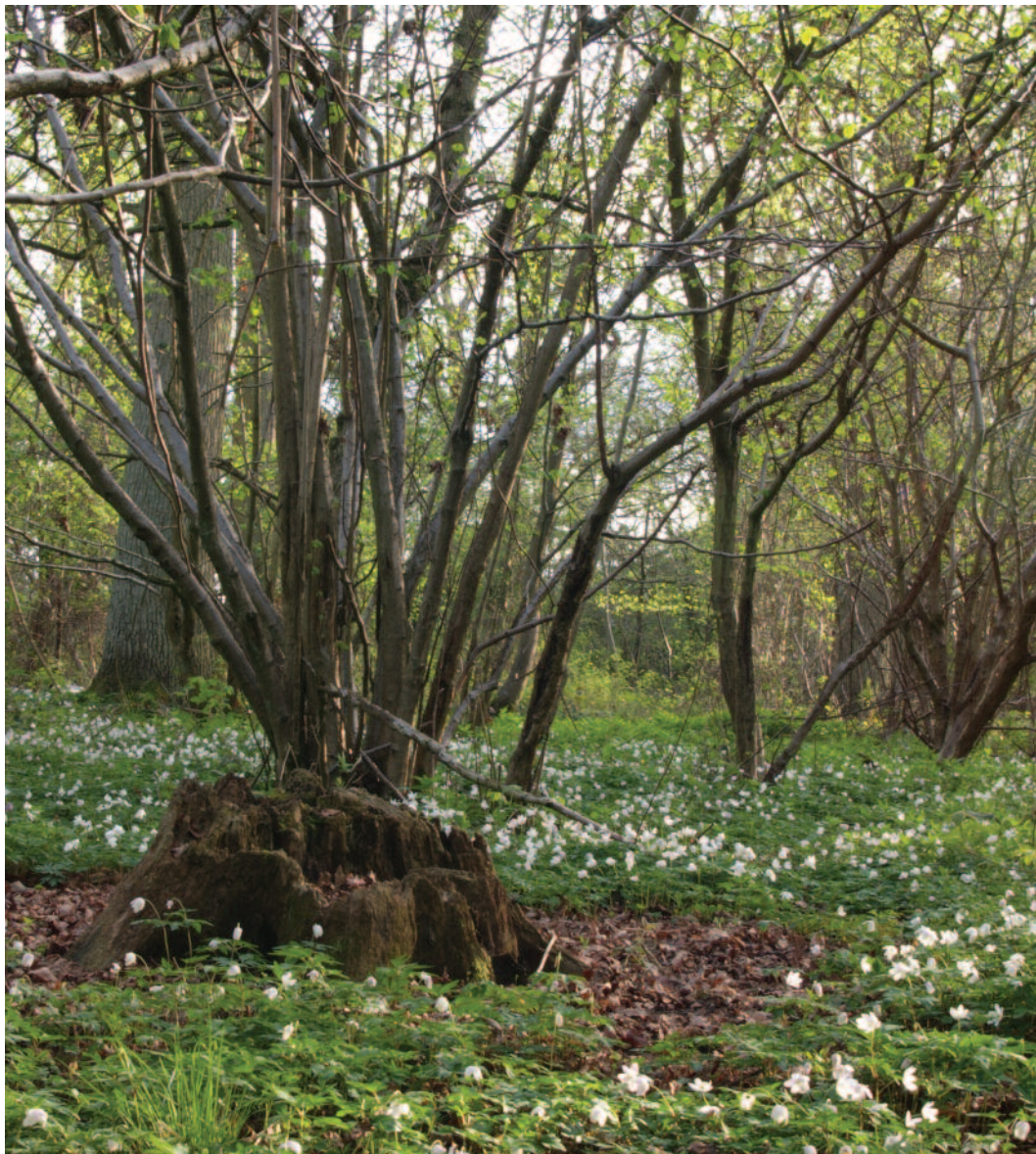
Particularly on intensively managed arable and grassland sites a key requirement to providing attractive new woodland habitat rests in the establishment of sufficient shrub and other low/medium height species. Without this, and lacking regeneration of bramble and other native shrubs, many small woods planted at that time now lack sufficient structural diversity and are poorly sited as game and wildlife habitats.

Game management and woodland wildlife habitats

The management of Britain's woodland has for thousands of years been an integral part of the rural economy, providing a source of food and grazing as well as timber and fuel. Coppicing, pollarding, felling and other forms of sustainable management gave these woods their character and diversity. Britain's native woodland wildlife has adapted to these managed woods. In many woods today, management for shooting is the only activity that directly maintains these features. In a survey of woodland owners, game management came out as one of the principle reasons for managing existing and planting new woods in

Britain. As a consequence, game management makes a substantial contribution to woodland biodiversity.

Woodland management should always be undertaken so as to safeguard wider conservation value. In ancient woodland in particular there may be both wildlife and archaeological features which deserve attention. The Woodland Trust has produced a guide to the management of ancient woodland which provides advice on identifying and safeguarding these features².



“...game management makes a substantial contribution to woodland biodiversity...”

Any woodland management should safeguard important conservation features, particularly in ancient woodland.

“...woodland management for releasing and shooting can improve habitat for a broad range of woodland wildlife ...”

Management for pheasants can improve the woodland for a range of wildlife.

Research by the GWCT has shown how woodland management for releasing and shooting can improve habitat for a broad range of woodland wildlife unless there are other particular conservation objectives, for example non-intervention for shade loving wildlife communities. Key activities include the maintenance and management of rides, encouraging native shrub regeneration or shrub planting, creating openings in the canopy among mature trees ('sky-lighting') and coppicing.

Some key findings comparing a total of 150 game and non-game woods in southern England include:

1. The edges of woods managed for game had a more sloping profile and a greater number of shrub species and more shrub cover than non-game woods. This included more flowering shrubs along the wood edges which also tended to support more butterflies.
2. Woodland managed for game contained more and larger rides than other woods. Rides in woods managed for game were kept more open than in other woods. Ground flora diversity was greater. However woods managed for game also contained more unwanted weed species than non-game woods and had more signs of vehicle use.
3. Woods managed for game supported more birds and a greater number of bird species in both summer and winter than other woods. Habitat management including canopy reduction and improvements in ground and shrub flora structure and feeding (in winter) explain these differences.
4. Hedges leading from the game wood sample tended to have better connectivity in the landscape and were more likely to have wildlife friendly cropping alongside them. There was no difference in the size and structure of hedges in the two samples.

² Ancient woods: a guide for woodland owners and managers.

<http://www.woodlandtrust.org.uk/SiteCollectionDocuments/pdf/policy-and-campaigns/AWGuide.pdf>



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 primary purpose of a release pen is to provide protection from predators while the young birds acclimatise in the wood and learn to roost in shrubs and trees at night. They also provide an initial focus for activities such as feeding. Woodland based pheasant release pens are not designed to hold birds during the shooting season and normally birds are free to come and go from around three weeks from release.

The release of large numbers of pheasants into a woodland release pen over many years can lead to changes in the woodland ground flora inside the pen and in some instances for a few metres around the pen. Once lost, many characteristic woodland plants are slow to re-colonise, particularly if soil has been enriched with nutrients.

As the main source of potential negative impacts, the game manager should always avoid placing pens in sensitive sites and aim to reduce the pen impacts as far as possible. This will help to improve the balance between these unwanted effects and the benefits of game management to the wider woodland³.

Recommendations for release pen management

1. Site new pens in woodland of low conservation value, such as secondary woodland and plantations. If a pen has to be placed in ancient semi-natural woodland, site it in an area without a sensitive ground flora or other features. Plants most affected in and around release pens are winter green perennials which propagate vegetatively, e.g. violets, speedwells and bramble.
2. Release no more than 1,000 pheasants into each hectare of release pen (400 per acre). Above this, undesirable plants become common and impacts on some native woodland plants more marked. In sensitive woods the maximum release should be 700 birds per hectare of pen (280 per acre).

3. To provide sufficient scope for the benefits of game management to the wider woodland described above, pheasant release pens should not take up more than about one-third of the total woodland and scrub area on an estate or shoot holding.
4. It is not clear the extent to which the woodland ground flora in a disused release pen will revert to its original state. The GWCT currently recommend not moving release pens unless there are obvious conservation benefits to be gained or if there are overriding husbandry reasons.
5. Birds released into woodland pens should be encouraged to leave the pen for at least part of the day once they are used to roosting in trees.
6. In ancient semi-natural woodland, pens should not extend into adjacent fields. To prevent pollution and silt run-off, wide buffer zones should be used between pens and watercourses and slopes prone to erosion.
7. For heavily shaded pens, thin the canopy trees to let in more light. Pheasants prefer an open, sunny pen and the ground and shrub vegetation will recover from any damage more quickly. Leave some felled trees for cover. Decaying wood is a valuable habitat for a host of insects and other animals and should be left.

³ See the GWCT Guidelines for Sustainable Game bird Releasing, <http://www.gameshootstandards.co.uk/docs/Releasingguidelinelr.pdf>

“The primary purpose of a release pen is to provide protection from predators...”

Careful siting and management of release pens is vital to avoid damage to the woodland.



“Supplementary feeding is important for pheasants throughout the autumn and winter...”

Feeding and the use of rides

Open areas in woods contain an abundance of diverse flora and fauna, notably butterflies and other insects that use the flowering shrubs found in them. The key is to maximise the benefits of rides to woodland wildlife and to ensure that game management activities, in particular feeding, do not reduce it.

Supplementary feeding is important for pheasants throughout the autumn and winter. This may be done by scattering grain along short sections of woodland rides or, more commonly, using feed hoppers. Rarely nowadays is straw used to encourage foraging. This can damage the ride flora and should be avoided on herb-rich rides in ancient woodland.

Ride management recommendations

1. Maintain a good ride width at ground level with shrubby margins. Canopy to canopy, if possible, the ride should be as wide as the height of the adjacent trees. Prevent tree canopy closure.
2. Feed birds from hoppers rather than on the ground, using many small hoppers in clusters rather than large single hoppers. These are more convenient to move and reduce competition between pheasants.
3. 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 and topography.
4. 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.
5. 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.



Hoppers can be used to provide supplementary feeding along rides.



Shrub management

Good woodland habitat for pheasants should contain plenty of shrubs. Locally, shrubs may also be used to create flushing points so that birds fly out at a suitable height for shooting. Natural regrowth 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 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.

In the past, non-native evergreens were widely used as game shrubs. In most circumstances these are inappropriate because they support fewer animal species than native shrubs (particularly insects) and can out-compete the native flora. The best way to encourage the regeneration of native ground cover is to undertake sufficient thinning to allow sunlight to reach the woodland floor. Creating small 'sky-lights' by felling, cutting of coppice areas and maintaining wide rides also provides additional sunny sheltered conditions.

Shrub management recommendations

1. To encourage natural regeneration allow sunlight to reach the ground by coppicing or by 'sky-lighting'. Scarifying the soil surface can encourage natural regrowth further. Coppicing or shrub cutting where deer browsing is heavy is not recommended.
2. Non-native species should not be planted in ancient woodland.
3. Avoid planting non-native shrubs species such as *Lonicera nitida* and snowberry. Use native species that suit the local soil type and climate as these are the most likely to thrive. Examples include hawthorn, dogwoods, native privet, bramble, hazel, box and holly.
4. If a native alternative is not practical restrict non-native shrubs to secondary woodland predominantly composed of introduced trees and shrubs. Even here avoid the use of invasive species, such as rhododendron and snowberry.
5. 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.

“Creating small ‘sky-lights’ by felling, cutting of coppice areas and maintaining wide rides also provides additional sunny sheltered conditions...”

Shrubs provide valuable shelter and a food source for pheasants and other wildlife.



Establishing new woodland for game

“...young trees and natural regeneration provide attractive holding and nesting cover...”

Siting of new woods needs to consider soil and aspect as well as layout and design that will maximise the benefits to game and wildlife.

New woodland can provide attractive habitat for game and other wildlife. In the initial years the rough low cover, young trees and natural regeneration provide attractive holding and nesting cover. Thereafter, as the trees and shrubs grow, they can provide roosting, holding and driving cover.

In considering the establishment of new woodland for pheasants two principal questions should be addressed:

1. Siting - what is the function of the new woodland planting? Is it to provide holding and driving cover or to function as a release and roosting site? It should be remembered that a wood intended to provide good roosting may not function well as a driving wood. Also, does the site make best use of the topography and existing release sites?
2. For a given soil type and aspect what planting layout and species composition will provide the best outcome for game and wildlife?



Woods intended as drives should contain good amounts of low and medium height shrub cover up to about 2m and within 30-50m of the edge of the wood. Pheasants are largely pedestrian birds and during the winter will hold at higher densities within low shrubby cover. During the 80's and 90's many thousands of new woods were planted on farmland. Typically, these were broadleaved woods, established at regular spacing and with minimal inclusion of low/medium height shrub species. Now 20-30 years old many of these woods lack significant structural diversity and the establishment of these layers can only now be achieved by major thinning.

Depending on the topography, drive woods will normally be planted about 150-200m from corresponding release/roosting woods to which they will be driven on the shooting day. With careful management, particularly where a new woodland site is accompanied by an adjacent area of game or wild bird

cover, the rough cover and young trees can provide attractive habitat in the first year and enable driving at an early stage.

For new plantations intended as roosting or release sites the situation is more complex. The location of roosting cover will have a profound effect on the viability of a shoot and the direction that driven pheasants will fly. Attractive roosting cover comprises relatively sheltered, dense cover, typically 3-5m from ground level. To achieve this it is necessary to select the right species. Dense mature hawthorn, field maple or hazel coppice provides amongst the most attractive natural roosting cover for pheasants, but has the disadvantage that it takes many years for this to develop from new planting. Most commonly this problem is solved by incorporating these species with a conifer nurse crop to provide roosting cover for approximately years 10-25.

“Pheasants are largely pedestrian birds and during the winter will hold at higher densities within low shrubby cover...”

Woods are normally sited 150-200m apart to allow birds to fly from drive woods back to roosting woods.

“...natural regeneration of native shrubs, bramble etc can be extremely slow and it is necessary to establish sufficient shrubs and medium height species from the outset...”

The post war policy to encourage conifer planting in many lowland areas has been followed by a presumption against their use. However, for the small woods where game is an objective, their use as a temporary nurse crop can mean the difference between an effective sheltered wood capable of providing good mid/late winter roosting cover and one from which pheasants will emigrate at the onset of leaf fall.

For new planting, particularly on previously arable or intensively managed grassland sites, natural regeneration of native shrubs, bramble etc can be extremely slow and it is necessary to establish sufficient shrubs and medium height species from the outset. Native species such as wild privet, holly, box and thorn are suitable and, depending on the site, between 15-20 per cent of the area may need to be established with shrubs.

For game the selection of main broadleaved species is less important and these should reflect the local conditions. Particularly in small woods where the aim is to produce structurally diverse low and medium height cover, it is generally wise to restrict shade casting species such as beech and sweet chestnut which, at high densities, will suppress lower cover. Sycamore should be avoided where game is an objective.

Recommendations for new woodland planting for game

1. In all cases ensure the establishment of a sufficient shrub/medium height component in new woodland plantings – particularly on previously arable or grassland sites.
2. Particularly where roosting/winter holding cover is an objective it may be necessary to incorporate a conifer nurse until a native shrub/medium height tree structure can develop. The conifer should be removed once the broadleaved trees and shrubs are well established.
3. Deer damage can be an important issue in many areas. Fencing of any sort can seriously impede the movement of pheasants and wherever possible use individual guarding.
4. Whether as a release/roosting wood or a wood from which it is intended to drive pheasants, siting and species composition are critical.



New woodland is an attractive addition to the landscape.



Further information and contacts

The management and creation of native woodland provides valuable habitat for pheasants and for a wide range of other wildlife. This guide provides an outline of some of the considerations when planning management or the creation of new woods for game.

For further advice on woodland creation call
0844 5438665 or visit www.woodlandtrust.org.uk/pheasants

For further information on woodland visit the
Woodland Trust at woodlandtrust.org.uk



For advice in game management visit the
Game and Wildlife Conservation Trust at GWCT.org.uk

For further information on managing woodland for game
please contact the GWCT's advisory team on 01425 651013, lferguson@gwct.org.uk



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The Woodland Trust
Kempton Way, Grantham, Lincolnshire NG31 6LL
Tel 01476 581111

woodlandtrust.org.uk

Registered office: The Woodland Trust, Kempton Way, Grantham, Lincolnshire NG31 6LL.
Tel: 01476 581111 Website: woodlandtrust.org.uk

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