

Action for black grouse



What we are doing

The black grouse *Tetrao tetrix* is one of the key woodland species identified for action under the Scottish Forestry Strategy 2006. This note summarises the action being undertaken by Forestry Commission Scotland, either ourselves or in partnership with others, to help conserve the black grouse in Scotland. There are links to more detailed information.

The black grouse is one of the most rapidly declining bird species in the UK and is a UK priority species. It needs a mosaic of woodland and moorland areas and edges, and conservation action needs to be planned at a landscape scale.

The **Black Grouse Species Action Framework plan 2007-2012**, published by Scottish Natural Heritage (SNH), summarises actions for black grouse across Scotland, including action in moorland areas. This note explains in more depth how Forestry Commission Scotland will contribute to this overall effort.

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Current status

Once widespread on upland and lowland heathland in England, Scotland and Wales, the black grouse has now become locally extinct in many regions and populations have become fragmented. It is one of the most rapidly declining bird species in the UK, with only 5,100 lekking males during the last national survey (2005).

The population in Scotland has declined rapidly from 1900. There was a partial reprieve during the 1950s-70s when large areas of the uplands were commercially planted with conifers. The young plantations provided a temporary habitat for black grouse, resulting in a re-expansion in range. However, in more recent times, the national survey in 2005 found c.3,500 displaying males in Scotland, down 29% from first national survey in 1995-96. There was some recovery in Perthshire, but numbers fell by 69% in Lothian and Borders and by 49% in south-west Scotland (Dumfries & Galloway and southern Argyll). In the mid 1990s, there was a c.10% year-on-year decline in Argyll, and the remaining birds in this area are increasingly isolated from other Scottish populations. There have been no recent significant regional changes elsewhere in Scotland. Localised increases in black grouse numbers appear to be associated with new native woodland schemes.

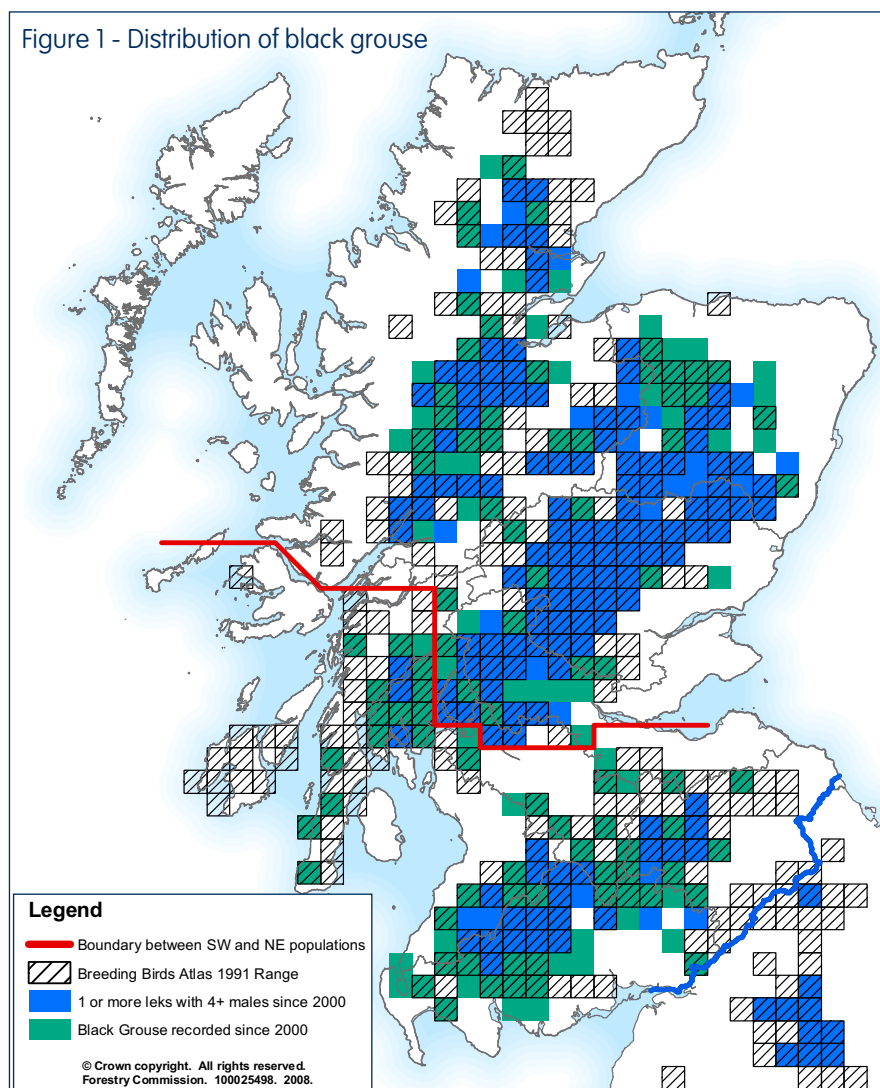
The black grouse is on the 'Red' list of species of high conservation concern because of this serious decline. As such, it is one of the highest priorities for action.

Black grouse are protected under the Game Acts between 11th December and 19th August, but can be legally shot outside this period. Forestry Commission Scotland does not shoot black grouse on the national forest estate due to its threatened status. Most private estates also currently choose not to shoot them.

Distribution

In Scotland, black grouse are widely distributed where sufficient suitable upland habitat exists. In general, the more northerly populations are stronger and more stable. Those in the south and south-west populations are in decline and much more fragmented. See distribution map in Figure 1.

Figure 1 - Distribution of black grouse



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Threats to black grouse

As populations become smaller and more fragmented through habitat loss and degradation, other factors such as predation, weather and disease may become more important. Isolation of populations may result in local extinction, because black grouse tend not to disperse very far.

In farmed areas both overgrazing and undergrazing can impact on the species. Active moorland management by many estates has reduced or ceased, as has the growing of root and arable crops on marginal in-bye land which were utilised by black grouse in the past. Deer numbers have increased in many areas, adding to local grazing pressure. Deer and stock fences can cause mortality due to bird strike. Afforestation has probably led to a reduction in the overall habitat suitable for black grouse although both new planting and clearfelling/replanting operations create temporary areas of suitable habitat. Felling also provides opportunities for restructuring woodland edges to provide more valuable open canopies and scattered trees.

The main predators of black grouse eggs and chicks in Britain are carrion and hooded crows, stoats and foxes. Targeted predator control may be helpful to stimulate recovery of black grouse in some places.

The weather can have a significant effect on breeding success, as young chicks are very susceptible to cold, wet weather between mid-June and mid-July.

Effective future management of black grouse must deal with this broad range of issues.

Black grouse habitat requirements

Black grouse prefer a fine-scale mosaic of habitats, where relatively small areas of woodland, moorland and grassland/meadow meet. Mosaics provide food and shelter throughout the year, as well as favourable conditions for breeding. Black grouse depend on different components of these habitats at different times of the year, and they do not travel great distances. Trees and shrubs provide shelter, and also food in the form of buds, catkins and fruit, principally from birch, rowan, hawthorn, juniper, willow, larch, Scots pine and alder. New native woodlands with plenty of open areas and edges should provide a permanent habitat for black grouse.

The moorland edge is often an important feeding area for adults and chicks, and lek sites are usually on grassland. However black grouse usually use heather moorland for only part of their life, and in some areas (such as Wales and western Scotland), they may use it very little at all. In western Scotland, the remaining black grouse are found predominantly around planted forests, while in southern, eastern and parts of northern Scotland, they are most associated with the edge of moors managed for red grouse shooting.



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Please visit the **Black Grouse UK - Ecology** site to learn more about the essential habitat requirements, population movements and life history of the species.

Black grouse conservation action to date

Recent conservation efforts for black grouse have centred on the establishment of several regional recovery projects and on establishing large scale trial management areas on the national forest estate in partnership with the Royal Society for the Protection of Birds (RSPB). Funding for privately owned land has been mainly through our Scottish Forestry Grant Scheme (SFGS) and the Rural Stewardship Scheme (RSS) on moorland.

The black grouse species action plan

Black grouse is a UK priority species and the Game & Wildlife Conservation Trust (GWCT) and the RSPB are lead partners for the UK Black Grouse Species Action Plan. Responsibility for delivery is devolved to steering groups in England, Scotland and Wales who work together on issues such as monitoring, reporting and sharing good practice (see the **Black Grouse UK** website). Forestry Commission Scotland is member of the **Scottish steering group** and has carried out much work for black grouse in recent years. For more information on the Scottish steering group contact Adam Smith (asmith@gct.org.uk).



Forestry Commission Scotland action for black grouse

Forestry Commission Scotland action will help to deliver the black grouse **Species Action Framework implementation plan 2007-2012**, which is aimed at achieving the targets in the black grouse species action plan. These are to restore the Scottish population to the levels recorded in 1996 (4300 displaying males) and restore the black grouse range in Scotland to its 1988-91 level.

In the longer term (20 years) the aim is to increase both the population and range of the species, and to promote re-colonisation of formerly occupied areas between currently isolated populations.

Forestry Commission Scotland will contribute strongly to the actions in the 2007-2012 plan wherever they are relevant to woodlands:

- practical habitat management to create or improve brood and adult habitat
- promote uptake of practical black grouse conservation measures and provide suitable advice to land managers
- mark or remove high-risk deer and stock fences to reduce mortality from collisions
- targeted predator control to improve productivity and improve adult survival
- incorporate appropriate measures into Forest Design Plans and private long-term forest plans

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- increase black grouse range and improve connectivity by targeting likely areas where leks can be established, restored or increased
- contribute to development of targeting guidance for Rural Development Contracts (RDCs) by defining core management areas
- other research and survey activities
- increase knowledge, awareness and enthusiasm for black grouse among private landowners
- develop the National Biodiversity Network as a reference point for black grouse datasets
- promote black grouse-friendly management practices by reviewing and updating guidance documents.

Targeting our black grouse conservation efforts

We will carry out and promote woodland management for black grouse in line with initial guidelines (below) that have been developed with RSPB, GWCT and SNH within the Scottish species action plan steering group. More work is planned for 2008 to review and develop the guidelines into more detailed advice.

In all situations, greater priority should be given to collaborative work covering several adjacent lek ranges, because work at a landscape scale is more likely to produce a population response.

Regional priorities should vary between areas of stable or declining populations:

- **in areas with declining populations** (the southern and western part of the range – see Figure 1), **the aim should be to halt the decline and maintain the present range. The priority should be to target leks with 4+ males, especially where they are in clusters within 10km of each other.** Management should aim to improve both adult survival and productivity. **Measures to improve habitat around leks of 3 males might also be considered,** where specialist advice supports this on the basis of existing positive management in adjacent areas.
- **in areas with currently more stable populations** (north of the dividing line in Figure 1), measures should be targeted at existing leks of 4+ males to **improve adult survival and productivity to facilitate range expansion.**

As a lower priority throughout the country:

- **range expansion** should be encouraged by the creation or improvement of good adult and brood habitat at new sites within female dispersal distance (c.10 km) of current leks which have stable or increasing populations. Priority should be given to sites that **either** have ceased to be occupied since the 1988-91 BTO Breeding Bird Atlas, or would improve links between existing populations. These measures should apply across the entire Scottish range and would bring added value if developed as part of wider habitat network initiatives. Projects aiming to provide opportunities for range expansion should obtain specialist advice to confirm their suitability.

The following sections describe our action for black grouse in more detail.

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Black grouse management on the national forest estate

Our work for black grouse on the national forest estate aims to:

- contribute to achieving Scottish targets for black grouse
- contribute to wider black grouse management strategies
- carry out management for black grouse on at least fifty sites.

To help the rapidly declining southern populations in Scotland a significant proportion of our effort until 2012 is being directed towards Galloway Forest District. Elsewhere the emphasis is on increasing the viability of existing populations.

Further information on distribution and abundance should be gathered before more definite plans for targeting action can be developed. Forestry Commission Scotland, along with partners such as RSPB and SNH, will be doing this during the course of this plan. In the longer term, Forestry Commission Scotland plan to manage black grouse via normal operations, rather than through emergency interventions.

Action for black grouse on the national forest estate is carried out on two levels.

Level one actions

- inclusion of black grouse as a management objective at relevant sites
- timing of operations to avoid disturbance of breeding black grouse
- restrictions on the use of fencing and careful positioning of new fences
- delivery of habitat improvements via normal forest planning and operations.

Black grouse conservation is identified as an objective and work for the species is included as part of general forest management. This means that forest management activities must be planned to avoid any disturbance to breeding black grouse. In addition, forest management will aim to increase, or at least maintain, the amount of high quality habitat available to black grouse, by means of alterations to forest plans. For example, in appropriate places restocking of felled areas may be delayed to benefit black grouse. In the longer term, most habitat needs of black grouse on the national forest estate will be delivered this way.



The exact suite of sites subject to level one action will be decided once a more comprehensive knowledge of the abundance and distribution of the black grouse is attained. However, **an initial target of fifty sites has been determined, spread across eleven forest districts.** All these sites should contribute to future black grouse habitat networks. As these actions are carried out as part of the overall forest management work of Forestry Commission Scotland, costs attributable specifically to black grouse cannot be determined.

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Level two actions

In addition to level one actions at least fifty sites between 2007 and 2012 will be subject to level two actions. These will be designed to rapidly improve the viability of existing populations by carrying out habitat improvements to increase local survival and breeding success.

- **Population monitoring** - Co-ordinated lek surveys throughout the range and brood counts on selected sites. These are vital for effective management of both local and national populations.
- **Specific habitat work** - This includes a wide range of actions designed to improve breeding success and increase adult survival. Breeding success can be improved by creating good quality brood habitat using measures such as drain-blocking and cutting ground vegetation. These increase the amount of insect food available to breeding female black grouse and their chicks, and make it easier for chicks to move around. Adult survival can also be improved by providing cover where birds can hide from predators.
- **Predator control** - Scientific evidence and management experience in Scotland have shown that crows and foxes can reduce the number of black grouse chicks that survive to become adults. Therefore, control is carried out on certain sites in springtime to reduce the number of crows and foxes present during the breeding season. Control work will only be carried out in places where it can be targeted effectively and where the likelihood of a beneficial impact is high.
- **Fence removal or marking** - Many fences that pose a threat to black grouse on the national forest estate have been removed or marked in recent years. This programme will continue over the period to 2012.

Table 1 - Summary of level two action expenditure on black grouse on the national forest estate from 2007 to 2012

Black grouse action the national forest estate - Level two action 2007 - 2012				
2007 - 2008	2008 - 2009	2009 - 2010	2010 - 2011	2011 - 2012
£435,000	£145,000	£130,000	£70,000	£50,000

Table 1 shows the sums that we aim to spend on level two actions on the national forest estate up to 2012. Much of this will be directed towards the most threatened populations in the south of Scotland, including a large trial management project (see below). Most spending will come from our budget, but contributions have been received from the Heritage Lottery Fund for constructing a hide and for habitat work in Galloway and for black grouse habitat work under the Dalriada project in West Argyll. In addition SNH and RSPB have contributed funds towards the monitoring of the trial management projects in Galloway and Fort Augustus Forest Districts.

The tapering of level 2 spending towards the end of the period reflects our intention to manage black grouse in future as part of normal forest operations. Some examples of projects for black grouse on the national forest estate are described on page 8.

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Black grouse trial management project

This project is a partnership between Forestry Commission Scotland, RSPB and SNH and will implement and monitor landscape-scale management on the national forest estate. Work began at two trial sites in Galloway and Fort Augustus Forest Districts in 2007 and the intention is to monitor the sites for five years to help understand how to manage this species in the future.

Management is focussed on creating a network of permanent, high quality habitat (e.g. bog restoration) and improving the value of habitat within plantations (e.g. by delaying restocking to allow more time for field-layer development). Production of high quality brood habitat is a priority. The monitoring programme includes annual black grouse lek surveys, landscape-scale habitat mapping, detailed assessment of vegetation, and monitoring of predators. SNH is funding the first three seasons of monitoring through a grant of £85,000 from their Species Action Framework budget.

Habitat research

A PhD project studying habitat quality for black grouse in relation to forest management techniques is taking place on the national forest estate. This project will identify how to enhance the value of felled and replanted areas for black grouse and could improve future management significantly. RSPB, SNH, Stirling University and Forest Research are partners in the project.

Large-scale habitat restoration projects

We are managing several large-scale woodland habitat restoration projects and these should yield noticeable benefits for black grouse. In particular, extensive woodland creation projects around Loch Lomond and Loch Katrine will be of sufficient scale to have significant benefits to the viability of local black grouse populations.

Black grouse lek viewing

We are in the early stages of planning two lek viewing hides. These will allow the public to observe the amazing mating behaviour of black grouse. One hide is planned for Galloway Forest District, funded by the Heritage Lottery Fund, and one is planned for Aberfoyle Forest District.



Management of private woodland for black grouse

The Scottish Rural Development Programme (SRDP) provides the main mechanism for grant support for measures that can help deliver these actions for the species.

Forestry Commission Scotland will work with SNH, and the Scottish Government Rural Payments and Inspections Directorate to promote and support suitable applications to help conserve and enhance black grouse.

For further information on the package of measures available for black grouse conservation management, visit the **Rural Development Contracts - Rural Priorities** website.

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Priority for black grouse support will vary regionally in each Regional Proposal Assessment Committee (RPAC) area. We expect that RPACs will use the targeting criteria in this note for guidance (see page 5). A map illustrating how the black grouse distribution in Scotland relates to RPAC areas is shown at figure 2. Potential grant applicants will be able to get advice from an appropriate contact or case-worker in their area to help them to develop a suitable plan.

Link here for black grouse information in your local RPAC area:

Argyll

Ayrshire

Borders

Clyde Valley

Dumfries & Galloway

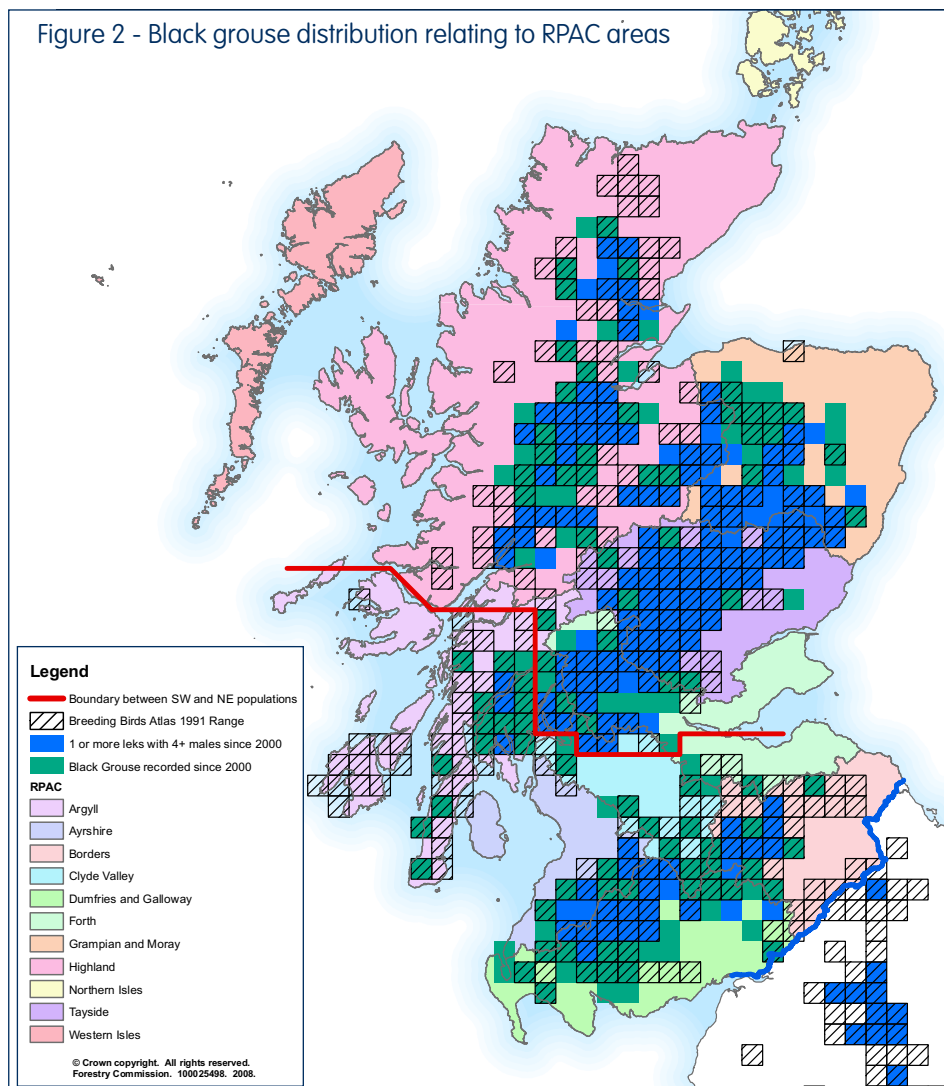
Forth

Grampian & Moray

Highlands

Tayside

Figure 2 - Black grouse distribution relating to RPAC areas



Black grouse are likely to benefit in many cases from the creation of new woodland habitats, and this is also supported by the SRDP.

Some black grouse management is still being carried out under legacy schemes under the Scottish Forestry Grant Scheme (SFGS).

Detailed advice on management prescriptions can be obtained by following these links to the **Black grouse UK** website:

- **Moorland**
- **Woodland**
- **Fencing**
- **Deer**
- **Predation**
- **Supplementary food**
- **Reintroduction**

Reporting and review arrangements

Forestry Commission Scotland will publish an annual summary of our actions for black grouse on this site and we will contribute to updating the Species Action Framework plan. This document will be revised if required and will be reviewed by 2010/11.

Watching black grouse

In the breeding season (March to mid-July), black grouse are mainly found in areas of upland moorland and hill farms, and near to planted forests. In winter, they use similar habitats but may move closer to woodland and scrub for protection and food, as well as to avoid snow cover.

There are several local initiatives that enable birdwatchers to watch black grouse without causing disturbance to the birds, including those being developed by Forestry Commission Scotland (see page 8).

If you are planning to go and see black grouse, either on one of these initiatives or by yourself, please remember to follow the **code of conduct** as disturbance can affect their breeding success.

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