

Hen Harriers: Your Essential Brief



Q: How many hen harriers are there in the UK?

A: There are 630¹ hen harrier pairs in the UK.

Q: How many hen harriers are there in England?

A: Hen harriers don't stay within the borders of countries so it depends when in the year you count them. England also has higher numbers of harriers during migration and in the winter, when harriers visit from Scotland and continental Europe. Counts are not made of how many stay all year in England, but there are believed to be at least 12 pairs.



Q: How many hen harriers could settle in England and not affect land management?

A: The Environment Council harrier mediation process modelled how many harriers could settle and not affect land management². Given a crude estimate of the area of suitable habitat³, a sustainable number could be 82 pairs of hen harriers in England.

Q: You say 'suitable habitat' – how much of that is on grouse moors in England?

A: 50% of the suitable English habitat is found on grouse moors – so there could be up to 41 pairs on English grouse moors.

¹ Musgrove, A.J., Aebischer, N.J., Eaton, M.A., Hearn, R.D., Newson, S.E., Noble, D., Parsons, M., Risely, K., & Stroud, D.A. (2013). Population estimates of birds in Great Britain and the United Kingdom. *British Birds*, 106: 64-100. <http://www.gwct.org.uk/research/scientific-publications/2013/musgrove2013/>

² Elston, D.A., et al (2014). Working with stakeholders to reduce conflict - modelling the impact of hen harriers *Circus cyaneus* on red grouse *Lagopus lagopus* populations. *Journal of Applied Ecology*, in press.

³ JNCC Hen Harrier Conservation Framework.

Q: Why are there so few hen harriers on the 50% of suitable habitat in England that has no driven grouse shooting?

A: It is likely to be a combination of harrier nests being predated⁴, lack of food⁵, persecution⁶, disturbance⁷, and possibly failing to have enough birds settled in an area to make it attractive to others. A paper⁸ published in 2013 identified that hen harriers benefited from the control of predators, such as foxes and crows, by gamekeepers to protect red grouse. Another paper published in 2014 noted that over half the hen harrier breeding attempts on Skye⁹ failed due to predation. More research is needed.

Q: Why are there so few hen harriers on English driven grouse moors?

A: In addition to the reasons above, this is a case of genuine wildlife conflict. Hen harriers eat grouse. If there are too many harriers on a moor a shoot becomes uneconomic, the gamekeepers lose their jobs, and numbers of ground-nesting birds decline, including ones of conservation concern such as waders. The Joint Raptor Study (1992-1996) and subsequent studies at Langholm demonstrated that this situation can really happen, and is no exaggeration¹⁰.

Q: So what happened at Langholm?

A: Between 1992 and 1997, hen harrier numbers rose from 2 to 20 pairs in 6 years on a driven grouse moor. Shooting was abandoned because the hen harriers ate over a third of all grouse chicks that hatched. With no grouse shooting, the local culture, economy and employment suffered and the control of generalist predators ceased. By 2003, 20 harrier nests were back down to 2 and numbers of breeding grouse and waders had more than halved¹¹. Predation was identified as the most likely cause of the declines. Grouse moor managers felt their worst fears had just been proven – this was a real lose/lose situation.

⁴ GWCT, *Waders on the Fringe*. <http://www.gwct.org.uk/waders/>

⁵ Amar, A., Redpath, S.M., & Thirgood, S.J. (2003). Evidence for food limitation in the declining hen harrier population on the Orkney Islands, Scotland. *Biological Conservation*, 111: 377-384. <http://www.gwct.org.uk/research/scientific-publications/2000-09/2003/amar2003/>

⁶ Redpath, S.M., Amar, A., Smith, A.A., Thompson, D.B.A., & Thirgood, S.J. (2010). People and nature in conflict: can we reconcile hen harrier conservation and game management?. In: Baxter, J.M. & Galbraith, C.A. (eds) *Species Management: Challenges and Solutions for the 21st Century*: 335-350. TSO (The Stationery Office). <http://www.gwct.org.uk/research/scientific-publications/2010/redpath2010/>

⁷ Disturbance – hen harriers are vulnerable to high levels of human disturbance in both breeding sites and winter roosts.

⁸ Baines, D., & Richardson, M. (2013). Hen harriers on a Scottish grouse moor: multiple factors predict breeding density and productivity. *Journal of Applied Ecology*, 50: 1397-1405. <http://www.gwct.org.uk/research/scientific-publications/2013/baines2013/>

⁹ SOC Journal Scottish Birds Vol. 34(2) June 2014 p.126-135.

¹⁰ Avery, M. (2012) *Fighting for Birds*.

¹¹ Baines, D., Redpath, S.M., Richardson, M., & Thirgood, S.J. (2008). The direct and indirect effects of predation by Hen Harriers *Circus cyaneus* on trends in breeding birds on a Scottish grouse moor. *Ibis* (Supplement 1), 150: 27-36. <http://www.gwct.org.uk/research/scientific-publications/2000-09/2008/baines2008/>

Hen Harrier Recovery



Q: Is there a conflict between grouse and harriers, and where does that leave us?

A: Yes, this is a genuine wildlife conflict; the Joint Raptor Study (1992-1996) proved that without new kinds of management, such as diversionary feeding and brood management, you cannot have viable grouse shooting alongside large numbers of hen harriers. Now, after 15 years of talks, 20 reports, 3 governments and 6 years of mediated conflict resolution talks, the aim is to implement the 81-page conservation framework published by the Joint Nature Conservation Committee¹², to increase the hen harrier population.

Q: Who is making that happen in England?

A: Defra brought the moor owners, gamekeepers and conservation groups together¹³ – and united them all in a simple aim: more hen harriers. This group has produced a Hen Harrier Joint Recovery Plan. Defra is expected to make an announcement soon on whether the plan will go ahead. You can make your voice heard on the importance of the plan by signing the e-petition at <http://tiny.cc/henharriers>.



Q: What is in the hen harrier recovery plan?

- 1) Law enforcement, prevention and intelligence – led by a senior police officer
- 2) Ongoing monitoring of breeding sites and winter roost sites
- 3) Research of the movement of hen harriers using satellite tracking

¹² The Conservation Framework for Hen Harriers in the United Kingdom (JNCC Report No: 441) was published in 2011 by the Joint Nature Conservation Committee. <http://jncc.defra.gov.uk/page-5775>

¹³ In August 2012, Defra officials established the Hen Harrier Sub-Group of the Uplands Stakeholder Forum including representatives from Natural England, the Moorland Association, the National Gamekeepers' Organisation, the Game & Wildlife Conservation Trust, the National Park Authority and the RSPB.

- 4) Diversionary feeding of hen harriers to reduce predation on grouse chicks
- 5) Engagement study about reintroducing them across suitable habitat in England
- 6) Trial the temporary movement of hen harrier young to aviaries¹⁴ (also called 'brood management')

Q: Temporarily removing hen harrier chicks to aviaries?

A: Nesting hen harriers can take significant numbers of grouse to feed their own chicks. Should a harrier build a nest within 10km of another, the harrier chicks in the second nest would be temporarily removed to reduce the local pressure on the grouse population. Any harrier chicks temporarily removed to aviaries would be released back to suitable habitat once fledged¹⁵.

Q: Diversionary feeding and moving chicks temporarily to aviaries – is that legal?

A: Yes, if it is done under a government licence.

Q: How many hen harriers will be killed in this plan?

A: None.

Q: If diversionary feeding reduces predation, why can't we just use that?

A: More research is required since diversionary feeding alone has not been shown to increase numbers of young grouse on the moor¹⁶, and hence overcome the root causes of the harrier-grouse conflict. The package of options ensures both hen harriers and grouse populations can thrive.

¹⁴ As discussed by Martin Harper (RSPB Conservation Director) 16th April 2014 – National Gamekeepers' Organisation AGM.

¹⁵ Hen harrier chicks usually fledge within 40 days.

¹⁶ Redpath, S.M., Thirgood, S.J., & Leckie, F.M. (2001). Does supplementary feeding reduce predation of red grouse by hen harriers? *Journal of Applied Ecology*, 38: 1157-1168.

<http://www.gwct.org.uk/research/scientific-publications/2000-09/2001/redpath2001/>

Is it time to ban driven grouse shooting?



Q: Is discussion of a ban on driven grouse shooting¹⁷ simplistic?

A: Yes. Firstly, it ignores the wider conservation, employment and economic benefits of moorland managed for grouse; and secondly, it fails to address why there are so few hen harriers on the 50% of the suitable habitat not managed for grouse shooting.

Q: Do we know what happens when driven grouse shooting stops?

A: Yes. The consequences are nowhere better illustrated than in Wales. Their moors once supported the most productive grouse moors in the UK as well as abundant populations of other birds; today they are all but abandoned. A study¹⁸ of an old grouse moor recorded that in less than 20 years¹⁹ lapwing became extinct, golden plover declined from ten birds to just one, and curlew declined by 79 per cent.

Q: Why was grouse shooting all but abandoned in Wales?

A: Because of the loss of gamekeepers during the Second World War, a subsequent lack of reinvestment, disease, overgrazing (leading to a loss of heather habitat) and, from the moor owners' perspective, a lack of support from conservation groups. As a consequence, not only have red grouse numbers crashed, but also, so have many birds which define the uplands like curlew, lapwing and black grouse.

Q: Do conservation groups work with grouse moors?

A: Yes. But more must be done. Today, over 75% of the entire Welsh black grouse population exists on the one remaining moor that has a gamekeeper.

Q: Is this all just about money?

A: It is for better not worse that red grouse shooting generates £100 million for the UK economy. The private investment made by moor owners (heather burning, legal predator control, etc) produces a positive contribution to biodiversity. We celebrate the fact that we have a thriving industry, supporting 4,000 jobs, which maintain our heather hills.

Q: Are moor owners able to claim grants for shooting?

A: No. Payments to land owners (including RSPB, National Trust, etc) are made only for conservation work or other things they have been asked to do by Natural England and which have a public benefit.

¹⁷ A [petition](#) has been started calling for a ban on driven grouse shooting in England. The logic is very simplistic – there are not enough hen harriers on these moors so the activity that sustains the moors and could sustain the harriers should be banned.

¹⁸ A study carried out by GWCT, funded by the [Moorland Association](#), which analysed the trends of upland birds in the Berwyn Special Protection Area (SPA) in North Wales.

¹⁹ In north Wales from 1983 to 2002.

Q: These Special Protection Areas (SPA) – why are there shoots on them?

A: It is as a result of traditional and sympathetic moorland management for grouse that we see many other important moorland birds on grouse moors – which have since received recognition for their importance to conservation by being designated as SPAs.

Q: Are the conservation benefits worth all the predator control effort?

A: Whilst the latest Breeding Bird Survey²⁰ reports that golden plover has declined 8%, lapwing 41%, and curlew 45%, the Pennines remain a stronghold²¹ of these wader birds. We have calculated²² that where control of generalist predators by gamekeepers ceases, lapwing and golden plover numbers would drop by 81% and curlew by 47% after 10 years.

²⁰ The Breeding Bird Survey (BBS) is run by the British Trust for Ornithology (BTO). Numbers quoted are from the 2012 BBS UK trends 1995-2011, p13.

<http://www.bto.org/sites/default/files/u16/downloads/reports/bbsreport12.pdf>

²¹ GWCT, *Waders on the Fringe*. <http://www.gwct.org.uk/waders/>

²² Fletcher, K.L., Aebischer, N.J., Baines, D., Foster, R., & Hoodless, A.N. (2010). Changes in breeding success and abundance of ground-nesting moorland birds in relation to the experimental deployment of legal predator control. *Journal of Applied Ecology*, 47: 263-272. <http://www.gwct.org.uk/research/scientific-publications/2010/fletcher2010/>

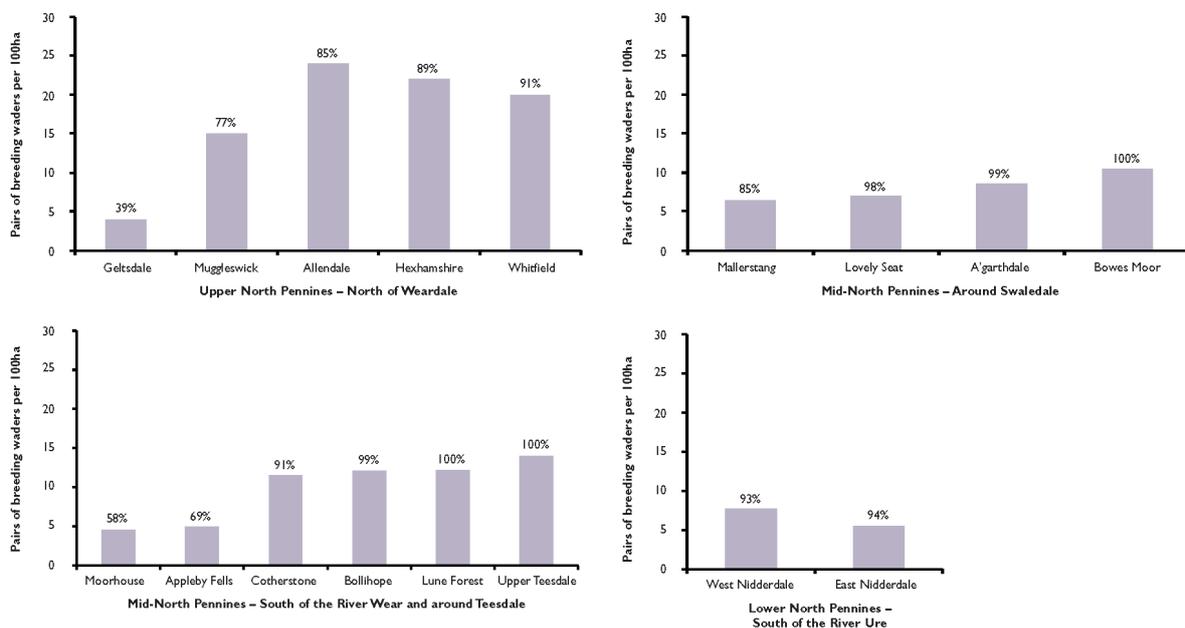
Key graphs



Figure 1: In a study²³ in Scotland over 40 years, grouse moors lost 24% of their heather cover whereas where grouse management was lost heather cover had reduced by 41%.



Figure 2: Density of breeding waders (pairs per 100ha) on all 17 SSSIs that make up the North Pennines SPA. The proportion in each that is managed for grouse is shown as a percentage above each bar.²⁴



²³ Robertson, P.A., Park, K.J. & Barton, A.F. (2001). Loss of heather *Calluna vulgaris* moorland in the Scottish Uplands: the role of red grouse *Lagopus lagopus scoticus* management. *Wildlife Biology* 7: 11-16. <http://www.gwct.org.uk/research/scientific-publications/2000-09/2001/robertson2001/>

²⁴ Data from Shepherd, K. (2008). North Pennine Moors SPA: Breeding bird survey 2005-07. A report presented to Natural England and Aebischer N.J., Ewald J.A. and Tapper S.C. (2009). Driven grouse shooting in Britain: a form of upland management with wider conservation benefits.

Your guide to the reasons provided to support a ban on driven grouse shooting



- 1 You are a vegetarian or vegan

Few vegetarians and vegans have a wish to enforce their chosen lifestyle on anyone. It is odd to single out driven grouse shooting in a country that kills 700 million 32-day-old chickens each year and imports a similar number from as far away as Thailand.
- 2 You are against shooting wild birds for food on moral grounds

If so, don't sign this petition since it is only calling for a ban on driven grouse shooting (when those shooting stand in a line). If you do sign, it would imply that you are happy to see people shoot grouse in other ways (walking in line or over pointing dogs).
- 3 You are against the high densities of grouse that are produced for shooting

Banning grouse shooting because of high densities of grouse is no more logical than banning sheep farming because it creates high densities of sheep.
- 4 You are against the provision of medicated grit and the dosing of a wild bird to combat grouse disease

Gritting does not create any significant environmental problem. If it ever were demonstrated that this was an issue it could be speedily dealt by withdrawing medication rather than the destruction of a whole system of land management and hundreds of jobs in profoundly disadvantaged areas.
- 5 You are against the legal killing of foxes, stoats, mountain hares, crows etc

Grouse shooters are not alone in killing predators. Others engaged in this activity are the RSPB, WWT, National Trust, many County Wildlife Trusts and if you include rats as predators, every local authority in the country.
- 6 You are against the killing of mountain hares where they are carrying high levels of ticks that transmit louping-ill

Ironically, the few mountain hares that remain in England were introduced from Scotland to provide sport. In Scotland, 80% of mountain hares live on grouse moors because they benefit from the predator control and habitat management undertaken by gamekeepers.
- 7 You dislike the reports of illegal persecution of birds of prey

Most keepers and moor owners are entirely law-abiding and deeply unhappy about any reported

- incidents of persecution. The ban would destroy them along with the guilty.
- 8 You would rather see more woodland in the English uplands Upland woods were felled for fuel and timber hundreds of years before the shotgun was invented. Most of the non-native tree re-planting has been an environmental car crash. Today heather moorland is a much rarer habitat than woodland, and Britain holds 75% of its global amount.
- 9 You dislike the practice of burning heather This practice is also used by the RSPB and National Parks to produce a patchwork mosaic of heather lengths that is known to boost a suite of moorland breeding birds. Golden plovers often nest on areas of burnt heather. Suggestions to cease burning small patches of heather in rotation have alarmed professional wildfire fighters. Heather left unmanaged would result in a significant build-up of wildfire risk.
- 10 You dislike access tracks on grouse moors Heather managed by both rotational burning and moorland tracks are welcomed by the fire service as a highly effective way of decreasing the risk of devastating wildfires.
- 11 You believe grouse moors cause climate change Grouse moors are in the process of restoring peatland which stores carbon. This reverses ill-conceived government policy in the 60s and 70s to drain the moors to increase moorland productivity for grazing livestock.
- 12 You dislike the colouration of the water If grouse shooting was banned, heather would be left unmanaged, building up a huge wildfire risk. A wildfire can leave bare peat exposed, creating increased peat erosion, and it is dissolved organic carbon (DOC) in water, which causes discolouration.
- 13 You believe grouse moors lead to flooding Floods are caused by extreme weather events on saturated ground, not by grouse shooting. If you want to stop flooding, banning the hard landscaping of cities and towns, especially the impervious surfacing of front gardens to park cars, would have a significant impact.
- 14 You dislike grants given to those managing moorland Natural England makes payments to moor owners (including RSPB, National Trust, etc) for managing moors the way Natural England wants them managed for public good.

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| 15 | You dislike restrictions to moor access whilst shooting takes place | Public rights of way remain open 365 days a year on moorland. For safety, people can be asked not to wander off paths whilst shooting takes place. Open access moorland may also be closed to prevent disturbance to breeding birds, fire prevention, etc. |
| 16 | You are concerned by the risk of eating game shot with lead | Along with oily fish and tuna, the Food Standards Agency (FSA) has advised that shot game should not be eaten more than twice a week. Clearly ammunition types could be switched rather than ban grouse shooting if the FSA risk assessment changes. |
| 17 | You feel that grouse shooting is anachronistic | The UK is full of anachronisms. We can buy a pint of beer; although we agreed to adopt the metric system 40 years ago. Clearly it is unreasonable to ban something just because you consider it anachronistic. |
| 18 | You feel that none of these things alone persuades you, but in combination they do | If not a single one of these reasons persuade you – why would they in combination? It is an understandable human response that those that lose patience on a combination of little things then decide to 'teach them a lesson'. This is the basis of bad law. |



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