Shooting and national nature recovery goals

How shooting delivers England's headline strategies and legally binding targets for nature recovery.

BASC

The British Association for Shooting & Conservation

Contents

Summary

Under the Environment Act (EA) 2021 the UK government set out a series of legally binding targets to protect the environment, clean up our air and rivers and boost nature. The Environmental Improvement Plan (EIP) published in 2023 reiterated and elaborated on the UK's commitment to the aims of this Act. This identified 10 goals for environmental improvement and an expanded set of targets which included additional measurable targets alongside those legally binding targets set through EA (EIP 2023).

In line with the principles outlined in the 2010 report 'Making Space for Nature' (Lawton 2011) which called for bigger, better and more joined-up nature recovery networks, the EA 2021 required 48 local authorities to lead the preparation of local nature recovery strategies. Hence nature recovery is central to the achievement of the aims of the Environment Act.

As an activity that has long contributed to shaping different landscapes within the UK, shooting is inextricably intertwined with many features of the countryside regarded as natural. Shooting is a necessary pre-condition for the preservation of healthy populations of some plants and animals. Shooting incentivises the creation of nature rich habitats. Shooting is also known to increase the structural complexity of ecosystems in which it is practised. Shooting's support for nature in England is reflected in the value of its contribution to natural capital benefits which are worth over £1.1 billion per annum in the UK as a whole. In England, these benefits include:

- Increased carbon sequestration
- Improvements in air quality
- Supporting and restoration of natural hydrology
- Conservation and management of wetlands
- Lowland tree planting and hedgerow protection (320,000 hectares of woodlands are maintained for shooting)
- Making farmland more wildlife friendly
- Rewetting and sustainably managing peatlands (18,000 hectares rewetted)
- Creation and maintenance of nesting sites and grounds
- Targeted control of pests and predators protecting vulnerable plant and animal life
- Control of invasive species
- Protection of woodlands from overgrazing
- Maintenance of healthy populations of native and introduced wildlife species
- Support for conservation research and evidence-based management

Many of these benefits directly support targets under the current EIP. Shooting also indirectly supports environmental goals of the EIP by, for example:

- Incentivising landowners to participate in environmental management schemes
- Incentivising the planting and maintenance of woodlands and hedgerows
- Enabling landowners to develop and implement wildlife management programmes
- Offering more sustainable economic alternatives to intensive agriculture
- Providing models of best practice for conservation
- Educating to support nature recovery
- Preserving skills, knowledge and practices that contribute to nature recovery

The shooting community is also actively addressing potentially negative environmental impacts linked to shooting. Examples include its role in efforts to protect wildlife (such as through participation in the Hen Harrier Task Force) and the development and adoption of guidelines and codes of practice aimed to ensure shooting continues to be sustainable and nature positive. Two robust examples of this are the Code of Good Shooting Practice and BASC's Sustainable Shooting Code of Practice for Wildfowl Quarry Species.

It is important to recognise that shooting provides a direct incentive for nature recovery, as many of the actions required to manage land for shooting support biodiversity and deliver other environmental benefits. It should also be noted that the conservation work undertaken by the shooting community is often self-funded. This voluntary support for habitat creation and management is valued at £450 million per year in England alone. Shooters have access to resources such as land, finance, local knowledge and management skills which means the shooting community already supports nature in England and is well placed to make further contributions to local nature recovery strategies.

The critical question in relation to the impact of any activity which affects land and natural resources is whether, on balance and based on evidence, the overall contribution has a positive impact on nature. Our analysis shows shooting supports six of the ten nature recovery goals included in the EIP (2023) and 18 of the government's current nature recovery targets, including four of the legally binding targets set out in the EA (2021). It does so in a way which places a significantly lower burden on the taxpayer than proposed alternative approaches, while safeguarding rural livelihoods and cultural heritage. Nature recovery in the UK can best be served by further developing the positive environmental role of shooting.

In order to do so we recommend:

1) Taking steps to improve recognition and understanding of shooting's capacity to support government policies for nature recovery.
2) Improving collaboration on measures that support environmental improvement.

Introduction: nature in English landscapes

Public and academic reports regularly state that concern about the state of the UK's natural environment is widely shared among the population (Upham et al 2009). This concern is reflected in public policy, leading the government to adopt policies aimed at supporting nature recovery. It is important to understand that the UK's varied landscapes and the nature found in them depend on relationships between the human and natural world (Brady 2006). So much so that many features regarded as 'natural' owe their presence to human activity (Mathews and Selman 2006). In the UK we are dealing with landscapes with nature in them rather than natural landscapes, and delivering nature recovery in the UK will require changes in relationships between people and nature.

Shooting has played a significant role in land management and remains a key stakeholder in maintaining and safeguarding nature in the UK (Done and Muir 2001). In the context of nature recovery, it is important to note shooting differs from many land uses in the UK because improved biodiversity and the presence of wild plants and animal species are a direct and intended requirement for the activity itself (Oldfield et al 2003). Consequently, members of the shooting community are heavily engaged in conservation. This conservation work is often funded by the sector itself or carried out on a voluntary basis on a scale which would otherwise be difficult to achieve. In 2023, for example, Cognisense estimated the value of shooters' unpaid voluntary conservation work in England at £450 million. In the context of the UK government's commitment to nature recovery, shooting has significant current involvement in land management and an important role to play in delivering on policy goals and targets.

Nature recovery and UK policy

Nature recovery refers to actions "taking us from protection to active restoration of the natural world" (The Nature Recovery Network 2024). In the context of UK policy, the concept was incorporated during the implementation of the Environment Act (2021) via the Environmental Improvement Plan (2023). The EIP gave 48 local authorities responsibility for developing local nature recovery strategies (LNRS). These authorities were required to consult widely with stakeholders in their areas in order to develop proposals for measures intended to achieve nature recovery. This approach was in line with the Lawton Principles outlined in the 2010 report 'Making Space for Nature: A review of England's Wildlife Sites and Ecological Network'. This stressed the importance of supporting networks of biodiversity sites as part of a more 'joined-up' landscape approach to nature recovery in the UK (Lawton 2011).

Rather than offering a one-size-fits-all solution, this approach involves drawing up plans that reflect the specific biodiversity priorities of their areas and that provide opportunity maps to suggest where action for nature recovery will have most impact.

Shooting and nature

As a widely dispersed community that is closely involved in land use and management as well as conservation activities, the shooting community is well placed to support the current approach to UK nature recovery. Members of the shooting community often possess extensive and detailed knowledge of the sites in which they are active. This places them in a unique position to monitor ecosystem health, support local nature recovery plans and contribute to evidence-based management. Just as significantly, aspects of the management of land for shooting have both direct and indirect positive impacts on nature.

The direct positive impact of shooting

The shooting community is actively involved in managing extensive areas for which viable alternative management strategies do not exist. In doing so, shooting often supports nature recovery targets on a self-financing basis. Thus, shooting already supports nature recovery (OXSREV 2025). Shooting delivers a range of direct benefits to nature across a wide range of landscapes and ecosystems. These include moors and other uplands, lowland woods, arable and improved grassland as well as inland and coastal wetlands. The unpaid voluntary conservation work undertaken by the shooting community has been estimated as being worth £450 million per year in England (Cognisense 2024). While Eftec and Strutt & Parker (2024) estimate the natural capital value generated by shooting is worth more than £1.1 billion per year.

The positive impact of shooting on CO_2 emissions, air and water quality

CO_2

Shooting incentivises the planting of trees and shrubs and protects plant life through the control of invasive species and wildlife, contributing positively to rates of carbon sequestration (GWCT 2019). Eftec and Strutt & Parker (2024) calculated the value of this sequestration in 2023 for England as £224 million. Peer-reviewed evidence suggests more extensive control of deer can further bolster sequestration (Spracklen et al 2025).

Air quality

Vegetation removes pollutants from the air, benefiting people and nature. Eftec and Strutt & Parker (2024) estimate the reduction of pollutants by vegetation on land planted for shooting generates £37.6 million annually in savings on healthcare in England alone. As it is now known that the negative impacts of air pollution are more severe and occur at lower levels than previously thought (Burnett et Al 2018) this figure likely understates this contribution.

Water quality and hydrology

Shooting plays an important role in protecting water supplies and maintaining the hydrological structure of some landscapes. Rewetting restores peatland hydrology, supporting carbon sequestration and reducing vulnerability to deep peat fires. In 2019 the GWCT found that drain blocking on upland peats used in shooting had rewet 18,000 hectares of peatland. Besides nature recovery, this helps safeguard the 70 per cent of UK drinking water which is sourced from upland peats (International Union for Conservation of Nature 2022). Shooting also encourages the creation and management of lowlands woods, enhancing water quality and reducing flood risk. Eftec and Strutt & Parker estimate such areas store 18.9 million cubic metres of water in the UK.

Habitat management benefits of shooting

Positive impacts on habitats apply across all shooting activities, with the level of benefit further increased by compliance with the Code of Good Shooting Practice, and other sustainable practice codes.

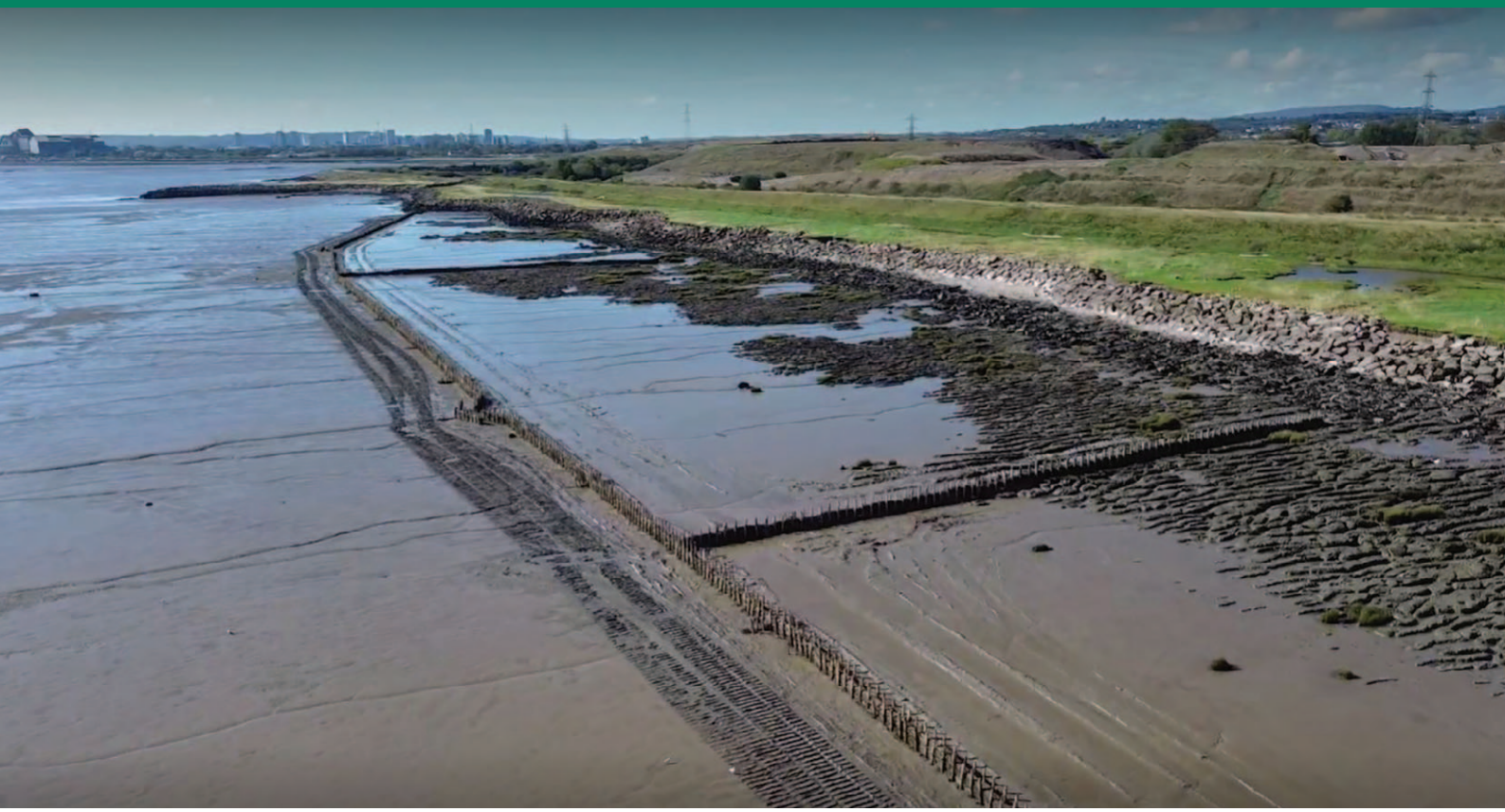
Woodland

Woodland is recognised as being important for nature recovery. However, commercial forestry creates monocultures with limited biodiversity benefit and the creation of biodiverse woodlands is costly. In 2023 Eftec and Strutt & Parker estimated that 18 per cent of England's woodlands (some 241,000 hectares) are on land used for lowland game shoots. These woodlands contain a large proportion of native flora, including slow-growing deciduous trees. The management of these areas for shooting includes practices such as coppicing, skylighting and the creation of shrubby edges and wide rides which benefit wildlife.

A recent study by OXSREV (2025) confirms that woodland managed for shooting has greater structural density than other wooded areas. In terms of the government's legal target of increasing woodland cover and canopy cover to 16.5 per cent by 2050, lowland game shoots play an exceptionally important role. Fifteen per cent of lowland game shoots are covered in woodland; this is well above the average for England.

Hedgerows

Shooting incentivises the creation and protection of hedgerows which are recognised as important habitats for native shrubs and other plants and wildlife. Complementing the Lawton Principles, hedgerows act as 'wildlife highways' connecting wooded biodiversity havens. Research conducted by OXSREV (2025) shows that land managed for game shooting has twice the density of hedgerows than comparator sites.



Farmland management for shooting

Measures employed on farmland used for lowland shoots support wildlife (Madden 2023). This includes game bird feeding that also supports wildlife (GWCT 2017). More generally, well managed sustainable shooting offers a low-intensity alternative in areas where farmers are being encouraged to move away from intensive agriculture.

Enhanced wetland and salt marsh management

Wildfowling causes less disturbance than other human activities in wetlands (Bierman 2020).
A census of BASC-affiliated wildfowl clubs indicates that up to 500,000 acres of wetlands in the UK are either owned and managed directly by wildfowling clubs or are managed with their involvement. UK wildfowlers have a long history of contributing to nature recovery in areas of coastal wetland used for shooting. Activities include the clearance of encroaching trees, targeted grazing and mowing, the creation of scrapes to support feeding, improving breeding productivity through the provision of islands for nesting and nest tubes and the targeted control of pests, predators and invasive species such as mink.

Elsewhere, wildfowlers monitor the health of wetlands and their wildlife. Wildfowlers engage in a wide range of citizen science projects in support of nature recovery (Bierman 2020, Musgrove et al 2001). Researchers have also pointed to the potential of wildfowling as a sustainable nature-based activity in wetlands with high ecological value (Rotherham et al 2005).

Upland habitats

When undertaken in line with sustainability best practice, upland management for shooting supports nature recovery. The Werritty review (2019) confirmed that in Scotland regular controlled burning of vegetation, managed in accordance with the Muirburn Code, increases above-ground biodiversity (of plants, birds, invertebrates) compared with unburnt moorland. Work undertaken at the University of York shows controlled burning of upland managed for shooting reduces wildfire risk and improves carbon sequestration (Heinemeyer et al 2023). In addition, and as mentioned above, the restoration of these areas via drain blocking is taking place (GWCT 2019). Responsible management of upland areas for shooting also benefits other species (Denny and Latham-Green 2020, Eftec and Strutt & Parker 2023).

Wildlife management benefits of shooting

Shooting enhances levels of wildlife diversity and contributes to the welfare and health of wildlife populations in a number of ways. These include:

Improvement of breeding efficiency

Wildfowling clubs and managers of upland and lowland game shoots take a range of actions to encourage successful breeding (Tharem et al 2001). These include the provision and maintenance of breeding and nesting sites, control of predators and reduction in human interference.

Feed

The maintenance of landscapes for shooting increases the abundance of naturally occurring plants and animals which support wild fauna. This is reflected in the abundance and complexity of wildlife populations in areas managed for shooting. Data shows wild birds and mammals benefit from the feeding of released gamebirds (GWCT 2019).

Deer management

While there is no accurate figure, it is often suggested that UK deer numbers are at their highest at more than two million. This poses problems for biodiversity and carbon sequestration. The UK's deer population includes recently introduced invasive species such as muntjac that threaten native plant and animal life. By reducing deer numbers, shooting protects woodlands, allows tree regeneration and protects conservation sites (Mackinnon et al 2025). Due to their movements, collaborative management of deer at landscape level is needed (Davies et al 2012). In this context, the national network of deer managers is an important conservation resource.

Grey squirrel management

Grey squirrels are invasive in the UK and their introduction has resulted in multiple local extinctions of native red squirrels. Grey squirrels damage and kill trees and their impact is particularly severe among native deciduous trees (British Red Squirrel not dated). Besides their impact on forest composition and carbon sequestration, the loss of these trees has further adverse impacts on species which depend on them. Grey squirrels negatively impact on woodland birds (Newsom et al 2010). The need to control them is widely recognised and the shooting community plays a key role in this respect.

Goose management

The UK population of geese combines numerous species, some of which are protected and others which are quarry species. However, both can be present in numbers that cause significant environmental and economic problems. Nature recovery requires a combination of species-specific management practices for geese and other wildfowl (Bainbridge 2017). Shooters play an important role in managing numbers, while balancing the needs of individual species through monitoring and supporting citizen science

Other pests and predators

Predator control contributes directly to the increased abundance of ground-nesting birds, including many high priority species of wader like the curlew. Given the broad range of species concerned (foxes, corvids, mink etc) it is difficult to draw general conclusions on the impact of pest control on nature recovery. However, Cognisense (2024) found that the identification and targeted removal of predators via shooting has significant economic value and advantages over other forms of pest control.

The indirect positive contribution of shooting

Shooting also generates indirect systemic effects that can contribute to nature recovery.

Incentivising participation in agri-environment schemes

Many actions included in agri-environment schemes (AESs) such as the creation of hedgerows, woodlands and diverse field margins simultaneously promote biodiversity and provide cover for game species.

Incentivising the planting of woodlands

The UK is struggling to meet its targets for tree planting (DEFRA 2022). By providing a supplementary income, shooting incentivises the planting and maintenance of diverse and wildlife-friendly woodlands.

Enabling deer and squirrel management plans

Grey squirrel and deer management are integral to nature recovery. Management plans for both are already a necessary precondition for some government grants. These plans rely heavily on the involvement of the shooting community. It is important to recognise that while landowners receive payments from these schemes, those who are involved in shooting in support of these plans generally do not.

Providing sustainable rural employment and wealth creation

Shooting is a high-value and sustainable economic activity that has the potential to support wellbeing and livelihood in rural communities while aiding nature recovery as part of a 'just transition'. The scale of shooting's importance to England's rural economy was outlined by Cognisense (2024) who estimated that the gross value added (GVA) derived from shooting in the UK as a whole is £3.3 billion, based on wider economic activity of around £9.3 billion, creating the equivalent of 67,000 full time jobs.

Shooting's contribution to specific UK nature recovery targets

Nature recovery goals and targets

The Environment Act of 2021 set out 13 legally binding targets to support environmental improvements in biodiversity, air quality, water quality and resource efficiency and waste reduction. These legally binding targets are:

1) To halt the decline in species abundance by 2030.
2) To increase species abundance so that by 2042 it is greater than in 2022 and at least 10 per cent greater than in 2030.
3) By the end of 2042, to improve the Red List Index for England for species extinction compared to 2022 levels.
4) To restore or create more than 500,000 hectares of wildlife rich habitat by 2042, with an interim target of restoring or creating 140,000 hectares of wildlife rich habitats outside protected sites by 2028.
5) To Increase tree canopy and woodland cover to 16.5 per cent of total land area in England by 2050, with an interim target of increasing this by 0.26 per cent by 31 January 2028.
6) To reduce population exposure to fine particulate matter (PM2.5) by 35 per cent in 2040 compared to 2018 levels.
7) To ensure that the maximum annual mean concentration of PM2.5 in 2040 must be equal to 10 micrograms per cubic metre.
8) To reduce nitrogen, phosphorus and sediment pollution from agriculture into the water environment by at least 40 per cent by 2038, compared to a 2018 baseline.
9) To reduce phosphorus loadings from treated wastewater by 80 per cent by 2038.
10) To halve the length of rivers and estuaries polluted by harmful metals from abandoned metal mines by 2038.
11) To reduce the use of public water supply in England per head of population by 20 per cent from the 2019 to 2020 baseline reporting figures, by 31 March 2038.
12) 70 per cent of the designated features in the Marine Protected Areas network to be in favourable condition by 2042, with the remainder in recovering condition.
13) Reduce residual waste (excluding major mineral wastes) kg per capita by 50 per cent by 2042 from 2019 levels.

The Environmental Improvement Plan (EIP) further developed the approach outlined in the EA outlining 10 nature recovery goals. These were:

1) Thriving plants and wildlife: the apex goal
2) Clean air
3) Clean and plentiful water
4) Manage exposure to chemicals and pesticides
5) Maximise our resources, minimise our waste
6) Using our resources from nature sustainably
7) Mitigating and adapting to climate change
8) Reduced risk of harm from environmental hazards
9) Enhancing biosecurity
10) Enhancing beauty and our engagement with the natural environment.

In relation to these ten goals the EIP details a total of 66 specific targets and commitments which include the 13 legally binding targets listed above. Eftec (2025) undertook an analysis of these targets, identifying those for which there is strong evidence that shooting has a positive impact. This analysis found that shooting strongly supports four of the legally binding targets set out in the EA (2024), six of the ten goals listed in the EIP and a total of 18 of the specific targets set out in that plan. Table 1 lists the targets in the EIP under Goal 1 (Thriving plants and wildlife: the apex goal) for the programme, with the legally binding targets under the EA shaded in orange. Table Two details the other EIP goals and targets that shooting supports.

Table 1. Targets under Goal 1 of the EIP on which shooting has a significant impact (legally binding targets shaded green)

Government Environment Act (2021) targets that have: (i) a clear link to shooting activity and (ii) for which the impact of shooting is potentially high	Shooting's impact pathway
Goal 1: Thriving plants and wildlife	
Halt the decline in species abundance by 2030. And then Increase species abundance so that by 2042 it is greater than in 2022 and at least 10 per cent greater than in 2030.	**Shooting supports conservation and breeding efficiency management covers a significant percentage of UK priority.**
Improve the GB IUCN Red List Index for England for species extinction compared to 2022 levels by the end of 2042.	**Shooting contributes to some species recovery plans.**
Restore or create more than 500,000 hectares of wildlife rich habitat by 2042. (Includes interim target: restore or create 140,000 hectares of wildlife rich habitats outside protected sites by 2028).	**Shooting management has significant involvement in habitat management schemes.**
Increase tree canopy and woodland cover to 16.5 per cent of total land area in England by 2050.	**Shoots are more likely to plant new woodland (OXSREV 2025).**

Table 1 continued...

All sites of special scientific interest (SSSIs) to have an up-to-date condition assessment and 50 per cent to have actions on track to achieve favourable condition by 31 January 2028.	Some SSSIs support shooting interest.
Restore 75 per cent of protected sites to favourable condition by 2042.	Some SSSIs support shooting interest.
65–80 per cent of landowners and farmers adopting nature-friendly farming on at least 10-15 per cent of their land by 2030 (also a Farming and Countryside Programme (FCP) objective).	Shooting occurs on a significant percentage that could enter AESs / use integrated crop management.
70 per cent of agricultural land and 70 per cent of farm holdings will be covered by new farming schemes by 2028.	Shooting occurs on a significant percentage of land that can enter AESs/ICM(integrated crop management).
Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration.	Shooting occurs on a significant percentage of land that could be restored.
Ensure that by 2030 at least 30 per cent of terrestrial and inland water areas, and marine and coastal areas, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based measures.	Shooting occurs on a significant percentage of land that could be managed.
Create or restore 30,000 miles of hedgerows a year by 2037 and 45,000 miles of hedgerows a year by 2050, returning hedgerow lengths in England to 10 per cent above the 1984 peak (360,000 miles).	Shooting occurs on a significant percentage of land that could create or restore hedges under AESs.
Bring 240,000 hectares of peatland under new restoration management by 2050 and, from 2026, continue management of all restored peatland. High – as shooting occurs on a significant percentage of peatland habitats.	Shooting occurs on a significant percentage of peatland habitats.

Table 2. Targets under Goal 9-10 of the EIP on which shooting has a significant impact

Government Environment Act (2021) targets that have: (i) a clear link to shooting activity and (ii) for which the impact of shooting is potentially high	Shooting's impact pathway
EA Goal 4 - Manage exposure to chemicals and pesticides	
Reducing the amount of lead in the environment.	Shooting community is reducing use of lead.
EA Goal 6 - Using our resources from nature sustainably	
Halt and reverse forest loss and land degradation globally by 2030.	Shooters maintain and actively manage a higher proportion of woodland than other users and are more like to plant new woodland.
Improving woodland management for sustainable timber production (also a FCP objective), building the capacity of the forestry sector and implementation of due diligence legislation for forest risk commodities.	Woodlands that are shot over are more likely to be managed that those that are not.
EA Goal 7 - Mitigating and adapting to climate change	
Net Zero emissions by 2050, including carbon budgets 4, 5 and 6, and the UK's 2030 Nationally Determined Contribution (NDC).	Shooting occurs on a significant percentage of habitats that contribute to sequestration or emissions from land.
EA Goal 8 - Reduced risk of harm from environmental hazards	
Increasing resilience and reducing the risk of wildfires across peatland and woodland.	Shooting occurs on a significant percentage of peatland and woodland.
EA Goal 9 - Enhancing biosecurity	
Reduce the number of introductions and establishments of invasive non-native species (INNS) by at least 50 per cent in 2030 (an FCP objective).	Shooting occurs on a significant percentage of land where INNS can be both introduced and controlled.

Conclusion

While the concept of nature recovery is well understood and enjoys widespread support, delivering it in the UK presents challenges. The UK's landscapes and ecosystems have differing features and characteristics. Levels of degradation vary, as do the range of possible options and targets for nature recovery. Besides being sites of importance in relation to natural capital, the UK's landscapes are also sites of cultural heritage, agricultural production and livelihood generation which must also be recognised and safeguarded. Efforts to recover nature which fail to take note of and respect the needs and values of the people who live in these areas will struggle.

The shooting community continues to play a central and positive role in the wellbeing of rural communities and the natural environment. If fully recognised and supported, it has the potential to do more. It is important to note shooting is one of the few land uses in rural areas in which measures to promote nature recovery are directly incentivised. Shooting makes a wide range of resources available to nature recovery. These include knowledge, skills and a network of organisations as well as financial resources. In this paper we have documented multiple ways in which the management of land for shooting supports nature recovery. While a small number of issues and incidents have been used to question this role, it is the case that even those activities associated with shooting which are regarded as having potentially adverse impacts on nature can contribute to "processes of change that can lead to beneficial direct and associated effects on habitats and wildlife" (NE 2020).

Where there is potential for conflict, the shooting community is actively engaged in efforts to address them. Those involved in shooting have developed and voluntarily adopted a range of guidelines, such as the Code of Good Shooting Practice and BASC's Sustainable Shooting Code of Practice for Wildfowl Quarry Species, which enhance the sector's sustainability. Through its involvement in conservation efforts such as the Hen Harrier Task Force, and in a wide range of citizen science projects, shooting supports measures to safeguard vulnerable wildlife. The shooting community also invests in conservation both as part of its normal activities and through financial support for conservation initiatives (such as the BASC Wildlife Fund). The contribution of shooting to nature recovery is overwhelmingly positive.

Unlocking the full potential of shooting for nature recovery

We believe nature recovery can only be enhanced if the UK government recognises the role that shooting can and does play. In order to develop this role we recommend:

1) Taking steps to improve the recognition and understanding of shooting's capacity to support government policies for nature recovery by:

- Recognising and taking seriously shooting's role in delivering nature recovery.
- Improving capacity to quantify the aspects of shooting that have the most direct links to UK targets i.e. woodland creation and restoration, uptake of nature-friendly farm measures, peatland/moorland restoration and conservation of high-value wetlands.
- Accurately assessing and sharing information about the scale of these contributions with stakeholders, policymakers and the general public.

2) Taking steps to improve collaboration on measures that support environmental improvement which might include:

- Fostering dialogue with the shooting community about its role in nature recovery.
- Sharing best practice and knowledge on links between shooting-related land management practices (e.g. controlled burning of vegetation, sustainable gamebird release, tree planting, deer management) and nature recovery.
- Fostering links between shooting interests and the broader strategy for nature recovery.
- Increasing the tie-in of the shooting community's nature recovery role and environmental schemes, such as Green Financing and Green Social Prescribing.
- Exploring how shooting can incentivise other nature recovery measures such as peatland restoration.

REFERENCES

Bainbridge, Ian. "Goose management in Scotland: An overview." Ambio 46, no. Suppl 2 (2017): 224-230.

Baldock, D. and Kam, H., 2024. Agri-Environmental Policies in England after Brexit.

Barden, A. 2023 Fact or fiction? UK deer numbers are at their highest levels in 1000 years – at around 2 million: available at: https://bds.org.uk/2023/11/16/fact-or-fiction-uk-deer-numbers-soaring-2-million/#:~:text=%E2%80%9CIt%20is%20generally%20accepted%20that,anywhere%20else%20in%20Great%20Britain.%E2%80%9D

Biermann, L., 2020. Assessing the impacts of human disturbance on wildlife: insights from wildfowl on the Exe Estuary (Doctoral dissertation, Bournemouth University).

Brady, E., 2006. The aesthetics of agricultural landscapes and the relationship between humans and nature. Ethics, Place and Environment, 9(1), pp.1-19.

British Red Squirrels (no date). Economic and environmental damage caused by grey squirrels Available at: https://www.britishredsquirrel.org/economic-environmental-damage-caused-grey-squirrels/ (Accessed: 7 April 2025)

Burnett, R.T., Pope III, C.A., Ezzati, M., Olives, C., Lim, S.S., Mehta, S., Shin, H.H., Singh, G., Hubbell, B., Brauer, M. and Anderson, H.R., 2014. An integrated risk function for estimating the global burden of disease attributable to ambient fine particulate matter exposure. Environmental health perspectives, 122(4), pp.397-403.

Cognisense, 2023, The Value of Shooting Report 2024, BASC, Retrieved from https://valueofshooting.co.uk/wp-content/uploads/dlm_uploads/2024/05/The-Value-of-Shooting-2024-.pdf

Davies, A.L. and White, R.M., 2012. Collaboration in natural resource governance: Reconciling stakeholder expectations in deer management in Scotland. Journal of Environmental Management, 112, pp.160-169.

Department for Environment, Food & Rural Affairs and Natural England. (2024, February 16). The Nature Recovery Network. Retrieved from https://www.gov.uk/government/publications/nature-recovery-network/nature-recovery-network

DEFRA 2022 Tree planting and food production: a joined-up approach Available at: https://defrafarming.blog.gov.uk/2022/08/09/tree-planting-and-food-production-a-joined-up-approach/#:~:text=Planting%20more%20trees%20and%20woodlands,spaces%20for%20people%20to%20enjoy

Denny, S.J., Latham-Green, T. and Hazenberg, R., 2021. Sustainable driven grouse shooting?. University of Northampton Institute for Social Innovation and Impact, A summary of the evidence.

Denny, S. and Latham-Green, T., 2020. What Impacts does Integrated Moorland Management, including Grouse Shooting, have on Moorland Communities. A Comparative Study.

Done, A. and Muir, R., 2001. The landscape history of grouse shooting in the Yorkshire Dales. Rural History, 12(2), pp.195-210.

Eftec & Strutt & Parker (2023), The natural capital benefits of shooting, BASC, Retrieved from https://basc.org.uk/research/natural-capital/

Eftec (2025) Shooting's Contribution to UK Nature Recovery Targets, BASC

Environment Act 2021, c. 30. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents [1, 6].

Environmental Improvement Plan 2023 (EIP23) available at: https://www.gov.uk/government/publications/environmental-improvement-plan

Local Nature Recovery Strategies 2023 available at: https://www.gov.uk/government/publications/local-nature-recovery-strategies/local-nature-recovery-strategies

GWCT (2019) "The Moorland Balance: The Science Behind Grouse Shooting and Moorland Management. Second edition" retrieved from https://www.gwct.org.uk/media/1153026/Moorland-Balance-2-1-.pdf

Heinemeyer, A., Ashby, M. and Marrs, R.H., 2023. Position Statement on the role of controlled burning in the management of heather-dominated landscapes in Great Britain.

IUCN 2020 The IUCN UK Peatland Programme – Water Quality accessible at: https://www.iucn-uk-peatlandprogramme.org/about-peatlands/peatland-benefits/water-quality#:~:text=Up%20to%2070%25%20of%20UK,reaches%20a%20water%20treatment%20plant

Latham-Green, T.L., 2020. Understanding the social impact of participation in Driven Game Shooting in the UK (Doctoral dissertation, University of Northampton).

Lawton, J., 2011. Making space for nature. Envtl. L. Rev., 13, p.1.

Mackinnon, J., Turner, R.S. and White, P.J., 2025. Impacts of mammals on trees and tree protection methods pertinent to English treescapes-a systematic literature review for Forestry Commission.

Madden, J.R., Buckley, R. and Ratcliffe, S., 2023. Large‐scale correlations between gamebird release and management and animal biodiversity metrics in lowland Great Britain. Ecology and Evolution, 13(5), p.e10059.

Madden J.R. & Sage, R.B. 2020. Ecological Consequences of Gamebird Releasing and Management on Lowland Shoots in England: A Review by Rapid Evidence Assessment for for Natural England and the British Association of Shooting and Conservation.

Matthews, R. and Selman, P., 2006. Landscape as a focus for integrating human and environmental processes. Journal of Agricultural Economics, 57(2), pp.199-212.

Musgrove, A.J., Clark, N.A., Gill, J. and Ravenscroft, N.O.M., 2001. A review of wildfowling on the Stour estuary. BTO Research Report.

National Audit Office (2024) The Farming and Countryside Programme. Available at: https://www.nao.org.uk/wp-content/uploads/2024/07/farming-and-countryside-programme-1.pdf

Natural England and the British Association of Shooting and Conservation. Natural England Evidence Review NEER016. Peterborough: Natural England.

Newson, S.E., Leech, D.I., Hewson, C.M., Crick, H.Q. and Grice, P.V., 2010. Potential impact of grey squirrels Sciurus carolinensis on woodland bird populations in England. Journal of Ornithology, 151(1), pp.211-218.

Oldfield, T.E., Smith, R.J., Harrop, S.R. and Leader-Williams, N., 2003. Field sports and conservation in the United Kingdom. Nature, 423(6939), pp.531-533.

Oxrev (2025) "Assessing the quality and quantity of woodland and hedgerow habitats on areas managed for shooting"

Rotherham, I. D., Doncaster, S., & Egan, D. (2005). Nature-based Leisure and Tourism in England's Humberhead Levels. Current Issues in Tourism, 8(2–3), 214–230. https://doi.org/10.1080/13683500508668215

Sánchez García, C. and Buner, F., 2017. Guidelines for successful gamebird and songbird feeding.

Smith, A., Appleton, H. and Ashby, M., 2022. Sustaining ecosystems–English grouse moors. Game & Wildlife Conservation Trust.

Tharme, A.P., Green, R.E., Baines, D., Bainbridge, I.P. and O'brien, M., 2001. The effect of management for red grouse shooting on the population density of breeding birds on heather‐dominated moorland. Journal of Applied Ecology, 38(2), pp.439-457.

Upham, P., Whitmarsh, L., Poortinga, W., Purdam, K., Darnton, A., McLachlan, C. and Devine-Wright, P., 2009. Public attitudes to environmental change: a selective review of theory and practice. Report for ESRC/LWEC. Manchester, UK.

Werritty, A., Hester, A., Jameson, A., Newton, I., Oddy, M., Reid, C., Davies, S., MacDonald, C., Smith, A. and Thompson, D., 2019. Grouse Moor Management Review Group: Report to the Scottish Government.

Shooting and national nature recovery goals

How shooting delivers England's headline strategies and legally binding targets for nature recovery.

BASC
The British Association for Shooting & Conservation

BASC, Marford Mill, Rossett, Wrexham LL12 0HL
01244 573 000 - basc.org.uk - enq@basc.org.uk

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