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Wildlife Management and Muirburn (Scotland) Bill

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A briefing on the background and context to the Wildlife Management and Muirburn (Scotland) Bill, and an explanation of the changes being made by the Bill.



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Summary and key Bill documents

The Wildlife Management and Muirburn (Scotland) Bill ('the Bill') was introduced on 21 March 2023. [The Bill as introduced can be found on the Scottish Parliament website.](#)

Supporting documents including a Policy Memorandum, Explanatory Notes and Financial Memorandum [are also available on the Scottish Parliament webpage for the Bill.](#)

The Scottish Government [has also published a business and regulatory impact assessment](#) (BRIA).

The [Policy Memorandum states](#):

“ The Wildlife Management and Muirburn (Scotland) Bill (“the Bill”) is being introduced to address raptor persecution and ensure that the management of grouse moors and related activities are undertaken in an environmentally sustainable and welfare conscious manner. The Bill will do this by implementing the recommendations of the independent review of grouse moor management.”

The Bill is in two main parts. **Part 1** deals with wildlife management. It introduces four changes to the law:

- it makes it an offence to use or buy a glue trap that could be used to catch an animal other than an invertebrate
- it introduces a licensing scheme for the use of specific traps to catch wild birds and animals, which will require people to complete an approved training course
- it introduces a licensing scheme for killing certain birds (initially, only red grouse), which will require the landowner to have a licence to allow the killing and taking of red grouse on their land, and introduces a code of practice for managing that land
- it makes it possible to have Regulations that would give new powers to inspectors, for example from the Scottish SPCA, to gather evidence around certain wildlife crime offences.

Part 2 changes the regulation of muirburn. Muirburn is the burning of heather or other plants to manage the natural environment. It is often carried out to encourage new growth for grazing animals, maintain certain types of landscapes and habitats, and reduce the risk of wildfires.

If the Bill passes, people will need a licence to undertake muirburn at any point in the year. There would be different requirements depending on the time of year and whether the muirburn is taking place on peatland or not.

Scottish Government 2022 consultation: Wildlife Management in Scotland

The Scottish Government set out proposals for the Bill in [its consultation Wildlife Management in Scotland](#), which opened on 26 October 2022 and closed on 14 December 2022. It stated:

“ The purpose of the proposals is to address raptor persecution and ensure that the management of grouse moors and related activities are undertaken in an environmentally sustainable and welfare-conscious manner.”

An [analysis of responses to the consultation was published by the Scottish Government](#) on 3 April 2023.

Scottish Parliament consideration of the Bill at Stage 1

The lead committee for this Bill is the Rural Affairs and Islands (RAI) Committee. It will consider the general principles of the Bill at Stage 1 and produce a report.

The RAI Committee [invited written evidence on the Bill in a Call for Views which closed on 5 May 2023](#), and [has published responses from organisations](#).

Revised version

This is a revised version of the briefing published on 6 June 2023. Revisions were made to the section on [Werritty review consideration of muirburn](#).

Context for the Bill

Background on grouse moors

Whilst many of the provisions in the Bill do not apply exclusively to grouse moors, the key overall objectives and background to the Bill are related to grouse moor management in Scotland.

The sport of shooting red grouse (*Lagopus lagopus scoticus*), a medium sized gamebird generally living in upland heather-dominated habitat, has occurred since the mid-19th century ¹. Today, productive grouse moors are mainly found in Scotland and the north of England, where moorlands are actively managed at different intensities by gamekeepers (i.e. people employed to manage wildlife and land for game shooting or deer-stalking) to provide these wild birds with favourable habitats ¹. Landowners have the right to take game birds - bird species which are hunted, killed and eaten by humans on their land - or to allow another person or persons to do so for sporting purposes.

How many grouse moors are there and what area do they cover?

There is limited information available about the exact number of grouse moors in Scotland and what area they cover, although some estimates exist. The [Grouse Moor Management Review Group report](#) (the background for which is set out below) stated in 2019:

“ A major challenge in undertaking this review was the lack of definition of a ‘grouse moor’ and the absence of official information on the number of estates on which grouse shooting occurs. We estimate that the current number of grouse shooting estates in Scotland is around 120 but note that this includes great diversity in both the size and level of investment in individual grouse shooting businesses.”

The report also states that less than 7% of Scotland’s land area is estimated to have some component of grouse moor management (according to the [Scottish Moorland Group, part of Scottish Land & Estates](#)) ². However, the REVIVE Coalition (who campaign for increased regulation of Scottish grouse moors), [state that 12-18% of Scotland's land is managed for grouse shooting](#).

Research commissioned by the Scottish Government found that over 1 million hectares (around 13% of Scotland's land) could be 'driven grouse moor' - described further below - through an assessment of constructed shooting positions called grouse butts, but that if a narrower definition of the area associated with the grouse moor enterprise is used i.e how far land management practices such as burning and predator control extend away from grouse butts, then the area could be much smaller, as low as 202,000 hectares (under 3% of Scotland's land). ¹

What does grouse moor management involve?

Specific management activities can include:

- Muirburn (burning moorland vegetation)
- Predator control - for example through use of wildlife traps

- Mountain hare culling
- Creating tracks for access
- The use of medicated grit - quartz grit coated with drugs and consumed by grouse with the aim of treating worms.

The [Grouse Moor Management Review report](#) describes grouse moor landscapes as 'cultural landscapes':

“ Heather moorland – admired by tourists in high summer when the hills appear to be covered in a purple haze – is not the natural vegetation on much of Scotland’s hill country. Within the climatic ‘forest zone’, much of Scotland’s heather moorland is the product of centuries of burning and other management, initially through deforestation and fire (some of it natural), and then for the grazing of livestock (sheep, cattle and goats) and, since the mid-19th century, also for the shooting of grouse. Relaxation of this active management, allowing the vegetation to revert to natural forest would likely yield a different landscape over much of Scotland from that of today’s open moorland. In some locations natural regeneration of the native woodland up to the former tree line is already well under way with consequent gains and losses for species diversity dependent on different habitats. The moorland landscape associated with grouse shooting is thus largely a ‘cultural’ landscape in which muirburn alongside other management activities are essential for its perpetuation.”

Red grouse are wild birds, not reared and released as with lowland game birds such as pheasants. Their numbers can vary considerably between years, with weather, habitat, disease and predators all having potential impacts on numbers ¹. The aim of grouse moor management activities is generally to maintain or increase grouse numbers to a level that will yield a ‘surplus’ for shooting.

A distinction can be made between 'walked-up' and 'driven' grouse shooting. Walked up shooting involves a group of individuals with guns walking across a moor in a line with dogs in front of them. Grouse are flushed out and shot. Driven grouse shooting uses a row of people (beaters), to flush the grouse towards stationary shooters.

Driven grouse shooting typically requires higher grouse densities, and is often described as being associated with more "intensive" management ¹ as higher yields of red grouse are sought. Driven grouse shooting accounts for the majority of commercial grouse shooting in Scotland ¹. The grouse shooting season runs from 12th August to 10th December each year.

Much of the activity on the ground is undertaken by employed gamekeepers whose management techniques or practices can impact on the extent and intensity of moorland management, as well as on biodiversity ¹.

The major predators on grouse (eggs, chicks or adults), namely fox, stoat, weasel and carrion/hooded crow, are routinely and legally killed on grouse moors ².

What is the value of grouse shooting to the Scottish economy, for employment and for rural communities?

The Scottish Government commissioned independent research to assess the socio-economic and biodiversity impacts of driven grouse moors and to understand the rights of

gamekeepers. [A summary report was published in 2020.](#)

The research estimated that around 2,500 FTE jobs (direct and indirect) were reliant on the grouse moor sector in 2009 with £14.5 million spent on wages related to grouse moor management and support, with a total Gross Value Added contribution of £23 million to the Scottish economy. The research stated that "Grouse shooting and related activities can be important to some remote and fragile local economies" ¹. The research also conducted a survey of gamekeepers covering their employment terms, key activities and views on their profession. It found gamekeepers often have strong familial ties to the profession, often perceiving gamekeeping as a 'way of life'.

The [Scottish Government's Business and Regulatory Impact Assessment \(BRIA\) for the Bill](#) states regarding the findings of the above commissioned research:

“ The findings confirmed that driven grouse shooting enterprises were rarely profitable as stand-alone land uses, as costs generally outweighed revenue, or at best resulted in a break-even position during good years. On-going net costs meant that driven grouse shooting was subsidised by other, on or off estate, income streams.”

The research also looked at alternative land uses, comparing key costs, revenues and staffing levels for different moorland uses including woodland creation, renewable energy, deer stalking and conservation - although noting these are not necessarily stand-alone enterprises and there is potential for a "holistic estate business model". The research states that:

“ Grouse shooting is perceived as facing increasing regulatory requirements, as well as longer-term uncertainty around climate change impacts, although sustained market demand, capital values and owner motivations remain significant drivers for retaining driven grouse.”

Grouse Moor Management Group (Werritty review)

A [Grouse Moor Management Group](#) (GMMG) was established by the Scottish Government in 2017 to examine the environmental impact of practices on grouse moors and advise on the option of licensing grouse shooting businesses. This was in response to concerns about the sustainability of management practices on grouse moors, including concerns that raptor persecution (the illegal killing of birds of prey) was taking place.

The Scottish Government [asked the GMMG to have due regard to the socio-economic impacts of grouse moor management](#) so that they might continue to contribute to the rural economy, while being environmentally sustainable and compliant with the law.

Background to GMMG - Scottish Natural Heritage review of satellite-tagged eagles

Prior to setting up the GMMG, the Scottish Government requested an investigation from Scottish Natural Heritage (SNH, now known as NatureScot) of the fates of satellite tagged raptors, especially golden eagles, in response to concerns about raptor persecution. The 2017 report, [Analyses of the fates of satellite tracked golden eagles in Scotland](#), found that of 131 golden eagles satellite tagged during 2004 - 2016, 41 (31%) were found to have disappeared (presumably died) under suspicious circumstances ³. The review found that "Some, but not all, areas managed as grouse moors were strongly associated with the

disappearance of many of the tagged eagles". It also found that persecution of young eagles was suppressing the golden eagle population and hampering recovery from historic persecution.

Grouse Moor Management Group 2019 report - the Werritty review

The GMMG (also known as the 'Werritty review') considered available scientific evidence on raptor persecution and predation, muirburn, mountain hares, and use of medicated grit. It also reviewed reports from relevant public sector organisations and NGOs, information supplied by Police Scotland and the Crown Office and Procurator Fiscal Service (COPFS) and oral evidence from presentations and invited experts.

The [final report was published in December 2019](#) and made over 40 recommendations for both legislative and non-legislative measures relating to grouse moor management including recommendations on licensing, muirburn and the use of wildlife traps. The recommendations are reproduced in full [in Appendix 1 of this briefing](#).

Details of the recommendations are included in the relevant sections of the briefing. However on the question of whether grouse moor licensing should be introduced, a key overarching issue for the review and its outcome, the GMMG recommended that:

“...a licensing scheme be introduced for the shooting of grouse if, within five years from the Scottish Government publishing this report, there is no marked improvement in the ecological sustainability of grouse moor management, as evidenced by the populations of breeding Golden Eagles, Hen Harriers and Peregrines on or within the vicinity of grouse moors being in favourable condition.”

In relation to wildlife traps, the key recommendation was:

“That new legislation should be introduced to make it a legal requirement that it becomes an offence to set or operate a trap without an operator having successfully completed a course run by an approved and accredited body and dealing with the relevant category of trap (cage and/or spring). A trap operator who has successfully completed a relevant trap training course should apply to their local police station for a unique identification number which must be attached to all traps that are set.”

In relation to muirburn, the key overarching recommendation was:

“That muirburn should be subject to increased legal regulation. This should apply to all muirburn, not only on grousemoors.”

Scottish Government response to the Werritty review in 2020

The Scottish Government [published its response to the Werritty report on 26 November 2020](#) announcing plans to legislate to license grouse moor businesses, preceded by consultation, as well as plans to make other regulatory and non-regulatory changes in relation to grouse moor management practices, including introducing a licensing regime for muirburn and restricting burning on peatlands. The Scottish Government agreed in its response to the Werritty review to amend legislation on the use and monitoring of traps as part of its work to develop a licensing regime for grouse moor management.

In announcing the Scottish Government's decision to introduce a grouse moor licensing regime on 26 November 2020, [the \(then\) Rural Affairs and Natural Environment Minister, Mairi Gougeon MSP said:](#)

“...we recognise the contribution that grouse shooting makes to the rural economy. And that the majority of those tasked with managing land already follow best practice guidance and care deeply about the countryside and land that they manage. I cannot, though, ignore the fact that some of the practices associated with grouse moor management, such as muirburn and the use of medicated grit, have the potential to cause serious harm to the environment, if the correct procedures are not followed. Neither can I ignore the fact that despite our many attempts to address this issue, every year birds of prey continue to be killed or disappear in suspicious circumstances on or around grouse moors. Since 2007, the Scottish Government has undertaken a range of measures to tackle wildlife crime, including: the introduction of vicarious liability; a poisons disposal scheme and restrictions on licences for those operating on land where it is suspected that wildlife crime has taken place. The fact that raptor persecution continues in spite of all these measures suggests that, while regulation from within the grouse shooting industry can be an important factor in driving behavioural change, self-regulation alone will not be enough to end the illegal killing of raptors, and further intervention is now required.”

Concerns about raptor persecution

The persecution of birds of prey has tended to be a high-profile and contentious issue in relation to upland management and the extent of its connection to management of grouse moors.

What is raptor persecution?

Criminal activity against birds of prey is often called raptor persecution. Raptors or birds of prey can include hawks, eagles, kites, buzzards, harriers, falcons and owls. It is an offence under [the Wildlife and Countryside Act 1981](#) to intentionally kill, injure or take (i.e. capture) any wild bird. Killing certain birds may be permitted if they are quarry birds (with 'open' and 'closed' seasons generally defined in law with different restrictions) or under a general licence (where individuals do not have to apply for the licence but conditions must be complied with) or specific licence (where individuals must apply for a licence), regulated by NatureScot.

It is also possible for a landowner or business (a body corporate) to be found vicariously liable - whereby one person can be held liable for the actions of another - for the actions of their employees or agents in relation to some wildlife offences, including the killing or taking of wild birds. This was introduced by [the Wildlife and Natural Environment \(Scotland\) Act 2011](#).

What are the concerns about raptor persecution on grouse moors?

There are concerns that raptors are illegally killed on grouse moors as a means of predator control, to support the numbers of grouse available for shooting. Red grouse have a number of natural predators including some birds of prey. There is evidence that some birds of prey are able, through predation, to reduce densities of red grouse significantly. Other species have been found to have a negligible impact, although there is a lack of scientific information available on this relationship for many species².

The Policy Memorandum for the Bill states:

“ Studies have shown that illegal killing is reducing the population and breeding success of raptor species in at least some grouse moor areas.”

The Werritty review considered evidence available on raptor persecution on grouse moors (citing around 70 available studies in Annex 1) and set out:

- Important grouse-predators include the golden eagle, peregrine falcon, goshawk and hen harrier. "Studies have shown that illegal killing is reducing the population and breeding success of all these species (plus Red Kite) in at least some grouse moor areas"
- The evidence consists of: (1) observed population declines or reduced occupancy of known territories; (2) reduced nest success; (3) reduced adult survival; (4) reduced age of first breeding (implying ready availability of vacant territories); (5) unexpectedly high disappearance of satellite-tracked raptors on grouse moors; and (6) finding on moors of poisoned baits and traps, and shot or poisoned carcasses of raptors
- It notes that "Not all types of evidence are available for every species"
- "As well as being targeted directly, some raptors are killed incidentally in attempts to trap or poison other predators"
- "In the absence of interference, these raptors breed as well or better on grouse moors than in other upland habitats, benefiting from various aspects of moorland management".

Challenges in detecting and prosecuting raptor persecution

The report describes that there are challenges with detecting crimes against raptors meaning discovered cases "probably represent only a small proportion of actual cases", with an even smaller proportion leading to prosecution and conviction due to difficulties obtaining evidence. The report sets out:

- "During this century, reports of poisoned or shot raptors have declined in numbers. However, this cannot be taken as evidence of a decline in raptor killing. It may be associated with a reported (but not proven) increase in the use of night-viewing equipment to shoot raptors on their roosting sites. Nightkilling can be practised at any time of year, and carcasses removed, making legally robust evidence of illegal killing practically impossible to obtain"
- Repeated disappearance of satellite-tracked birds on particular moors is not sufficient to obtain a prosecution, because disappearance cannot be assigned to a particular individual, and no carcass is normally available
- A continued decline in reported cases has followed the introduction of vicarious liability
- It is possible (but unproven) that perpetrators have become more concerned with hiding evidence in recent years, following press reports of disappearance of satellite-tracked birds. Some moor managers may have ceased or reduced their killing of raptors in recent years, although other evidence suggests that the practice continues.

Wildlife crime reports

The Scottish Government must produce annual wildlife crime reports under section 26B of the Wildlife and Countryside Act 1981, and these reports include statistics on the number of detected raptor persecution offences and prosecutions, with some supporting narrative including on policy developments and enforcement. The latest report is the [Wildlife Crime in Scotland Annual Report 2021](#), published 14 April 2023⁴. Table 1 below shows the number of raptor persecution offences recorded by Police Scotland from 2016 to 2021.

Table 1: Police Scotland raptor persecution offence data 2016-17 to 2020-21

Year	Number of raptor persecution offences
2016-17	11
2017-18	24
2018-19	17
2019-20	25
2020-21	11

Adapted from [Scottish Government 2021 Wildlife Crime Report](#)

More information e.g. breakdowns of the above information for species and local authority level is available in the report. Types of offences include shooting, trapping and poisoning. The report does not include information on the location of offences beyond local authority level (unless cases are described in the narrative) so it is not generally possible to infer linkages with land management types such as grouse moors.

The report also includes statistics on wildlife incidents identified by the Scottish SPCA's Special Investigations Unit (SIU) as crimes from April 2020 to March 2021. In this period there were 14 instances where the SIU identified a crime had taken place under the category of raptor persecution, but only 2 were reported to COPFS. The report states that not all incidents identified as crimes will provide sufficient evidence for a prosecution to be progressed to COPFS.

The report also includes information on how wildlife crime is investigated in Scotland, and the different actors involved. Wildlife crime priorities are set at UK level by the Wildlife Crime Tasking and Coordinating Group. The group's membership includes the Police, the Partnership for Action against Wildlife Crime (PAW), National Wildlife Crime Unit (NWCU), and the Joint Nature Conservation Committee (JNCC). Its wildlife crime priorities in 2020-21 include raptor persecution. Within PAW there is also a PAW Scotland Raptor Group.

Work on wildlife crime for the reporting period included "Crime prevention measures to mitigate the risks that persecution posed to the South of Scotland Golden Eagle project", and "similar measures were taken in partnership with the Cairngorm National Park Authority to safeguard satellite tagged eagles in the Cairngorms".

Context on the conservation status of raptors

The Werritty review describes the historical context of raptor persecution and its impact on the conservation status of raptor species:

“ Owing to persistent but then legal killing of many raptor species, mainly in the interests of game rearing, raptor numbers across Britain were greatly reduced in the 19th-early 20th centuries... ..At the national level most species have increased substantially over recent decades, but most still do not occupy their entire potential range in Britain. Eliminated species either recolonised naturally or were reintroduced. Despite increasing nationally, several raptor species have declined in grouse moor areas during this century.”

Grouse Moor Management Group, 2019²

The most recently published wildlife crime report for 2021 includes a 'health of species' appraisal by NatureScot for priority species, which for birds of prey includes hen harrier, peregrine falcon, golden eagle and red kite. Key information from the summary is reproduced in Table 2 below. This appraisal is intended to give an overview of population trends, factors affecting the health of the species and the relative impact of wildlife crime on the conservation status. It was produced in response to an Environment, Climate Change and Land Reform Committee request for this context in Session 5 of the Scottish Parliament. The appraisal states that threats to all of these species include illegal persecution.

Table 2: NatureScot ‘Health of Species’ appraisal for (selected) priority species in the 2021 Wildlife Crime report

	Hen Harrier	Peregrine Falcon	Red Kite	Golden eagle
Distribution	The species is found widely across the country but has breeding concentrations in Orkney, some west coast islands and Argyll mainland	Can be found throughout Scotland. Generally, the species is more common in the south and east of the country	There are four main population centres based around original reintroductions areas; Black Isle, those in Aberdeenshire, Perthshire/ Stirlingshire and Dumfries & Galloway have merged to cover most of that area	The species can be seen widely across the Highlands and Islands primarily in upland habitats, with a very small population in the Southern Uplands, bolstered by the ongoing South Scotland Golden Eagle Project
Population	The most recent national survey was in 2016 and the population was estimated at 460 pairs, a decrease from 2010.	The most recent national survey was in 2014 and the Scottish population was estimated at 516-538 pairs, a decrease since 2002.	Increasing after successful reintroduction, however the growth of the populations is varied with the North Scotland (Black Isle) one in particular suffering slow growth due to illegal persecution	The population increased between the 2003 and 2015 national surveys, up to 508 occupied territories. This passed the 500 pair target required by NatureScot to reach favourable conservation status nationally
Monitoring	Up to two-thirds of the breeding population is monitored annually by the Scottish Raptor Study Group. The Heads up for Harrier initiative encourages landowners to participate in a nest camera scheme. There is also annual non-breeding roost monitoring	Between a half and two-thirds the breeding population is monitored annually under the Scottish Raptor Monitoring Scheme, mainly by Scottish Raptor Study Group members	There is annual monitoring of a large proportion of the breeding population under the Scottish Raptor Monitoring Scheme, mainly by Scottish Raptor Study Group members and other volunteers. There is also an annual winter roost coordinated count as part of a wider European survey	Around half the breeding population is monitored annually under the Scottish Raptor Monitoring Scheme mainly by Scottish Raptor Study Group members
Threats	Natural mortality includes starvation and disease. Foxes are the main natural predator of nests. The species is at the centre of the raptor game management conflict and regionally, illegal persecution is a significant threat to the species	Natural mortality can include collisions with power lines, starvation and disease. Illegal persecution from both pigeon fanciers and game management interests remains a regional concern for some inland and upland populations	Red kites are subject to natural mortality and their scavenging habits can make them vulnerable to collisions with vehicles and power lines. Growth of the North Scotland (Black Isle) population in particular has been hampered by illegal persecution	Natural mortality can include collisions with power lines, starvation and disease. Illegal persecution regionally remains a significant concern

Adapted from [Scottish Government 2021 Wildlife Crime Report](#)**Stakeholder disagreement on the current extent of raptor persecution on grouse moors**

There is disagreement between stakeholders regarding the extent to which raptor persecution on grouse moors continues to be a significant issue.

The Scottish Raptor Study Group for example [states in written evidence to the Rural Affairs and Islands Committee](#):

“ Scottish Raptor Study Group members have first-hand experience of grouse moors where species of raptors are absent, disappear early in the season , or where nests fail on a regular basis. These are not one-off occurrences but a pattern of events. The driven form of grouse shooting appears to have raptor persecution central to its business model, raptors would prey on some of the surplus grouse that is required to shoot and without that the industry, in it's driven form, cannot survive, hence why the killing continues. There are many peer reviewed scientific papers that provide hard evidence to support this.”

Scottish Land & Estates (SLE) - a membership organisation which represents landowners, land managers and rural businesses including a large number of grouse moor owners - [state in written evidence to the Rural Affairs and Islands Committee on the Bill](#) that it "accepts that there have in recent years been a small number of troubling, isolated incidents of raptor persecution (and that such incidents were, deplorably, more common in decades past)". However, it states that "there is no evidence of a current or “ongoing” raptor persecution problem that is widespread across or indeed exclusive to the grouse shooting sector." SLE also state that:

- There has already been a cultural shift in gamekeeping (in relation to raptors)
- Scottish Government measures to date including the introduction of vicarious liability and general licensing restrictions (described further below) have had significant impacts, and 2020 increases to wildlife crime penalties (via [the Animals and Wildlife \(Penalties, Protections and Powers\) \(Scotland\) Act](#)) have not yet had an opportunity to influence statistics
- The Scottish Government has not conducted any raptor monitoring on or near grouse moors or produced reporting on rates of raptor crime on or near grouse moors.

There is also disagreement between stakeholders regarding to what extent wildlife crime reports can be used to indicate the extent of, or underlying trends of raptor persecution. [SLE for example state that the 2021 report confirms](#) "that offences against birds of prey are at historically low levels with 12 offences recorded in 2020-2021".

Others state that wildlife crime statistics are limited in demonstrating the scale of the issue in relation to raptor persecution in particular, due to challenges in detecting, investigating and evidencing these types of crime in remote areas.

[RSPB Scotland state for example:](#)

“...only a small proportion of cases does a police investigation culminate in a court case, owing to the challenges in securing a sufficiency of admissible evidence. Those undertaking the illegal killing of birds of prey clearly do not wish to be caught, and such activities are carried out in remote areas where they are likely to remain unwitnessed and undetected. Public access in many rural areas is concentrated on or close to paths and tracks, and the perpetrators of criminal activity are aware that any illegal activities away from such routes will likely remain undiscovered. The premise that detected raptor persecution cases represent the “tip of the iceberg” is well understood and accepted. Often the only clues that illegal behaviours may be occurring are a sustained failure of successful breeding by species such as Golden Eagle, Hen Harrier, Peregrine, or Red Kite in areas with suitable nesting habitats, ample available food, and an absence of nest predators due to systematic legal predator control; the repeated turnover at traditional nest sites of adult birds that ordinarily should have a high year-to-year survival rate; or, the sudden, disappearance of satellite-tagged raptors, as confirmed by the NatureScot Commissioned Report...”

The Scottish Government acknowledges this, for example [the Ministerial Foreword to the 2021 report states](#):

“While there has been a reduction in the number of recorded crimes against raptor species, we must acknowledge the likelihood that not all cases of raptor persecution will have been witnessed or recorded.”

2023 study on hen harrier persecution

A [recently published peer-reviewed study \(published May 2023\)](#) led by RSPB conservation scientists (with authors also from other bodies) has found that illegal killing associated with gamebird management accounts for up to three-quarters of annual mortality in hen harriers across Britain. The study analysed data from hen harriers tracked across Britain between 2014 and 2021 using remote sensing data. It found that annual survival was low, especially among first-year birds, with illegal killing accounting for 27–43% and 75% of mortality in first-year and subadult (1-2 years) harriers respectively. It states that illegal killing is likely attributable to grouse moor management because:

- i) a 10 % increase in grouse moor use resulted in a 43% increase in mortality risk
- ii) a strong overlap existed between mortality and grouse moor extent
- iii) death due to natural causes showed different spatial and temporal patterns; and
- iv) timing of mortality peaked around the shooting season and breeding territory establishment.

It states that "Wildlife crime persists in the British uplands, where raptors are illegally killed on moorland managed for Red Grouse".

[SLE responded to the report stating:](#)

- Estates play a vital role in encouraging raptors to flourish
- RSPB Scotland has not provided the data it is using which undermines a collective effort to tackle raptor crime, and there are transparency concerns regarding satellite tag data

- It is well established that there is a high natural mortality rate for hen harriers in their first year and other factors including weather, availability of prey and predation can all play a big role
- There are different reasons why tags stop transmitting, not only persecution.

Other Scottish Government action to tackle raptor persecution and implement Werritty recommendations

In addition to setting up the Grouse Moor Management Group, other Scottish Government action in recent years aimed at tackling wildlife crime, in particular raptor persecution has included:

- In 2014 [NatureScot introduced a framework whereby it can restrict the use of General Licences to trap and shoot wild birds](#) on land where they consider there is evidence to suggest that a wild bird has been killed, injured and/or taken other than in accordance with a licence, or where General Licences are being otherwise misused. The rationale was that the light-touch approach to regulation offered by General Licences (where there is no application process, and no significant registration or reporting requirements) would not be appropriate where there has been evidence to show wildlife crimes have taken place. [NatureScot meet with Police Scotland and the National Wildlife Crime Unit periodically](#) to review information and identify any possible cases for future restrictions
- The [Animals and Wildlife \(Penalties, Protections and Powers\) \(Scotland\) Act 2020](#) increased the maximum penalty for the most serious animal welfare and wildlife crimes to five years imprisonment and unlimited fines. This followed the publication of a [2015 report by the Wildlife Penalties Review Group](#) (known as the 'Poustie review') to consider the effectiveness of penalties across wildlife crime
- Introduction of vicarious liability for some offences against wild birds, introduced by the [Wildlife and Natural Environment Act 2011](#)
- Piloting the use of [special constables](#) in Cairngorms National Park.

The extent to which the above interventions have impacted on raptor persecution is subject to debate.

Other recommendations of the Werritty review

This Bill seeks to take forward key recommendations of the Werritty review regarding wildlife traps, grouse moor licensing and muirburn. The Werritty review made recommendations in other areas, and other action has been taken by the Scottish Government through legislative and non-legislative means. For example:

- **Satellite-tagging** as a mechanism of detecting wildlife crime was considered by the Werritty review and the report recommended “more thorough regulation of the fitting and use of satellite tags coupled with more expeditious sharing of information”. The Scottish Government [said in its response to the Werritty review](#) that NatureScot has

agreed new data-sharing protocols for satellite-based tracking of tagged raptors

- Grouse moor management can include the culling of **mountain hares**, with the aim of supporting red grouse populations, although there is a broader debate around whether there is evidence to support this ¹. The Werritty review recommended increased regulation via a Code of Practice in the first instance, with licensing introduced if mountain hare was in unfavourable conservation status following that. In response to animal welfare and conservation concerns about the extent of mountain hare culling taking place, a new licensing scheme for mountain hare was introduced in March 2021. The [Animals and Wildlife \(Penalties, Protections and Powers\) \(Scotland\) Act 2020](#) amended Schedule 5 of the Wildlife and Countryside Act 1981 to include mountain hares. Anyone who now intentionally or recklessly kills, injures or takes mountain hare without a licence will be acting unlawfully.

Grouse moors, uplands and biodiversity

The Scottish Government's policies in relation to grouse moor management sit within the wider context of policies aiming to tackle the twin climate and nature crisis. Accelerating nature restoration and regeneration is a Scottish Government priority set out in [the Scottish Biodiversity Strategy](#) (which is still in draft, due to be finalised in 2023). The Strategy states:

“ The Global Climate Emergency and the Nature Emergency are twin reinforcing crises: the actions we take to address each are fundamental to our wellbeing and survival as a species. There is now an indisputable body of evidence that biodiversity, both globally and in Scotland, is in real trouble. Our efforts to address the crisis to date have generated some lessons and local successes, but we urgently need to accelerate and scale up those efforts to drive landscape and seascape scale recovery.”

Ensuring "grouse-moor management sustains healthy biodiversity, especially with regard to muirburn, legal predator control and diversification of habitat to create a more diverse upland landscape", is set out as a priority action for 2030 under this strategy.

To set grouse moors within a wider context of land management, the Strategy states that around 70% of Scotland is solely or partially managed for agriculture (roughly 10% arable and 20% pasture, with the remainder rough grazing which in the uplands is often secondary to grouse moor and red deer estate management).

Grouse moors tend to be located in Scotland's uplands (above the limits of enclosed farmland) which comprise a range of habitats including moorland, rough grassland, blanket bog, woods and species-rich grasslands. The majority of this land is managed for field-sports and livestock grazing and some multi-functional uses (e.g. renewable energy, nature conservation and amenity interests).

The Scottish Biodiversity Strategy states that in the uplands, management practices giving rise to heavy impacts of grazing, deer impacts and "inappropriate muirburn especially on deep peat" has led to the degradation and loss of upland and peatland habitats, and that "overall at least 25% of wider uplands are considered to be in poor condition". It states that a range of species and habitats are declining, especially waders, hen harriers, mountain willow and juniper. The greatest decline in birds has been in uplands, with 18% decline

since 1994; 17 species contribute to this indicator with nine in long-term decline.

The strategy sets out that by 2045, the vision is that management of deer ranges, grouse moors and upland agriculture in Scotland will be contributing to the regeneration of biodiversity in upland areas.

Research on grouse moors and biodiversity

The controversy around to what extent raptor persecution takes place on grouse moors is one aspect (albeit the highest profile) of how grouse moors impact on Scottish biodiversity. Grouse moor management practices are capable of impacting biodiversity in a number of ways, both positive and negative ¹.

Research commissioned by the Scottish Government on the biodiversity impacts of grouse moors in Scotland, published in 2018, stated ¹:

- Heather moorland provides a range of ecosystem services (i.e. the benefits people derive from ecosystems). Studies to date have rarely focussed explicitly on the impacts of driven grouse shooting on service delivery, and have focused on a small set of services (such as water quality and carbon storage). There are likely to be many interactive effects on biodiversity and ecosystem services of management activities associated with driven grouse shooting. To address substantial information deficits new, controlled experimental studies are needed to examine management impacts on biodiversity.
- Legal predator control impacts can be both negative and positive, resulting in changes in the combinations of species present on managed grouse moors.
- Impacts of muirburn on biodiversity are diverse and can be positive and negative, depending on a range of conditions including fire intensity. Muirburn can provide structural diversity to the moorland landscape, particularly on drier moorlands, which is often associated with higher above-ground biodiversity. There is almost no published data on below-ground biodiversity impacts, and there is highly conflicting evidence on muirburn impacts on peatland biodiversity ([this is discussed further in later sections](#)).

NatureScot research also notes that evidence from the primary literature indicates that moorland management affects the abundance and diversity of bird species, and some species benefit from moorland management while others do not ⁵.

Action in the grouse moor industry on biodiversity

There are some voluntary initiatives in the grouse moor industry aimed at protecting or improving biodiversity. For example, [Wildlife Estates Scotland is an initiative](#) which aims "to promote the best habitat and wildlife management practices, build recognition and raise standards" through an accreditation system to a set of voluntary standards. Aims include to build information on species and habitats, encourage conservation projects and engagement with public and private stakeholders.

The [Game and Wildlife Conservation Trust states that](#) "Upland management has a key role to play in addressing the climate change and biodiversity crises", and that "whilst we fully recognise the concern to address raptor crime, this should not impact on the potential for managed moorland to deliver public good at landscape-scale".

Muirburn

The Bill also addresses muirburn. Muirburn is often associated with grouse moors, but is also carried out for other land management purposes.

What is muirburn?

Muirburn is a long-standing practice in the Scottish and UK uplands and, as described above, has shaped Scotland's landscape. A [review of evidence commissioned by NatureScot](#) defines muirburn as “the intentional and controlled burning of moorland vegetation”⁵.

Moorlands are “a broad habitat mosaic found mainly in the uplands, which is characterised by low-growing vegetation, usually on acidic soils that are often low in nutrients and sometimes water-logged”. They are characterized by a broad range of vegetation types, such as blanket bog, wet and dry heath, dry grasslands and bracken. They are uncultivated.⁵

Muirburn is defined in more detail in the [Supplement to the Muirburn Code: A Guide to Best Practice](#) as:

“ The knowledgeable and controlled application of fire to a predetermined area, at a specified time of day and season, and under specified weather and fuel conditions, so as to ensure that the intensity, rate of spread, and limits of spread of the fire meet planned resource management objectives. Prescribed burning of moorland in Scotland is usually referred to as muirburn, and there are four main land management objectives which apply:”

1. “To produce a continuous supply of vigorous and nutritious new growth, by removing accumulated dead and woody plant material which makes the vegetation unpalatable and indigestible for grazing animals;”
2. “To maintain moorland vegetation which is varied in composition and height, allowing greater access by livestock, and which provides increased foraging and nesting opportunities for moorland game and wildlife;”
3. “To maintain the cover of heather, blaeberry and other characteristic moorland plants, in the long-term, so as to provide year-round forage and cover for livestock, moorland game and wildlife, and to maintain internationally renowned moorland landscapes;”
4. “To reduce the accumulation of potential fuel and so reduce the risk of damaging, high intensity wildfires”

Carrying out muirburn is referred to as 'making muirburn'. Best practice guidance for muirburn is set out in [the Muirburn Code](#). [Further information on the Code and existing regulations for muirburn is provided in a later section of this briefing.](#)

Figure 1: Image showing mosaic of burned and unburned moorland



Image credit: Alison Hester, Source: [Socio-economic and biodiversity impacts of driven grouse moors in Scotland](#)

Extent of muirburn in Scotland

Muirburn is associated primarily with the management of grouse moors, but also with livestock grazing.

There is no regular monitoring of muirburn and therefore it is difficult to find figures on the area that is burned annually. However, recent research has been carried out to shed some light on the extent of burning on driven grouse moors. [A 2020 mapping exercise was commissioned by the Scottish Government as part of a wider piece of research \(mentioned earlier in this briefing\) on the socio-economic and biodiversity impacts of driven grouse moors](#), to "Provide a more up to date assessment of the area of grouse moors in Scotland under management for driven grouse, mapping clearly the areas of moorland that are actively managed for grouse and the intensity of current management regimes." The study used GIS (computer mapping tools) and aerial and satellite images. This built on [a previous 'phase 1' mapping project carried out in 2018, which aimed to identify areas of driven grouse moors](#).

The findings suggested that:

- Burning is part of typical management on grouse moors, with 'active' burning (in the 3-5 years prior to when the phase 1 analysis was done in 2018) confirmed on 79% of

holdings with grouse butts presentⁱ, that together manage 87% of the area identified as driven grouse moors. For clarity, this does not draw conclusions about the extent of burning, but only the presence of some burning, indicating that it is a common management tool

- Around 19% of rough grazing on holdings with grouse butts had been burned at one time, typically since 2013 and in some case since 2015, but with some areas potentially longer ago. This proportion increases closer to grouse butts. 25% of the rough grazing area within 2,000m of a grouse butt had been burned at one time, and 38% of the rough grazing area within 500m of grouse butts had been burned at one time
- Any average masks the large variation in burn intensity across Scotland, however, with some holdings having substantially higher burning intensity than the average.

What is the debate around muirburn?

Muirburn is undertaken as a land management tool to support the management of grouse moors, deer or grazing livestock. However, there is concern, disagreement, and uncertainty around the benefits and disadvantages of muirburn, particularly in relation to environmental outcomes and in relation to managing wildfire.

In addition, there are questions around oversight of compliance with [the Muirburn Code](#) which sets out best practice guidelines.

These key issues are discussed in the following sections.

Several publicly-funded projects have set out to review the available evidence around the impacts of muirburn, including:

- Climate Xchange (Scotland's centre for climate change expertise) produced an evidence review on '[Understanding carbon sequestration in upland habitats](#)' in January 2021 which assessed some of the evidence around muirburn
- The project on '[Socio-economic and biodiversity impacts of driven grouse moors in Scotland](#)' reviewed the evidence on muirburn in relation to biodiversity on driven grouse moors.

Most recently, [NatureScot commissioned a review of the available evidence around muirburn](#)⁵. The review, published in 2022, sought to answer the following questions:

1. *What is muirburn?*
 2. *What is the relationship between muirburn and wildfire?*
 3. *What is the impact of muirburn on carbon emissions and storage?*
 4. *What is the impact of muirburn on habitats and species?*
 5. *What are the practical approaches that can be used to identify peat and peatlands?*
-

ⁱ As described above, 'grouse butts' are constructed hides used for driven grouse shooting. The presence of butts was used in this project as an indicator of grouse shooting.

The authors are clear that the review deals specifically with the direct and immediate impacts of muirburn. The review does not assess:

- The impact of muirburn in preventing natural change in moorland vegetation over time (e.g. the establishment of woodland) or its impact on wider land use
- Whether muirburn is an acceptable or necessary management practice for the management of moorland.

The research also highlighted key knowledge gaps in relation to muirburn, noting that:

“ Since a lack of evidence does not imply an absence of impact, more research is required to fill these knowledge gaps in order to provide robust and definitive answers to these questions.”

Key findings in relation to each question (aside from ‘What is muirburn’) are highlighted in the relevant sections below.

Impact on carbon emissions, storage and sequestration, especially on peatlands

A key question is the role of burning in relation to the ability of ecosystems to sequester carbon to mitigate climate change, and to ensuring that carbon remains stored in the vegetation and soils rather than being released into the atmosphere.

The Werritty review noted that:

“ The effects of muirburn below-ground are the least well understood. In general terms the intensity of a fire is thought to be a key issue: impacts on soil structure/properties (and carbon in particular) tend to be more severe (sometimes catastrophic) under more intense, longer duration fires igniting dry soil/peat. Fires penetrating the moss/litter soil are likely to destroy much of the seed bank, which could result in a very different post-fire plant species composition as well as changes to hydrology, soil chemistry and increased likelihood of erosion. **Muirburn can have both positive and negative effects on carbon storage, both directly, by affecting carbon contents of soil and vegetation, and indirectly, by affecting carbon storage potential through the changes in plant community composition after fire.** There is often an assumed net loss of carbon under regular muirburn, but the evidence is not conclusive and the longest running study (60 years) shows reduced carbon sequestration in regularly burnt areas but no long-term reductions in soil carbon accumulation. Data on muirburn impacts on dissolved organic carbon, particulate organic matter, suspended sediments, aluminium, iron etc. in runoff are also inconclusive, with varying data on losses and subsequent recovery within the system as vegetation regrows, as well as some evidence for interactive effects with historical and current pollutant deposition and post-fire rainfall patterns. The few studies on hydrology indicate lowering of water tables in regularly burnt areas, but divergent effects on overland water flows according to the nature of concurrent rainfall events. There are obvious implications here for future climate change affecting muirburn impacts. ² (Emphasis added)”

In relation to the question of ‘**what is the impact of muirburn on carbon emissions and storage?**’ NatureScot’s commissioned review of evidence provided the following summary:

Box 1: NatureScot commissioned review summary of findings (text replicated from the report; text in square brackets added)

1. *What we know*

- There is evidence of burning of above-ground biomass on peat during muirburn with potential impact on carbon sequestration.
- The data available appears to be focused on dissolved organic carbon (DOC) [this means organic carbon dissolved in water] fluxes and aboveground (vegetation) carbon, with information on greenhouse gas emissions and soil carbon stocks being more limited.

2. *What we know we don't know*

- There is limited empirical evidence describing the effects of muirburn on carbon fluxes including greenhouse gas (GHG) emissions from UK moorlands.
- There is no overall consensus as to the net impacts of muirburn on carbon budgets, with evidence supporting gains, losses and no difference in carbon stores/fluxes following muirburn.
- The majority of data available is for stream or soil water dissolved organic carbon (DOC) concentrations. Few studies directly measured or calculated the effects of muirburn events on greenhouse gas emissions or carbon stocks prior and post fire events.
- There are few complete carbon budgets from UK moorland sites subject to managed burning. In particular, there is a lack of information on soil carbon stocks.
- There are few long-term studies from which the impacts of burning on carbon budgets can be determined, with limited geographical coverage. Those studies that do exist do not cover the range of habitats and habitat condition, and often have to make assumptions where data is lacking.
- There is little or no carbon budget data for dry heathlands or other important moorland habitats.⁵

Link to longer summary: [What is the impact of muirburn on carbon emissions and storage?](#)

This question is particularly significant for peatland habitats, given that these store very large amounts of carbon. Covering only one-fifth of Scotland's area, [Scotland's peatlands store 25 times more carbon than all the vegetation in the UK](#), and peatland restoration is considered to be an important nature-based solution to climate change. [Considerable sums of public money have been committed to achieving this goal.](#)

Though this can occur if a fire gets out of hand, burning for management purposes (sometimes called 'controlled' or 'prescribed' burning) does not aim to result in burning the peat soil, which can have significant negative consequences. However, the question is

how burning peatland vegetation affects both healthy and degraded peatlands with different depths of peat soils, and the [ecosystem services](#) (e.g. the benefits that nature provides, such as climate regulation, carbon sequestration, flood management and pollination) those peatlands provide. This is a complex area of study.

Peat depth

A further question is how to define peat for the purposes of regulating muirburn. This is related to the question of how muirburn affects peat functioning and whether this depends on the depth of the peat layer.

The [Muirburn Code](#) states that "Burning should not take place on peatland, except as part of a habitat restoration plan, approved by NatureScot", and defines peatland as:

“ an organic soil, which contains more than 60 per cent of organic matter and exceeds 50 centimetres in thickness. ⁶ ”

[In response to the Werritty Report, the Scottish Government undertook to](#)

“ review...the current definition of peatland, taking expert advice on whether it should be revised and a stricter definition imposed. ⁷ ”

The Scottish Government's consultation on legislative proposals consequently sought views on defining peat as organic soils with more than 60% organic matter exceeding 40cm in thickness for the purposes of muirburn.

NatureScot's commissioned review of evidence highlighted:

Box 2: NatureScot Commissioned review summary of findings (text replicated from the report)

- There is a lack of evidence relating to the impact of muirburn on different depths of peat. ⁵

[The analysis of the Scottish Government's consultation on the Bill](#) states that a majority – 66% - of those who provided a view on peat depth did not agree with a definition of 40cm. However, respondents had contrasting reasons for disagreeing, with some arguing that there should be no change to the 50cm definition due to the limited evidence around impacts at different depths. Others arguing that shallower peat layers should be included in the definition of peatland either by restricting muirburn on all peat soils or by adopting a shallower definition (e.g. 30cm). Reasons for this included the vulnerability of shallow peat, and coherence with definitions in some of the scientific literature ([this is discussed further later in the briefing](#)).

Muirburn and biodiversity

A further question is around the impact of muirburn on biodiversity. As noted in a previous section, muirburn, along with other upland management techniques, maintain a particular

set of habitats in the uplands. The question is, within those habitats, whether muirburn is beneficial for a diversity of species, and furthermore, what the impact of an absence of fire would be on biodiversity, either in that habitat, or in the habitats that may result from withdrawing that management or applying other management.

As previously noted, in 2017, the then Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham MSP, commissioned research into "[the costs and benefits of large shooting estates to Scotland's economy and biodiversity](#)" focusing on driven grouse shooting. The research was carried out by a team of researchers from Scotland's research institutes and was divided into three parts; part 2 investigated biodiversity impacts of driven grouse shooting in Scotland.

The review found that biodiversity impacts were dependent on a number of factors, including fire intensity, habitat and species types.

The summary noted, among other things, that:

“ There is strong evidence from many papers that the major determinant of any reported increases in biodiversity is the mosaic of different ages of burn giving a mix of habitat structures, as well as post-fire ‘good seedbeds’ for germination. Undoubtedly, muirburn can in some cases cause detrimental effects on biodiversity (and other components of the system) - *fire intensity seems to be critical in determining severity of impact*, but most studies have not recorded this - the high degree of uncertainty and controversy concerning muirburn impacts is probably directly related to this paucity of connected information from fire intensity through to measured impacts. There is strong evidence that a key issue in terms of impacts of muirburn is whether or not the fire has burned into the moss/litter layer/soil/peat - in that order, it greatly increases the likelihood of detrimental impacts, not just on biodiversity. Muirburn impacts can also differ according to the type of moorland. Strongest (but much is still inconclusive) evidence for a greater likelihood of long-term *detrimental* impacts comes from blanket bog/wet heath areas, and it has been widely assumed that regular muirburn is detrimental to peat-forming species such as *Sphagnum* [bog mosses]. However, this is not conclusive either as several studies have found the opposite, including the long term (60 years) experimental study that followed burnt v unburnt areas - both *Eriophorum* [e.g. cotton grass] and *Sphagnum* (especially *S. capillifolium*) became more abundant in frequently burned plots than unburned. There is moderate evidence suggesting that both different *Sphagnum* species and different growth stages are differentially affected by fire. In addition, not all *Sphagnum* species are considered indicative of a bog in good health (some species are important peatformers, others are not) so this also needs to be considered when assessing individual *Sphagnum* species responses to muirburn.”

NatureScot's Commissioned review of evidence also found that the impact of muirburn on habitats and species is complex and varied. Their findings are set out in Box 3.

Box 3: NatureScot Commissioned review summary of findings (text replicated from the report; text in square brackets added)

1. *What we know*

- The impact and influence of muirburn on moorland habitats and species is complex.
- Moorland management (which includes managed burning) affects the abundance and diversity of bird species. Some species benefit from moorland management while others do not. It is difficult to disentangle the impact of muirburn on birds from the impact of other moorland management practices.
- Burning results in a change in plant species composition, but this change is not always consistent. Moorland vegetation responds to managed burning in a complex manner, with many factors including habitat type and condition, soil moisture content, geographical location, scale of muirburn management, burn rotation length, fire severity and intensity, air pollution and other management such as grazing, all having an effect.
- There is consistent evidence that *Calluna* [heather] cover increases over time following burning.
- There is mixed evidence as to the response of *Sphagnum* [peat mosses] to prescribed burning, however there is evidence that *Sphagnum capillifolium* [a specific type of peat moss] can recover from managed burning.

2. *What we know we don't know*

- In general, there is limited evidence describing the effects of muirburn on the full range of moorland habitats and species across the UK. For some moorland vegetation types, species groups and species, there is no evidence base, and for some others there is a contested evidence base. The review concludes that the evidence from the primary literature is focussed on blanket bog and upland heath, and no studies were identified from the Web of Science search that looked at the impact of muirburn on other important moorland habitats such as grassland (e.g. *Molinia caerulea* [purple moor grass] dominated grassland or *Nardus stricta* [mat-grass] dominated grassland), flushes or alpine heaths.
- There is a lack of evidence on the impact of muirburn on small mammals, reptiles, or amphibians.
- The review concludes that the evidence base is too limited to draw firm conclusions regarding the impact of muirburn on terrestrial invertebrates.⁵

Link to longer summary: [What is the impact of muirburn on habitats and species?](#)

Wildfire risk and wildfire management

Another key question is the relationship between muirburn, wildfire risk, and wildfire management. On the one hand, it is thought that some wildfires are caused by muirburn that has spread uncontrolled. On the other, managed muirburn burns the heather and other vegetation and thereby reduces the amount of flammable vegetation (sometimes referred to as the 'fuel load'), on the moorland. It is thought that this can help manage the risk of wildfires.

There is a general concern around the future prevalence of wildfires, resulting from a hotter, drier climate.

NatureScot's commissioned review of evidence summarised:

Box 4: NatureScot Commissioned review summary of findings (text replicated from the report ; text in square brackets added)

- *What we know*
 - There is evidence that muirburn causes a proportion of wildfires that occur on moorland, however, there remains uncertainty regarding this proportion.
 - There is evidence from field studies that the immediate effect of burning on *Calluna vulgaris* [heather]-dominated habitats is to reduce above ground biomass (fuel load).
 - Studies suggest that fire intensity in *Calluna* [heather] is controlled by fuel structure, windspeed and fuel moisture content.
- *What we know we don't know*
 - There is a lack of research into the question of whether variation in fuel loads resulting from muirburn influence the subsequent occurrence or likelihood of wildfire in moorland in the UK.
 - This review found that the evidence base relating to the role of muirburn in controlling fire intensity and fire severity was too limited to draw firm conclusions.
 - There was a lack of evidence relating to muirburn controlling the extent of wildfire in moorland.
 - There was a lack of research into the relationship between muirburn and wildfire on non-*Calluna* [heather] dominated habitats.⁵

Link to longer summary: [What is the relationship between muirburn and wildfire?](#)

Some organisations [advocate the use of muirburn for managing wildfire risk](#), while others suggest that [rewetting peatland as part of peatland restoration is a better way of managing wildfire risk](#).

Compliance with the Muirburn Code

There appears to be general agreement that muirburn should be carried out in accordance with best practice to prevent damage or adverse outcomes. The Werritty review highlighted weaknesses with existing measures to ensure compliance with best practice.

Best practice in Scotland is set out in [the Muirburn Code](#), which provides guidance on suitable and unsuitable burning. [NatureScot notes in its introduction to the code](#), for example, that:

“ Areas with thin soils or steep slopes, should not be burnt as this can increase the risk of soil erosion. Woodlands and wetlands, for example, should be avoided. Woodland can benefit from fire only in very special circumstances: it may help to prepare a good seedbed and thus promote woodland expansion. To avoid over-grazing and trampling damage, heather patches burnt to provide fresh growth for deer and sheep shouldn't be too small in size. They shouldn't be too large either, as they will then lack variation in structure, and habitats that shouldn't be burnt will be burnt along with those that should.”

The Code, [discussed further in a later section of this briefing](#), includes both statutory and voluntary good practice. However, as [the Werritty review](#) noted, the statutory requirements of the Code are limited to e.g. requirements to inform the landowner and relevant neighbours, prohibitions on making muirburn outside the muirburn season or in darkness, and safety requirements around being able to control the fire and prevent unintended spread or damage.

As a result, there are few provisions which incur any penalties for non-compliance. This is limited to prosecutable offences in relation to the areas set out above, and to non-compliance with some aspects of the code where land managers are in receipt of agricultural support. In the latter case, it is a requirement to ["comply with the requirements of the Muirburn Code as they relate to the maintenance of soil organic matter"](#) under 'cross-compliance' rules (rules around good management which land managers in receipt of payments must adhere to) which are enforced by the Rural Payments and Inspections Division (RPID). Failure to do so could result in a reduction in agricultural payments. However, as the Werritty review notes "only a small subset of muirburn-related activities in the Code are deemed to 'breach' the grant conditions – specifically a fire left unattended, an uncontrolled fire over a large area, or burning which results in damage to woodland."

The Werritty review highlighted that "potentially damaging activities" which the Code advises against are not subject to penalties for non-compliance. The review concluded that:

“ the ‘breach and penalty’ system only applies to those receiving RPID muirburn-related support payments. No other penalty systems, other than prosecution for failing to notify neighbours or undertaking muirburn outwith the specified time periods, address non-compliance with the Muirburn Code. Both issues represent major weaknesses in promoting the sustainable management of muirburn.”

Moreover, given that muirburn has not been systematically recorded or monitored, assessing compliance with the code is challenging. The Werritty review noted that:

“ Although the Muirburn Code is designed to minimise the likelihood of detrimental impacts by promoting ‘good’ practice, there have been no assessments to date of levels of adherence to the good practice detailed in the Code. In the absence of a robust system of monitoring compliance, plus the relatively few instances under the Code of the withholding of RPID payments under cross compliance, it is not currently possible to assess the Code’s effectiveness.”

Part 1: Wildlife management

Part 1 of the Bill includes provisions on:

- Glue traps
- Regulation of certain wildlife traps
- Licensing of land for killing and taking of certain birds (grouse moor licensing)
- Investigation of wildlife offences.

Glue traps

Glue traps and the existing law

Glue traps (also known as glue boards) are used for a variety of purposes, including to control rodents, mainly rats and mice. They are trays coated with strong adhesive. Once the animal steps onto the board it is likely to be stuck to it and is unable to free itself.

Glue traps are used by contractors for example in food premises (where the use of rodenticide poisons may be undesirable due to the risk of poison contamination) but are also generally available for purchase online. The pest control industry [has developed a voluntary code of practice for their use](#).

The use of glue to trap birds is an offence under [the Wildlife and Countryside Act 1981](#). There is currently no legislation governing the use of glue trap boards to catch rodents in Scotland. Should an animal be caught in one, the Policy Memorandum to the Bill states that "they immediately fall under" [the Animal Health and Welfare \(Scotland\) Act 2006](#) since the animal is now "under the control of man" - which is required for protection under the Act. This means, among other things, that it is an offence to cause the animal unnecessary suffering by an act or omission if the person knew or ought reasonably to have known that the act or omission would have caused the suffering or be likely to do so. The Policy Memorandum states that under the existing law, "Operators of glue traps should humanely dispatch any target species caught, or extricate and release, or if necessary, humanely destroy any non-target species accidentally caught".

Regulation in other parts of the UK

In England, [the Glue Traps \(Offences\) Act 2022](#) makes it an offence for member of the public to use glue traps. Professional pest controllers who wish to use glue traps will only be able to do so under licence. The ban will come into force in April 2024. In Wales, provisions to ban the use of glue traps for members of the public and professional pest controllers are included in [the Agriculture \(Wales\) Bill introduced to the Senedd on 28 September 2022](#).

The Policy Memorandum sets out that the Scottish Government considered mirroring the approach taken in England i.e enabling pest controllers to continue using glue traps under licence, but decided not to take this route setting out a number of reasons including:

- Regardless of whether they are being utilised by a professional or member of the public, it is not possible to use a glue trap in a way that does not cause unnecessary

suffering.

- There is no Standard Occupational Classification Code for pest controllers, no qualifications or licence are needed to work in the pest control industry and no regulatory authority oversees them. This would make it difficult to operate exemptions.
- Alternative methods of rodent control are available .
- Where glue traps have been banned in other countries, pest controllers have been able to adapt and use alternative methods of rodent control..

Scottish Parliament Petition and Scottish Animal Welfare Commission report

A petition (PE01671) on Sale and Use of Glue Traps, calling on the Scottish Parliament to urge the Scottish Government to ban the use and sale of glue traps, [was lodged in 2017 and considered by the Public Petitions Committee in Session 5 of the Scottish Parliament](#). Animal welfare concerns raised included that glue traps are cruel, indiscriminate (catching target and non-target species such as birds or mammals other than targeted rodents, including pets), and cause prolonged suffering to any animal caught in them. Although guidelines for usage are that traps be checked frequently and any caught animal be killed humanely, it was argued that these are often not followed and animals are left to die from injuries, suffocation or starvation.

The Committee received submissions from the Scottish SPCA, the British Veterinary Association, and the Humane International Society UK supporting a ban. In 2020 the Committee agreed to close the petition on the basis that the Scottish Government had indicated its preference to legislate for a ban on the sale and use of glue traps to members of the public, once there was a suitable bill to take this legislation forward.

In response to concerns raised, the Scottish Government sought advice from the Scottish Animal Welfare Commission (SAWC). SAWC published its [Report on the use of rodent glue traps in Scotland in March 2021](#). The report drew on views from the pest control industry, enforcement and government advisory bodies and animal welfare stakeholders, and reviewed approaches in other countries.

The SAWC report noted:

“ unanimous recognition that glue traps cause animal suffering, with the majority of respondents indicating the likelihood that their use causes significant and potentially prolonged animal suffering to the target species. Importantly, concerns are not isolated to a particular aspect of the use of glue traps and even with optimal use (frequent checking and effective dispatch) there remains a significant animal welfare concern. It is the view of the Commission that there is no way that glue traps can be used without causing animal suffering.”

SAWC concluded in its review that the animal welfare issues connected with the use of glue traps would justify an immediate outright ban on their sale and use. This was its "preferred recommendation". Given some agencies suggested in some cases there is no alternative to the use of glue traps as a last resort, SAWC recommended a licensing approach - in instances where there was a clear risk to public health - if the Scottish

Government was not minded to introduce a ban.

Reviewing legislation in other countries, the SAWC report states:

“ In those countries that have introduced legislation, the general direction is toward licensing the use of glue traps in specific and limited circumstances and the use of glue traps by the general public has been banned. Where a strict licensing approach has been adopted the number of applications for such licences has reduced significantly or has not occurred at all. The Commission concludes that an outright ban on the sale of glue traps to the general public is appropriate and that to further reduce (and ultimately end) their use, a very strict licensing approach should be adopted for industry users.”

What the Bill does: Sections 1-3

Sections 1 -3 of the Bill regulate the use of glue traps in Scotland.

The Bill will make it an offence to:

- Without reasonable excuse, use a glue trap for the purpose of killing or taking any animal other than an invertebrate (section 1(1))
- Without reasonable excuse, use a glue trap in a manner that is likely to cause bodily injury to any animal other than an invertebrate that comes into contact with it (section 1(2))
- Without reasonable excuse, purchase a glue trap that is designed to capture any animal (other than an invertebrate) unless this is purchased for use outwith Scotland and is delivered outwith Scotland (section 2).

Glue trap is defined in the Bill in section 1(5) as a trap that is designed, or is capable of being used, to catch an animal other than an invertebrate, and uses an adhesive substance as the means, or one of the means, of capture.

These offences are liable on summary conviction to a maximum penalty of 12 months' imprisonment, or a £40,000 fine, or both. On conviction on indictment, they carry the maximum penalty of five years imprisonment, or an unlimited fine, or both. These penalties are consistent with the approach to wildlife and animal welfare crime penalties implemented by [the Animals and Wildlife \(Penalties, Protections and Powers\) \(Scotland\) Act 2020](#).

In recognition that individuals and professional pest controllers who currently use glue traps will need time to adapt to and develop alternative methods of rodent control, the Bill provides that the glue trap provisions will be brought into force by regulations. The Policy Memorandum states that the Scottish Government intends to bring regulations into force to commence the ban on the use glue traps "after a transition period". The length of transition period is not specified, however the Scottish Government [consulted on a two-year transition period](#) which might indicate intentions.

The Bill purports to follow the recommendations made by SAWC in its report discussed in the previous section. The Policy Memorandum sets out the animal welfare drivers for these provisions of the Bill:

“ Wild animals, including rats and mice are sentient creatures and as such are capable of experiencing pain and suffering. A ban on the use of glue traps will have a positive impact on animal welfare standards in Scotland. Not only will fewer target species suffer as a result of being caught by glue traps, but it is expected that nontarget animals – which can fall victim to glue traps – will also benefit from the ban.”

The [Scottish Government's BRIA published alongside the Bill](#) considered the impact of these provisions on pest controllers and sets out:

- Not all professional pest controllers use glue traps and for those who do use them, they are not the primary method of rodent control used, but rather a last resort.
- Evidence suggests substitute methods are available such as ‘breakback’ traps to control rodents, live box traps, snap traps and electric traps, as well as deterrence and exclusion.
- Ongoing contracts with professional pest controllers focus mainly on prevention.
- As a result of campaigns by animal welfare groups, a number of retailers have already agreed to stop selling glue traps.
- A survey of Scottish Local Authorities found that the majority (11 out of the 14 who responded) never use glue traps, two stated they do not provide a pest control service, and one confirmed that they do not regularly use glue traps but would consider using them where there is justifiable concern for public health and no alternative practical solution.

Stakeholder views

Whilst stakeholders all tend to recognise animal welfare concerns about use of glue traps, there is disagreement between different groups - largely between animal welfare stakeholders and the pest control industry - about whether glue traps should still be available as a last resort for public health reasons. Please note that this section aims to illustrate the key strands of the debate, rather than provide an exhaustive summary of stakeholders views.

The [British Pest Control Association \(BPCA\)](#) - the professional association for the UK public health pest management industry - is against a ban and in [written evidence to the RAI Committee on the Bill states](#):

“ Glue boards are essential for public health. A complete ban on rodent glue boards in Scotland will have a devastating impact on human health and safety. Everything from hospital wards to school lunchrooms will be liable to close while extended pest management programmes occur.”

It also states that a ban will negatively impact the food and hospitality sector, as rodents carry and transmit disease, where failure to act quickly in a high-risk environment "can result in sickness, distress and death". It states that without glue traps, rodent management will take longer, meaning temporary closures of sites, such as food and hospitality businesses, hospitals and care home wards, food preparation areas, critical infrastructure and government buildings. It states that there are "no viable alternatives to glue boards when speed is crucial".

The BPCA recommends that instead of a blanket ban, glue traps should be banned for untrained users and the general public, but should remain an option for qualified pest controllers via licensing, as a last resort for reasons of public health.

A number of animal welfare stakeholders support the ban, including the Scottish SPCA, OneKind and the British Veterinary Association. The Scottish SPCA [state in written evidence to the RAI Committee](#) that it has "long been opposed to the use of glue traps due to the level of suffering they cause and their indiscriminate nature" and it does not support a transition period, but would like to see an immediate ban. In written evidence to the RAI Committee, [SAWC recommends that the ban on glue trap use by individuals be brought in as soon as possible](#), as this would have a significant impact on unmonitored domestic use.

The Scottish SPCA reference instances where they have sought to rescue non-target species from glue traps, or euthanise animals harmed by glue traps including birds and a fox.

In written evidence to the RAI Committee, [Police Scotland states that it agrees with the proposed ban](#) but seeks clarification on what would be considered a "reasonable excuse" for using glue traps. Police Scotland also suggests there should be a discussion about a potential new offence in of possession of glue traps in addition to the offence of purchasing, noting there could be some dubiety around the offence of 'acquiring' a glue trap.

Potential Scottish Government amendment at Stage 2 if Internal Market Act exclusion agreed

The Policy Memorandum also states that the Scottish Government wish to ban the sale of glue traps, as well as their use or purchase, but that this has been impacted by [the UK Internal Market Act 2020](#) (the UK IMA).

The UK IMA provides that any goods that are lawfully sold in one part of the UK can also be sold in the other parts of the UK, as long as the goods comply with any statutory rules or regulations in the part of the UK in which they were produced or into which they were imported (the "mutual recognition principle").

The Policy Memorandum states that for a ban on the sale of glue traps to be compliant with the UK IMA, the Scottish Government is exploring the possibility of gaining an exemption to the UK IMA. Should this be granted; the Scottish Government intends to bring forward an amendment at Stage 2 or Stage 3 of the Bill.

The [process for the consideration of exclusions to the UK IMA in Common Framework areas is set out on the UK Government website](#). The UK Government and devolved administrations [have agreed a Provisional Common Framework on Animal Health and Welfare](#).

Wildlife traps

Wildlife traps and the existing law

A range of different kinds of (lethal and non-lethal) wildlife trap are used in game management, the pest control industry, conservation management, farming and sometimes by domestic users.

Existing rules on wildlife traps are found across a number of legal instruments. [The Animal Health and Welfare \(Scotland\) Act 2006](#) is also generally relevant to trapping, in that it provides that it is an offence to cause a protected animal unnecessary suffering by an act if the person knew or ought to have known that the act would cause such suffering or would be likely to do so.

Live capture bird traps

There are a range of [existing requirements for the use and registration of live capture bird traps](#) (such as crow cage traps and Larsen traps) which can be deployed under General Licences. Section 1 of the [Wildlife and Countryside Act 1981](#) makes it an offence to kill, injure or take any wild bird. However, for some common bird species that are generally accepted to cause certain types of damage, or pose specific threats, NatureScot can issue 'General Licences' to kill or take birds under specific circumstances, while adhering to certain conditions. A General Licence means that an individual can use that licence, without application to NatureScot, as long as they abide by the conditions of the General Licence. General licences for live bird traps include welfare provisions such as on how often traps should be checked, and provision of food and shelter.

Under existing rules, operators of crow cage traps and Larsen traps are required to register with NatureScot and must display a single tag or sign that shows the NatureScot Trap Registration Number which allows the individual operator to be identified.

Snaring

The Bill does not currently impact on snaring but provisions may be introduced at Stage 2 - more information on this [is set out below](#).

The use of snares i.e. a trap using a noose to capture certain animals e.g. foxes and rabbits is currently permitted in Scotland, however, it must be carried out in accordance with a number of requirements set out in section 11 of [the Wildlife and Countryside Act 1981 \(as amended\)](#). For example, as snares are intended to restrain only target species, they must be checked at least once in every 24-hour period. It is an offence to use or set a snare in a position which is of a nature that it could cause bodily injury to any wild bird coming into contact with it.

The [Wildlife and Natural Environment \(Scotland\) Act 2011](#) made a number of amendments to the Wildlife and Countryside Act 1981, introducing new requirements for the operation of snares, including the introduction of training, record keeping and identification tags registered with NatureScot. The provisions also introduced the need for establishment of approved training bodies to deliver snare training, and created an administrative role within Police Scotland to maintain records of trained operators. The changes were implemented between 1st January 2012 and 1st April 2013 .

Spring traps

Spring traps are governed by the [Agriculture \(Scotland\) Act 1948](#) and the [Spring Traps \(Approval\) \(Scotland\) Order 2011](#) (the STAO), as well as the [Wildlife and Countryside Act 1981](#).

Unlike for live capture bird traps and snares, there are currently no requirements for operators of spring traps (or small mammal live capture cage traps) to be registered with NatureScot or display ID numbers on traps.

Werritty recommendations and animal welfare concerns

The Policy Memorandum states that the aim of the changes in the Bill is to "ensure that wildlife trapping is being undertaken in an environmentally sustainable manner".

The [Werritty review sets out concerns](#) both that traps can be associated with illegal raptor persecution, and that the lawful use of traps can result in the capture of and injury to raptors and other unintended harm to wildlife. The Werritty review recommended that:

- "New legislation should be introduced to make it a legal requirement that it becomes an offence to set or operate a trap without an operator having successfully completed a course run by an approved and accredited body and dealing with the relevant category of trap (cage and/or spring).";
- "A trap operator who has successfully completed a relevant trap training course should apply to their local police station for a unique identification number which must be attached to all traps that are set."; and
- "That any operator dealing with the relevant category of trap (cage and/or spring) should undergo refresher training at least once every ten years."

It also noted that "Increased regulation on the use of snares was introduced a few years ago and provides a model for other activities".

Scottish Government response and consultation

In its [response to the Werritty review](#), the Scottish Government accepted that the use of traps is sometimes necessary to enable land managers to control certain species to protect livestock, crops, and wild birds. However, it also stated that the lawful use of traps can result in unintended harm to wildlife and "there are occasions where traps are not being deployed or used in a manner that is compliant with the current regulations".

It also noted that the Werritty recommendations would bring regulations for trapping broadly in line with those for snaring, and the requirement for record keeping and individual trapper IDs would inform a better understanding of the level of trapping being undertaken in Scotland.

The Scottish Government consulted on including a variety of traps in the wildlife trap licence provisions in the Bill in its [Wildlife Management in Scotland](#) consultation. The provisions of the Bill below cover spring traps and live capture bird traps and there is information in the Policy Memorandum about potential further action on snaring.

Specifically regarding cage traps used for the live capture of wild mammals, the Scottish Government decided following consultation that licensing this kind of trap "could have

unintended consequences" and that these "were not assessed by the Werritty review", as the remit of the review only considered traps as they pertain to grouse moor management and raptor persecution. The Scottish Government states in the Policy Memorandum that it is not aware of "evidence that cage traps (other than those designed to capture corvids and usually on or around grouse moors) have been used with the intent to illegally capture raptors".

What the Bill does: Section 4 - Regulation of certain wildlife traps

Section 4 of the Bill increases regulation of the use of certain wildlife traps, by amending [the Wildlife and Countryside Act 1981](#), inserting new sections 12A to 12G, to introduce a wildlife trap licensing scheme for certain kinds of traps.

Regarding the need for additional regulation of wildlife traps, the Policy Memorandum states:

“ The illegal use of traps on and around grouse moors continues to be an issue. In May 2019 a hen harrier was found caught in a spring trap that had been illegally set next to its nest on a grouse moor in South Lanarkshire. In January 2022, NatureScot restricted the use of general licences on a grouse moor in Perthshire based on Police Scotland evidence of wildlife crime that included a satellite-tagged hen harrier, found dead in an illegally set spring trap. Where live capture traps have been used to persecute raptors, they are usually either ladder traps, or funnel traps. Designed to capture corvids, a decoy bird (often a carrion crow but certain other decoy species are also permitted) is placed inside the trap to attract corvids or other target species. Birds that are attracted to the trap can enter via the roof, either through the horizontal slots of the ‘ladder’ or via a ‘funnel’. Once inside the trap it is virtually impossible for the birds to escape unaided.”

Who will require a wildlife trap licence?

The requirement for a licence will apply to individuals using traps for the purpose of taking wild birds, and spring traps approved by an order made under section 50 of [the Agriculture \(Scotland\) Act 1948](#). Currently this is only [the Spring Traps Approval \(Scotland\) Order 2011](#) (“the STAO”), which includes a table listing approved types and makes of spring trap.

Individuals using those traps must hold a licence and also:

- Register with the relevant authority (Scottish Ministers or if delegated NatureScot) for a unique licence number
- Complete training each time they apply or renew their licence (with training courses approved by the relevant authority)
- Display this unique licence number on each trap they use in a readable manner - either directly on the trap or on a tag that is fitted on the trap in such a manner that it is not capable of being easily removed; and
- Use the trap in accordance with the training.

The Policy Memorandum states that the intention is to delegate licensing to NatureScot,

who will issue guidance on what evidence must be submitted when applying for a licence, and will consult with stakeholders in developing that guidance and consult on the required training.

Offences and penalties

A person who fails to comply with the requirement to hold a licence and uses one of the traps set out above, or has a licence but fails to display it as set out above or use and monitor it appropriately in accordance with the training course, will be guilty of an offence. A person who without reasonable excuse, uses a trap on any land without the authorisation of the owner or occupier of the land, or has a trap in their possession without that authorisation, will be guilty of an offence.

Penalties for the above offences are, on summary conviction, to imprisonment for a term not exceeding 6 months or a fine not exceeding level 5 on the standard scale (or both). The Policy Memorandum states that this level of penalty mirrors the penalties for comparable offences for snaring identification numbers.

Application and fees

The relevant authority (expected to be NatureScot) can require payment of a reasonable fee to accompany an application for a wildlife trap licence. The Policy Memorandum states that although NatureScot does not currently operate licences on a cost recoverable basis, a review is expected which will assess the potential to apply the principle of full cost recovery to species licensing, therefore the Bill allows for the possible introduction of charges.

A wildlife trap licence can be granted or renewed "for a period not exceeding 10 years" and must specify the person to whom it is granted, the licence number, identify the type or types of traps to which the licence applies, and specify "any conditions the relevant authority considers appropriate to attach to the licence". The Policy Memorandum states that such conditions could include "for example, the keeping of appropriate records".

Modification, suspension and revocation of licence

The relevant authority may modify a wildlife trap licence at any time, and may suspend or revoke a licence if the licence holder fails to comply with any conditions attached, or the relevant authority "is satisfied that the licence holder has committed a relevant offence".

A wildlife trap licence may also be suspended if there is an official investigation or proceedings in relation to a suspected relevant offence and the relevant authority is satisfied that if the suspect or accused (as relevant) were to be convicted, the relevant authority would then be satisfied that they had committed a relevant offence.

"Relevant offences" are:

- Section 11 to 11C, 11E, 12A, 12F or 17 of the Wildlife and Countryside Act 1981 - which relate to the prohibition of certain methods of killing or taking wild animals, offences relating to snares, the offences introduced in this Bill regarding wildlife trap licences, and making false statements to obtain a licence
- Section 50 or 50A of the Agriculture (Scotland) Act 1948 -which relate to night shooting of rabbits and hares, and illegal use, sale or possession of spring traps

- Regulation 41 of The Conservation (Natural Habitats, &c.) Regulations 1994 - which prohibits certain methods of taking or killing wild animals
- The Wild Mammals Protection Act 1996 - which prohibits a number of specified cruel acts against wild mammals
- Section 1 or 2 of the Wildlife Management and Muirburn (Scotland) Act 2023 - provisions in this Bill regarding glue traps.

The Policy Memorandum states that these offences "are considered to be offences closely linked to the misuse of traps or causing the suffering of a wild mammal".

Appeals

The Bill does not set out an appeals process in relation to decisions by a licensing authority on wildlife trap licences. The Policy Memorandum states that NatureScot has an established internal appeals process that will be extended to cover wildlife trap licences, and that as a public body, NatureScot also fall under the remit of the Scottish Public Services Ombudsman (SPSO).

Further provisions - delegated powers

Section 12G introduces delegated powers for Scottish Ministers to make further provisions on wildlife traps by regulations, with a requirement to consult NatureScot and such persons as they consider likely to be interested in or affected by wildlife trap licensing, relating to (a) the use of a wildlife trap requiring a wildlife trap licence (b) displaying of licence numbers on traps, and (c) approved training courses. Regulations may also expand on the "relevant offences" listed above.

Section 12A(8) provides Scottish Ministers the power to amend by secondary legislation, the types of traps to which these provisions apply. The Policy Memorandum states that this will allow the the Scottish Government "to flexibly respond to the way traps are used in the future, for example, should evidence come to light that traps that do not fall within these provisions are linked to raptor persecution". It would also allow flexibility to regulate new types of trap if necessary.

What the Bill does: Section 5 - Increased penalties for illegal use of spring traps

Section 5 of the Bill increases the maximum penalty for the offence in section 50 of [the Agriculture \(Scotland\) Act 1948](#).

A person convicted of using, or knowingly permitting the use of, any spring trap other than an approved trap will be liable on summary conviction to a term not exceeding 12 months or a fine not exceeding £40,000 (or both) and on indictment to imprisonment for a term not exceeding five years or an unlimited fine, or both.

The Policy Memorandum states that this increase is in line with the approach implemented by the [Animals and Wildlife \(Penalties, Protections and Powers\) \(Scotland\) Act 2020](#) which increased the maximum penalties for a range of wildlife crimes to 5 years and/or an unlimited fine under solemn procedure (used for more serious criminal proceedings).

Stakeholder views

The provisions in the Bill on wildlife traps apply to all trap users whether for conservation, sporting, agricultural or other land management purposes, i.e. not just use of traps on grouse moors.

There is disagreement between stakeholders regarding the need for additional regulation of wildlife traps. Please note that this section aims to illustrate the key strands of the debate, rather than provide an exhaustive summary of stakeholders views.

There is general support for increased regulation of wildlife traps from animal welfare and conservation organisations such as OneKind, RSPB Scotland, the Scottish SPCA and the Scottish Animal Welfare Commission, in order to address or mitigate concerns about animal cruelty and suffering (of target and non-target species), concerns about misuse of traps associated with wildlife crime, and potential implications for biodiversity.

The REVIVE Coalition campaign for increased regulation of Scotland's grouse moors in a number of areas including on wildlife traps. One of its member organisations, the [League Against Cruel Sports](#), has published a report claiming a survey it commissioned shows "Grouse shooting in Scotland is dependent on killing up to a quarter of a million animals in traps and snares each year, and nearly a half of these will be non-target species". It states that "failure to comply with codes of practice is widespread on Scottish grouse moors". The Coalition states that it recognises that "on some occasions - like ethical conservation work - wildlife management can be deemed necessary and justified if approached properly" but "the killing to kill on grouse moors that is wholly unnecessary and not representative of a modern and progressive Scotland". [It argues that seven "ethical principles of wildlife control" should be applied to grouse moors.](#)

The Scottish Animal Welfare Commission [states in written evidence to the RAI Committee](#):

“ We welcome the requirement for training in order to qualify for a licence and we recommend that this contains a discrete animal welfare component, delivered by an independent expert. Training could usefully cover animal sentience and animal behaviour, allowing participants to gain an accurate insight into the impact of live traps and spring traps on animals’ experiences prior to death.”

The [Scottish SPCA has concerns about suffering caused by wildlife traps](#), stating it has investigated cases on grouse moors where wildlife has been targeted including hen harrier, and experience of traps not being checked as required. The [British Veterinary Association suggest](#) that record-keeping and reporting requirements should be attached to licensing and cover data on non-target species that were caught using licensed traps, in order to assess the effectiveness of the traps.

[RSPB Scotland states in written evidence](#) that as a landowner, the killing or taking of vertebrates is a matter of last resort and should be justified on a case - by - case basis, but that lethal, humane control measures may sometimes be required. However, it supports the proposed licensing regime in the Bill and states that the current system for regulating live bird capture traps (via General Licences) is poorly monitored and open to abuse. It states that over twenty years, the organisation has "witnessed, documented and reported to the Police, Scottish SPCA and/or the licensing authority numerous instances where such traps are used as 'cover' for the criminal destruction of birds of prey, particularly through the abuse of cage traps permitted to catch corvids, or other instances where there is a complete disregard of the conditions of use for such traps".

RSPB Scotland also notes that NatureScot is conducting a wider review of species licensing and recommends that this be expedited so recommendations can be incorporated into the Bill if needed. It suggests there is a need for standardisation of regulations governing all devices used to trap animals and birds, to provide clarity both for practitioners and enforcement.

Concerns about impacts on rural livelihoods and evidence base for regulation

There are concerns, largely from rural and sporting estates and gamekeepers, about the proportionality of the proposals and whether there is sufficient evidence on misuse of traps on grouse moors to support the need for increased regulation. [Concerns expressed include:](#)

- The administrative burden for gamekeepers or estates will be harmful to rural livelihoods and is disproportionate
- That tampering with traps e.g. by animal rights activists to make it appear as if an offence has been committed may expose individuals to risk of prosecution
- Whether there is sufficient evidence linking current use of wildlife traps with raptor persecution. Scottish Land & Estates state that the latest Scottish Government wildlife report has shown "that the persecution of raptors using traps is infrequent compared to shooting and poisoning"
- That the Bill gives NatureScot broad discretionary powers which may create uncertainty
- That there is no statutory right of appeal for refusal, suspension or revocation of a licence

The [Game and Wildlife Conservation Trust states](#) that whilst additional regulation may impose administrative burdens, such requirements may also assist trap operators to demonstrate compliance, best practice and conservation benefits. It states that the introduction of training, registration and ID numbers for snare operators has "materially contributed to improvement in management practice". It notes that extending these standards to other traps "seems a practical step, but only if there is consistency and streamlining of administration, training, oversight and to obviate the need for multiple Identity tag numbers".

Use of traps in agriculture

Regarding views of users of wildlife traps outwith grouse moor management, the [National Farmers Union Scotland \(NFUS\) agrees that ID numbers are appropriate for traps set in remote locations](#) but would prefer to see the requirement apply only to those set outwith a steading or holding, where it is not immediately obvious who is responsible for the trap. It does not believe it would be proportionate for training to be required for use of traps for rodent control in and around farm buildings. Similarly [the Scottish Crofting Federation states it agrees with a licensing system](#) but not in relation to traps used for rodents.

Potential Government amendments on snaring at Stage 2

The Policy Memorandum states that the Scottish Government has committed to reforming

snaring legislation and that this will include "consideration of whether a ban on the use of snares should be introduced". It states that in order to allow sufficient time for analysis of the findings of this review, "the Scottish Government intends to introduce provisions on snaring at Stage 2".

Snaring reviews

Under [section 11F of the Wildlife and Countryside Act 1981](#) (inserted by the Wildlife & Natural Environment (Scotland) Act 2011), the Scottish Government must carry out a review of the operation and effect of key legislation on snaring and lay a report in the Scottish Parliament every 5 years.

The Scottish Government [published the most recent review, Review Of Snaring For Scottish Government in November 2022](#). Its findings include:

- Snaring legislation should be amended in order to require operators to update snaring records at least every 48 hours, introduce disqualification orders for snaring offences, and to introduce a statutory code of practice for snaring
- The number of reported incidents of snaring-related offences during the review period (2017-2021) has reduced compared to the previous review (2012-2016). However, the number of cases notified to the Scottish SPCA is "still high"
- There is a need for further assessment of some issues e.g. temporary revoking of ID numbers, refresher courses and how rules apply where operators allow others to check snares
- Given continuing concerns regarding the welfare of animals caught in snares, a wider review of snaring should be undertaken as soon as is practicable.

A [previous review \(the first statutory review\) was published by SNH in 2017](#). The 2022 review notes there are outstanding recommendations from the 2017 review.

Scottish Animal Welfare Commission 2022 position paper - recommending a ban on snares

SAWC published [a position paper on snaring](#) on 14 December 2022. It concluded:

“ Wild mammals and birds are known to be sentient and capable of experiencing pain and other negative sensations. Any traps that do not instantly kill or render them irreversibly unconscious are likely to impact their welfare. Therefore, the use of snares in the lethal control of terrestrial mammals raises significant welfare concerns. Non-target species caught in snares will also suffer and may die, often very slowly. Neonates and juveniles may starve to death, if traps catch an adult on which they are dependent within their breeding season. SAWC concludes that snares cause significant welfare harms to members of both target and non-target species.”

In the report, **SAWC recommends that the sale of snares and their use by both public and industry are banned in Scotland**, on animal welfare grounds.

Provisions to ban the use of snares are included in [the Agriculture \(Wales\) Bill introduced to the Senedd on 28 September 2022](#).

Licensing of land for killing and taking of certain birds (grouse moor licensing)

Sections 6 and 7 of the Bill introduce a new licensing regime for the shooting of red grouse, via amendments made to the Wildlife and Countryside Act 1981. A “section 16AA licence” will be required, issued by the relevant authority.

Grouse moors and the existing law

There is no current overarching licensing regime for grouse moors although specific land management activities are subject to a range of statutory and non-statutory rules and guidance, as set out in this briefing for example in sections on wildlife traps and muirburn.

Landowners have the right to take game on their land or to allow other persons to do so for sporting purposes. Sporting rights give the right to take wild birds and animals (while compliant with the relevant law) as part of the property rights pertaining to a specific parcel of land. The holder of the sporting rights can give permission to others to use this right over the specific land, but the primary right remains with the owner of the land.

This right is modified through various legislation, most notably [the Wildlife and Countryside Act 1981](#) which prevents the killing of all wild birds and then allows those with the legal right, or those with permission from the person with that legal right, to take and kill certain species with various conditions under licence. NatureScot sets out [detailed requirements under General Licences on](#).

Mountain hare culling is also [subject to licensing by NatureScot](#) (background to this is set out in an earlier section of this briefing).

Regulation of game shooting in other countries

The Scottish Government [requested NatureScot \(then SNH\) to conduct a comparative review of how game bird hunting is regulated](#) - including through licensing – in 14 countries across Europe. Its 2017 report found that "all 14 countries have legislation to regulate hunting, promote sustainable hunting and require individual hunters to be licensed. Licences can be revoked in all 14 countries if hunting law is breached – and in most countries a serious breach may incur other penalties."

Werritty Review consideration of grouse moor licensing

The [Werritty review stated in November 2019 regarding whether overarching licensing for grouse shooting should be introduced](#):

“ All recommendations on licensing are based on scientific evidence and with due regard to the contribution that grouse shooting makes to the rural economy in sparsely populated areas. On whether or not to introduce licensing for the activity of shooting grouse, the Group was evenly split (with arguments for and against detailed in Appendix 1). In light of this, and with the Chair choosing not to exercise a casting vote, **we unanimously recommend that a licensing scheme be introduced for the shooting of grouse if, within five years from the Scottish Government publishing this report, there is no marked improvement in the ecological sustainability of grouse moor management, as evidenced by the populations of breeding Golden Eagles, Hen Harriers and Peregrines on or within the vicinity of grouse moors being in favourable condition.** This recommendation, whilst science-based, also reflects values and opinions that differ across members of the Group. Ultimately, whether or not to license the shooting of grouse is a political decision.”

The report also recommends:

“ That a framework Code of Practice on grouse shooting be produced reflecting regulation specific to the sector and advising on best management practices. If statutory provisions are included, the Code would need approval by Scottish Ministers with SNH having oversight and ownership.”

In its wider discussion of how licensing may work if introduced, the review sets out:

- The lack of an agreed definition of the term ‘grouse shooting businesses’ as referenced in our remit means that, should licensing be introduced, a clear target must be identified
- If licensing were to be introduced, SNH (now known as NatureScot, but for the purposes of legislation is formally still SNH) should be the licensing authority using procedures allowing for both individual and general licences and with scope for any initial licensing scheme to be amended as required in response to changing conditions.

Appendix 1 of the report sets out arguments for and against licensing grouse shooting.

Other areas considered by the Werritty review, such as on medicated grit, are potentially relevant to this section of the Bill, if addressed via future contents of the proposed statutory Code of Practice.

Medicated grit

Grouse moor management can include the use of medicated grit - grit normally coated with flubendazole - used to suppress worms in grouse to enable numbers to be maintained at a higher level. The use of medicated grit is controlled by the [Veterinary Medicines Regulations 2013](#) with [Guidance Note 13 on the use of Cascade](#) and also the [Wildlife & Countryside Act 1981](#).

The [Werritty review states](#) that "When used correctly, flubendazole has proved highly effective in reducing endemic strongyle worm levels in grouse guts with residues in food for human consumption presenting a very low risk".

However, the Werritty report set out a number of concerns about the use of medicated grit on grouse moors stating "Although there are estates following sustainable practices in the

use of medicated grit, many are not":

- The dosage supplied to birds must be determined by a veterinary prescription reflecting the current worm burden in grouse. However not all estates routinely determine worm burdens: some use medicated grit as an insurance and treat worms against perceived wider risks
- Land managers must ensure that no drug is ingested 28 days before grouse are harvested and enter the food chain - there is some evidence that this does not always happen. Current testing for flubendazole residues in the food chain is based on a small number of grouse samples each year and it is unclear what level of contamination would constitute a threat to human health
- Anecdotal evidence of grit piles on open mounds instead of in bespoke grit trays, and claims of grit piles being found too near to water courses - situations which could lead to "greater environmental contamination"
- More research is required on the potential development of drug resistance
- There is some evidence that flubendazole is toxic to aquatic organisms. At present SEPA does not test for the presence of flubendazole contamination in water bodies
- *Cryptosporidium* (an intestinal infection) has only been detected once on grouse moors in Scotland, but its presence in Northern England and connection to increased densities of grouse, with higher numbers visiting each grit tray, raises concerns for the future
- Attempts have been made to address these issues through guidance and workshops, but there is no system in place for monitoring the use of medicated grit.

The report recommended that **the use of medicated grit should be subject to increased regulation**, specifically:

- That SNH, following consultation with other appropriate bodies, should publish a Code of Practice on the use of medicated grit and all land managers using medicated grit to reduce the worm burden in Red Grouse populations should adhere to the Code of Practice
- That SNH should have powers to check compliance with the Code
- That if, after five years or less, following introduction of the Code, noncompliance is widespread, the option of introducing increased legal control should be considered.

Further recommendations on medicated grit were:

- That Food Standards Scotland should undertake work to identify the levels of flubendazole residues in grouse in the food chain that are harmful to human health
- That there should be wider training for veterinary surgeons on the use of medicated grit
- That SEPA should conduct a study on whether flubendazole residues exist in water bodies
- That future monitoring of *Cryptosporidium* in connection with use of medicated grit

should be undertaken should the associated risk prove necessary.

What the Bill does: Section 6 - Killing and taking of certain birds permitted only on land with section 16AA licence

Section 6 introduces provisions into the Wildlife and Countryside Act 1981 so that in the future, landowner rights to take red grouse can only be exercised under a '16AA licence'.

If a landowner (or other person permitted under legislation to take game on the land in which they occupy) does not hold a licence, then they will no longer be able to take red grouse on that land or to permit another person to do so. Where a person wishes to take red grouse on land that they do not own or occupy they will only be able to do so if they have permission from the landowner or occupier (or other person permitted by the landowner or occupier) and a 16AA licence is held in respect of that land.

Section 6 (5) amends Schedule 2 of the Wildlife and Countryside Act 1981 to set out which bird species may only be killed or taken on land with a section 16AA licence. The only species listed is red grouse. The Policy Memorandum states that "the Scottish Ministers can also add further birds to the licence regime if they thought it was appropriate to do so".

What the Bill does: Section 7 - Licensing: land on which certain birds may be killed or taken

Section 7 of the Bill introduces the licensing regime for 16AA licences by introducing sections 16AA to 16AD to the Wildlife and Countryside Act 1981.

Section 16AA provides that the relevant authority may, on the application of an owner or occupier of an area of land, grant a licence for the purposes of permitting the killing or taking of any type of bird included in Part 1B of Schedule 2 of the 1981 Act (currently only red grouse as set out above) "if it is satisfied that it is appropriate to do so".

Key aspects of a section 16AA licence and the application process under the Bill are:

- The **'relevant authority'** is Scottish Ministers or may be delegated to SNH (known as NatureScot). In practice the licensing regime is expected to be managed by NatureScot, which the Policy Memorandum states "mirrors the approach taken for the administration of other wildlife management licences"
- The **licence holder must be the owner or occupier of the land**, and so someone who holds the sporting right to shoot grouse
- The application must **specify the area of land** to which the licence is to relate by reference to a map
- The relevant authority can **specify what information is to be provided** with the application and in what form, and must publicise those requirements
- A licence may be granted or renewed **for a period not exceeding 1 year**
- In determining whether it is appropriate to grant a section 16AA licence, the relevant

authority "must have regard in particular to the applicant's **compliance with a code of practice** made in accordance with section 16AC"

- As with the provisions in the Bill on wildlife trap licensing, the relevant authority may charge a 'reasonable fee'. The Policy Memorandum sets out that although NatureScot does not currently operate licences on a cost recoverable basis, a review is expected to take place in this area, therefore the Bill allows for the possible introduction of charges.

The Policy Memorandum sets out the rationale for the licence attaching to the activity itself of shooting red grouse on a given area of land, thought to be the most straightforward approach given challenges in defining what is understood to be a grouse moor or a commercial grouse shooting business. It also aims to provide for a less administratively burdensome scheme compared to, for example, requiring everyone who wishes to shoot grouse to apply for a licence individually.

The licence is required regardless of the form of red grouse shooting i.e. whether it is 'driven' or 'walked-up', and regardless of the scale of shooting including whether or not it is happening as part of a commercial enterprise.

The Policy Memorandum also states that as with other licensing regimes, NatureScot will consult with stakeholders before issuing detailed guidance outlining the evidence that an applicant must submit.

Modification, suspension and revocation of licence

The relevant authority may modify the 16AA licence at any time. Grounds for suspension or revocation include a failure to comply with conditions of the licence, where the relevant authority is satisfied that a 'relevant offence' has been committed.

Where the relevant authority has not satisfied itself that a relevant offence has been committed but the licence holder or a person involved in managing the land is the subject of an investigation of a relevant offence, the licence may be suspended.

'Relevant offences' are those set out in:

- Offences set out in Part 1 of the Wildlife and Countryside Act 1981 - a range of wildlife offences including the offence of intentionally killing, injuring or taking any wild bird
- The Protection of Badgers Act 1992 - offences relating to badgers including the taking, injuring or killing of badgers or interfering with badger setts
- Part 3 of the Conservation (Natural Habitats, &c.) Regulations 1994 (S.I. 1994/2716) - offences related to European Protected Species
- Section 1 of the Wild Mammals (Protection) Act 1996- specified prohibited acts against wild mammals with intent to cause unnecessary suffering
- The Hunting with Dogs (Scotland) Act 2023 - the offence of hunting a wild mammal using a dog (with exceptions), or knowingly causing or permitting the hunting with a dog.

The Scottish Ministers may by regulations modify the definition of "relevant offence".

In relation to the rationale for the relevant offences included, the Policy Memorandum

states that "The purpose of the licensing scheme is to address the on-going issue of wildlife crime, and in particular the persecution of raptors, on managed grouse moors" and "It will do this by enabling a licence to be modified, suspended or revoked, where there is robust evidence of raptor persecution or another relevant wildlife crime related to grouse moor management such as the unlicensed killing of a wild mammal, or the unlawful use of a trap" which has been committed under the legislation specified.

The ability of NatureScot to make a decision about whether it is satisfied that a relevant offence has been committed is sometimes described as a decision on the 'civil burden of proof'.

Right of appeal relating to section 16AA licences

Section 16AB sets out a right of appeal against a decision of the relevant authority to refuse to grant a section 16AA licence, attach a condition to, modify, suspend or revoke a section 16AA licence. Appeals to the Sheriff are to be determined on the merits rather than by way of review and must be made within 21 days of the decision on the licence being made. The Policy Memorandum also sets out other complaint routes via NatureScot's internal processes or via a complaint to the Scottish Public Services Ombudsman.

New Code of Practice on Grouse Moor Management

Section 16AC requires Scottish Ministers (which may be delegated to NatureScot) to prepare a Code of Practice "for the purpose of providing guidance about managing land" under a section 16AA licence. It sets out that a Code of Practice may in particular provide guidance on:

- How land should be managed to reduce disturbance of and harm to any wild animal, wild bird and wild plant
- How the taking or killing of any wild birds should be carried out
- How predators should be controlled.

The Code must be reviewed every 5 years and may be revised following a review.

The Policy Memorandum further states that the Code "will also set out best practice for the use of medicated grit and other activities related to grouse moor management".

Expected financial impact on grouse moors

The Policy Memorandum states that grouse shooting makes an important contribution to the rural economy, and the [Scottish Government's BRIA for the Bill states](#):

"There will be little or no impact on those businesses that comply with the existing law. The cost to businesses who lose their licence due to illegal conduct is difficult to estimate, as the 2020 Socio-economic and biodiversity impacts of driven grouse moors in Scotland part 1 report found that grouse shooting businesses operated at an average net cost".

Implications of licensing for human rights

The Policy Memorandum states that the Bill is compliant with the European Convention on Human Rights (ECHR). Regarding implications of the proposed 16AA licensing regime for property rights, it states:

“ The protection of property rights under A1P1 [the right to peaceful enjoyment of possessions] is not absolute, and restrictions on these rights may be permitted provided they have a legitimate aim and are proportionate to that aim. The provisions of the Bill respect these principles in view of the aims of the prevention of cruelty to animals, the prevention of wildlife crime and protection of the natural environment. A fair balance is struck between those whose possessions are affected by the provisions of the bill and the wider general interest of prevention of cruelty to animals, prevention of wildlife crime and protection of the natural environment.”

Stakeholder reactions

There is disagreement between stakeholders regarding the need for additional regulation of grouse moors, including specifically through a licensing regime, and the impacts it will have on wildlife crime and the environment, livelihoods and the rural economy. Please note that this section aims to illustrate the key strands of the debate, rather than provide an exhaustive summary of stakeholders views.

As described [in a previous section of the briefing](#), the extent of a link between raptor persecution and grouse moors is an area of debate. Organisations representing rural estates and shooting interests such as Scottish Land & Estates, the British Association for Shooting and Conservation and Scottish Countryside Alliance [argue that the lack of clear evidence means the introduction of licensing is unnecessary and disproportionate](#).

[SLE raise concerns](#) that the Werritty report and 2017 SNH review of the fates of eagles are out of date as a basis for introducing licensing. SLE has also raised concerns that the SNH report did not establish at the time that eagles whose satellite tags failed or stopped transmitting had been killed or had disappeared.

[The Game and Conservation Wildlife Trust note](#) that there are clear imperatives to tackle climate change and biodiversity loss in Scotland, but state there is a risk that the Bill "establishes an inconsistent approach to land management best practice". The comparison is drawn with agriculture where current reform proposals concentrate on developing positive outcomes for carbon sequestration and biodiversity, whereas the proposals in this Bill focus on removal of licences, penalties and "offer very significant powers of discretion to NatureScot". It states there are risks of land abandonment "if enforcement is heavy-handed", and that upland management for grouse can "generate significant ecosystems services".

Conservation and animal welfare stakeholders tend to be in favour of licensing. [REVIVE is a coalition of social, environmental and animal welfare organisations](#) who have called for reform of Scotland's grouse moors since forming in 2018. The Coalition state in written evidence to the RAI Committee:

“ The decision to licence the shooting of grouse, an activity often surrounded by intensive and destructive land management practices, is a wholly reasonable step to take in order to put a stop to raptor persecution. The Scottish Government has correctly acknowledged that voluntary restraint has failed and so this wholly reasonable step has become totally necessary.”

The RSPB [has called for the licensing of driven grouse shooting across the UK since 2013](#). An [evidence review of peer-reviewed studies by the RSPB Centre for Conservation](#)

[Science in 2020](#) set out concerns about "growing environmental impacts of driven grouse shooting" in relation to conservation interests across the UK. In addition to concerns about raptor persecution, other concerns included the widespread use of medicated grit with "largely unknown wider environmental consequences" and "use of lead ammunition toxic to both humans and wildlife".

RSPB Scotland [states in written evidence to the RAI Committee](#):

“ The pattern of repeated offences taking place on a sizeable number of grouse moors, notably in the Southern Uplands and the Central and Eastern Highlands, demonstrates unequivocally that the current suite of sanctions available have failed to deter or prevent these crimes from continuing... ..We recognise that successive Scottish Governments have taken a number of steps to address the persistent problem of raptor crime linked to grouse moor management over the past two decades, including the introduction of incremental improvements to wildlife protection legislation and increased penalties available to the courts. However, it is now widely accepted that a step change with meaningful deterrents to wildlife crime is now needed. We therefore support most strongly the proposal to use a civil burden rather than a criminal burden of proof in raptor crime cases, with the public checks and balances provided by Police and NatureScot underpinning the proposed system of sanctions - including the ultimate sanction of the removal of the right of an owner/ occupier to shoot grouse on a specific area of land and where the public authorities are satisfied that wildlife crimes are occurring.”

Scope of relevant offences

Some stakeholders have raised concerns about the scope of relevant offences defined by the Bill (the basis upon which licences can be suspended or revoked) and their connection to the Bill's overarching policy aim to tackle raptor persecution. [SLE for example states that the Policy Memorandum offers no evidence](#) that these offences are common on grouse moors or that those offences impact upon raptors. It argues that the definition of relevant offences should be focussed on those that pose a risk to raptors, to align with the stated objectives of the Bill.

Human rights concerns

Some stakeholders have raised concerns that the proposed licensing regime could infringe on human rights, in particular in relation to how licensing interacts with and may limit property rights, and by introducing a 'civil burden of proof' in relation to areas currently dealt with under criminal law.

The [British Association of Shooting and Conservation states for example](#) that the right to shoot grouse is "inherent" to land ownership which is protected under the European Convention on Human Rights (ECHR) and that "unnecessary and disproportionate restrictions, such as the proposed licencing scheme, infringes on guarantees under the ECHR".

Concerns set out by stakeholders include:

- That NatureScot will be able to suspend a licence if there is an official investigation, but has not been prosecuted, with fears expressed about a risk of sabotage to the industry by those who disagree with shooting
- Licensing may interfere with rights under Article 14 of the ECHR which prohibits

discrimination on grounds “such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status” - indicating people who partake in grouse shooting may have protected characteristics.

On the other hand, some animal welfare stakeholders argue that licensing is a proportionate Government response which is comparable to other areas. The [Scottish Animal Welfare Commission for example states in written evidence](#):

“ SAWC sees the proposed licensing provisions as proportionate and consistent with other recently introduced measures to protect wildlife, such as the licensing scheme... under the Hunting with Dogs (Scotland) Act 2023. Licensing will provide for accountability on behalf of persons responsible for the management of land where activities take place that can affect the welfare of sentient wild animals.”

Implications for rural livelihoods and wider land management

Concerns have been raised that licensing may negatively impact on the rural economy, investment in moorland areas and affect job certainty on grouse moors. In [written evidence to the RAI Committee SLE states for example](#):

“ The Section 16AA licensing scheme... is fundamentally unworkable for all parties and, if introduced, risks causing serious and permanent damage to Scotland’s rural fragile communities, economy and environment. If a licensing scheme is to be introduced, it should be light-touch and risk-based, in line with the Scottish Government’s Better Regulation agenda.”

The [REVIVE Coalition argue that reform of grouse moors should be part of a wider transition](#) towards alternative, more sustainable land uses:

“ "The Werritty report estimates that grouse shooting contributes about £23 million to Scotland’s economy (0.02% of Scotland’s overall economy). Industry figures also suggest that grouse shooting provides around 2,500 direct and indirect jobs. Forestry, in contrast, contributes about a billion pounds to the economy and about 25,000 jobs while nature based tourism (excluding field sports) contributes over £1.2 billion to the economy.... ...Diversifying towards alternative land uses that are better for the environment and our wildlife can help our people by bolstering already successful sectors and, coupled with land reform, benefit rural Scotland significantly. This is why this Bill should be as strong as possible with regard to regulation of land used to shoot red grouse, to aid a just transition in order to benefit rural Scotland in the medium/ long-term.”

[RSPB Scotland states](#):

“ A licensing scheme explicitly does not mean an end to grouse shooting. We believe that it will drive a move towards higher standards and more sustainable approaches to gamebird shooting in line with the common standards of regulation of gamebird shooting adopted in most other European countries.”

Proposed Code of Practice

Animal welfare and conservation organisations tend to be supportive of the proposed introduction of a Code of Practice, for example to implement recommendations of the Werritty review on medicated grit, and to ensure that as a whole grouse moor

management is environmentally sustainable. On the other hand, the game-shooting industry has raised concerns that this goes beyond the policy aims of the Bill which are centred around raptor persecution, and could create uncertainty or disproportionate requirements.

Details of the proposed licensing system

Stakeholders have also expressed views around areas such as:

- Whether a one-year length for a licence is appropriate - with views both supportive and against
- Whether the Scottish Government should be able to add species to the licensing regime through regulations - again with views both supportive and against
- The extent to which NatureScot will have broad discretion to make decisions around the granting or removal of licences
- Whether safeguards in place regarding appeals of decisions around granting, modification, suspension and revocation of licences are sufficiently robust
- Whether licensing will be cost neutral to the public purse, as well as the financial burden for grouse moor businesses.

Investigation of wildlife offences (Scottish SPCA powers)

Background - calls for the Scottish SPCA to have powers to investigate wildlife crime

The Policy Memorandum sets out that if a decision is made to extend the Scottish SPCA's powers to investigate wildlife crime then **the Scottish Government will bring forward further provisions by amendment at Stage 2, following the outcome of further consultation.**

The Scottish Society for the Prevention of Cruelty to Animals (Scottish SPCA) is an animal welfare charity which acts as a reporting agency to the Crown Office and Procurator Fiscal Service (COPFS) in respect of animal welfare offences. It also has powers under [the Animal Health and Welfare \(Scotland\) \(Act\) 2006](#) to investigate animal welfare offences. [Scottish SPCA inspectors](#) may enter and search premises under warrant, seize animals and issue animal welfare notices if certain conditions are met.

There have been calls for a number of years to extend the powers of the Scottish SPCA in relation to wildlife crime with the aim of improving enforcement ⁸.

2010 Wildlife and Natural Environment (Scotland) Bill scrutiny and 2014 Scottish Government consultation

During [the passage of the Wildlife and Natural Environment \(Scotland\) Bill in 2010 and 2011](#), the Scottish Parliament debated extension of powers for the Scottish SPCA that would allow them to investigate a greater number of suspected wildlife crimes.

Amendments were tabled at stages 2 and 3 of the Bill but were withdrawn. The [Scottish Government made a commitment in 2011 to consult on the subject and subsequently published a consultation in 2014.](#)

The consultation stated:

“ It is widely accepted that wildlife crime is difficult to detect and investigate and that this leads to difficulties in mounting prosecutions and convicting those responsible. These crimes often occur in remote locations where there are few or no witnesses. When incidents are discovered it is often impossible for police officers to attend the scene quickly and delays increase the likelihood of any evidence being destroyed – either deliberately or simply as a result of exposure.”

The consultation stated that in 2012 the Scottish SPCA had 59 trained inspectors and five Special Investigations Unit officers, and although their powers do not allow them to investigate all wildlife crime incidents reported to them, during the five year period from 2007 to 2012 the Scottish SPCA were involved in 188 wildlife crime cases, 67 of which proceeded to prosecution and 37 of those prosecutions resulted in a conviction (some solely handled by the Scottish SPCA and some in which it assisted the police).

The consultation noted possible benefits and disadvantages of an extension of powers. Possible benefits were considered to include: "a broader range of situations open to investigation by the SSPCA, for example where there are no live animals present; an additional, specialist, resource made available at no cost to the public purse; and potentially quicker response times in circumstances where police resources are restricted". Possible disadvantages were listed as: "potential conflict between the SSPCA's campaigning position, on issues such as snaring, and the use of powers to investigate incidents associated with those issues; and perceived lack of accountability for decisions made by charities (in comparison to police forces for example)".

The consultation did not lead to an increase in the Scottish SPCA's powers.

2019 Scrutiny of the Animals and Wildlife (Penalties, Protections and Powers)(Scotland) Bill

The issue of the Scottish SPCA's powers resurfaced during scrutiny of the Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Bill (now 2020 Act) in the Scottish Parliament in 2019. [The lead Committee on the Bill, the Environment, Climate Change and Land Reform Committee, considered the issue](#) and stated in its Stage 1 report:

“ Given legislation only allows the SSPCA to enter land when an animal is actively suffering, this can lead to anomalous situations where, for example, if a live bird has been caught in an illegal trap, SSPCA inspectors could intervene, but could not look around it for other illegal traps or traps with dead animals. Stakeholders also made the point that, given wildlife crime often takes place in remote areas, it can be difficult for the police to prioritise attending within a timeframe that allows for the capture of evidence. The Committee agrees that in some situations the lack of powers of the SSPCA to gather evidence is an anomaly, and their resources and expertise could potentially be used effectively by expanding their powers in this area.”

Scottish Parliament Environment, Climate Change and Land Reform Committee , 2019⁹

The Committee recommended in its Stage 1 report on the Bill that the Scottish Government explore in detail the options to enhance detection and prosecution by

expanding the powers of the Scottish SPCA , as an approach to better resourcing wildlife crime enforcement ⁸ .

2022 Taskforce to review Scottish SPCA powers

The [Scottish Government's 2021/2022 Programme for Government](#) included a commitment to establish an independent taskforce to consider whether the Scottish SPCA "should be given extra legislative powers to investigate wildlife crime" and stated "This group will report before the end of 2022."

Subsequently, in 2022 the Scottish Government's (then) Minister for the Environment and Land Reform appointed a Taskforce to undertake a review as to whether the Scottish SPCA should be given additional powers, through legislation, to allow them to investigate wildlife crime. The review was [a commitment in the Bute House Agreement](#).

The Policy Memorandum states that this Taskforce has presented its report to Scottish Ministers (at the time of writing this is unpublished - a [Scottish Government response to an FoI request](#) suggests it received the report on 22 October 2022). The Scottish Government states that it "is considering the findings and will publish a full response shortly".

The Scottish Government [responded to a Freedom of Information request setting out who had been invited to participate in the review](#). This was:

- Police Scotland
- COPFS
- National Wildlife Crime Unit (NWCUC)
- Scottish SPCA
- RSPB Scotland
- NatureScot
- British Association for Shooting and Conservation (BASC)
- National Farmers Union Scotland (NFUS)
- Scottish Land & Estates (SLE)
- Scottish Gamekeepers Association (SGA)

The consultation on the Bill, [Wildlife Management in Scotland](#), indicates that if provisions to expand the Scottish SPCA's powers are included in the Bill following recommendations of the Taskforce, "a separate consultation with interested parties will be undertaken".

What the Bill does: Section 8 - Investigation of wildlife offences, and potential for Scottish Government Stage 2 amendments

The Bill does not extend the Scottish SPCA's powers in itself but creates delegated powers which would enable Scottish Ministers to do so by regulations.

Section 8 of the Bill introduces a power for Scottish Ministers to make regulations to expand the powers of animal welfare inspectors appointed by the Animal Health and Welfare (Scotland) Act 2006, specifically to enable them to investigate relevant offences relating to wild animals as set out in Part 1 of the Bill and Part 1 of the Wildlife and Countryside Act 1981.

Any regulations introduced under this section would be subject to the affirmative procedure.

Stakeholder views

There are mixed views regarding whether the Scottish SPCA's powers should be expanded to cover wildlife crimes. There is broad support for expanding its powers to investigate wildlife crime from animal welfare and conservation stakeholders. There are also concerns, in particular from the game-shooting industry and rural estates, that this extension of powers would not be appropriate given the status of the Scottish SPCA as an animal welfare charity.

In written evidence to the RAI Committee, [the Scottish Animal Welfare Commission \(SAWC\) states that](#) "wildlife crime causes severely adverse impacts on the welfare of wild animals and that the introduction of a cadre of officers experienced in wildlife welfare, evidence-gathering and joint working with other agencies would be beneficial". It notes the Scottish SPCA's "long record of successful investigation of animal welfare offences" and that as a reporting agency to COPFS "it meets high standards of evidence provision, objectivity and legislative understanding".

The Scottish SPCA [stated at the time that the Animals and Wildlife \(Penalties, Protections and Powers\) \(Scotland\) Bill was being scrutinised in the Scottish Parliament in 2020:](#)

“ At the Scottish SPCA, our priority is to help as many animals as we can. We have a nationwide pool of inspectors who would be able to enforce the law to protect wildlife right across Scotland. Now is the right time to establish a taskforce to review enforcement when it comes to tackling wildlife crime in Scotland and allow for the potential of extension of wildlife powers to be discussed in more detail.”

It also stated:

- "The Scottish SPCA anticipates around 2% of our prosecutions would relate to wildlife crime should we have the powers to investigate. We investigated over 82,000 reports of animals in need in 2019 and the majority of these related to injured wildlife."
- "We are already a reporting agency to the COFPS as we enforce the Animal Health and Welfare (Scotland) Act 2006. This means we are already accountable and provide prosecutions reports annually, and that we believe the extension of powers to investigate wildlife would have no impact on our charitable status."
- "We have over 60 inspectors posted across Scotland, each of whom would be able to investigate crimes against wildlife. This would provide much greater resource in Scotland to investigate and enforce the law."
- "The Scottish SPCA does not want any external funding to investigate wildlife powers. Extending powers would greatly increase available resource and be cost-neutral to

the taxpayer."

- "Under present law, the Scottish SPCA can attend to a report of an animal caught in an illegal trap. The Scottish SPCA has the power to remove this animal because it is a welfare issue. However, the Scottish SPCA does not have the power to remove any other illegal traps in the area which could subsequently trap or hurt an animal. We would have to call in the police to remove these."

Organisations such as [Scottish Land & Estates](#), [the British Association for Shooting and Conservation](#), [the Scottish Countryside Alliance](#) and [the Game & Wildlife Conservation Trust](#) raise concerns about extending the Scottish SPCA's powers. Concerns include:

- The Scottish SPCA is a charity with specific objectives focused around animal welfare and it was never its intention to act as a wildlife crime enforcement body
- Disagreement with the principle of giving charities statutory powers to investigate crime, highlighting the need for accountability in relation to such powers, and that charity staff do not operate to the same standards or have the same training as police officers
- How Scottish SPCA powers to investigate wildlife crime might interact with licensing of grouse moors (section 16AA licensing described in previous sections) - for example, NatureScot may be able to suspend a section 16 AA licence if the Scottish SPCA was investigating a licence holder
- The Scottish SPCA conducts campaigning work e.g. on snaring which can indicate a lack of impartiality, and fundraising which may be a conflict of interest with having statutory powers.

[Police Scotland](#) has stated that there would be a need to avoid public confusion regarding enforcement roles, and a need for training, processes and accountability if powers were to be increased, and has requested to be part of that dialogue if plans to increase the Scottish SPCA's powers are progressed.

Raptor Persecution UK [has criticised the Scottish Government for the balance of input to the Taskforce set up to consider this issue](#), suggesting it was "heavily weighted to the game-shooting industry" and excluded other conservation and wildlife organisations.

Part 2: Muirburn

Muirburn and the existing law

Muirburn is governed by provisions in the [Hill Farming Act 1946](#). These provisions establish an open and closed season for muirburn. The muirburn season is from 1st October to 15th April inclusive, but the season can be extended to 30th April, with the permission of the landowner. A licence is required to make muirburn outside the muirburn season.

It is also a requirement to:

- Inform the landowner, and any occupier within 1km of the proposed muirburn site (unless one of those people has given notice in writing that they do not wish to be informed). If there are 10 or more people who need to be notified, an advertisement can be placed in a local newspaper. Any notice must be given after the end of the previous muirburn season, but no later than 7 days prior to commencing muirburn. The person making muirburn must comply with requests from the landowner or relevant neighbours for additional information on the dates on or between which the muirburn is intended to be made; the places at which the muirburn is intended to be made; and the approximate extent of the proposed muirburn. Any requests must be met by the day before muirburn commences.

It is an offence to:

- Make muirburn outside the muirburn season, unless under licence,
- Make muirburn between one hour after sunset, and one hour before sunrise (in essence, when it is dark),
- Fail to provide sufficient staff and equipment to properly control the fire,
- Cause damage to woodlands, or adjoining lands, fences or scheduled monuments,
- Fail to notify the landowner and relevant neighbours.

Requirements in other legislation also apply to muirburn, for example in relation to health and safety, smoke nuisance, and responsibilities in relation to protected species.

Best practice for muirburn is set out in [Scotland's Muirburn Code](#) ('the Code'). The Code is reviewed every five years, most recently in May 2021. It includes both the statutory requirements above and voluntary good practice, but there is no formal requirement to comply with the Code as a whole.

According to NatureScot, the Code "aims to ensure that when muirburn is carried out, it:

- "is in the right place
- "avoids damage to sensitive habitats and ecosystem services
- "doesn't lead to wildfire" ⁶

In relation to muirburn on peatlands, the Muirburn Code currently advises against burning on peatland, unless this is part of a habitat restoration plan approved by NatureScot. The Code defines peatland as soil “which contains more than 60 per cent of organic matter and exceeds 50 centimetres in thickness”. However, unless the peatland is on a Site of Special Scientific Interest (SSSI) there are no legal prohibitions against muirburn on peatlands in Scotland. On SSSIs, [consent is normally required from NatureScot](#) to carry out muirburn.

Public money has previously been available for carrying out muirburn under the [Scottish Rural Development Programme’s Agri-Environment Climate Scheme](#), though these options have not been available in recent years.

Werritty review consideration of muirburn

As part of its consideration of grouse moor management, the Werritty review considered muirburn - concluding that there was a need for additional oversight of the practice.

The review noted that the impacts of muirburn on the wider environment are “highly contested, with variable and sometimes contradictory findings from different experiments and monitoring work”.

The review highlighted, among other things, that:

- The benefits of muirburn for grouse, livestock, deer and Mountain Hare are “well-established”.
- There is evidence that regular muirburn in accordance with the Muirburn Code can have some benefits.
- There is “strong evidence that muirburn can cause detrimental effects in some situations”
- Both positive and negative effects of muirburn on different environmental functions have been recorded, and impacts can differ under different circumstances.
- The “strongest, but still inconclusive evidence for a greater likelihood of long-term detrimental impacts comes from blanket bog/wet heath”, though noting that some studies have found the opposite.
- Few provisions in the Muirburn Code carry penalties for non-compliance and it is not possible to assess the Code’s effectiveness due to a lack of a robust system of monitoring compliance.
- Muirburn maintains a ‘cultural’ moorland landscape, some of which would otherwise be colonized by woodland.
- It is important to consider how climate change itself affects muirburn impacts.

In relation to muirburn, the review’s headline recommendation was that:

“Muirburn should be subject to increased legal regulation. This should apply to all muirburn, not only on grouse moors.”

The review further recommended:

“

- That the Scottish Government should increase regulatory control relating to the Muirburn Code;”
- That SNH [NatureScot] and Rural Payments and Inspections Directorate (RPID) should be given power and resources to monitor adherence to the Muirburn Code by any land manager carrying out muirburn, whether or not they are in receipt of muirburn-related support payments;”
- That increased training should be required for any land manager directly involved in setting and managing fires;”
- That the Muirburn Code should be subject to regular updates to represent best available knowledge and consideration of predicted changes in climate that might require additional changes to parts of the Code. That this process be subject to expert peer-review;”
- That a fire danger rating system for Scotland should be introduced to better support decision-making about where and when to burn;”
- That the Scottish Government explore changes to the current RPID support payments that would discourage malpractice more effectively than the current very limited breach and penalty powers;”
- That the Muirburn Code published in 2017 should be updated to include the Supplement to the Code: A guide to Best Practice.”

With regard to the overarching recommendation that muirburn should be subject to increased legal regulation, the Grouse Moor Management Group assessed three options for increased regulation:

- a. Adding further requirements to the existing legislation which specify when muirburn can lawfully be carried out;
- b. Adding a general condition that the operation is carried out in accordance with the Muirburn Code;
- c. Requiring a licence for all muirburn.

The review concluded that:

“ In reviewing options a), b) and c), we favour option c) i.e. that muirburn should be unlawful unless carried out under a licence. There should be provision for a general licence (or equivalent) to allow muirburn to take place without seeking individual permission provided that the requirements noted above are complied with. Most instances will fall within the general licence without the need for tighter controls, but this option offers to SNH the opportunity to revise the conditions for what is acceptable in response to changing needs and to non-compliance in a flexible and proportionate way.”

[In response to the Werritty review, the Scottish Government committed](#) to:

- During the next parliamentary term, following a full public consultation, we will bring

forward the legislation necessary to enhance the monitoring and regulation of muirburn and to introduce a licensing regime.

- We will also bring forward legislation within the next parliament to ban muirburn on peatland (except in very limited cases as part of an approved habitat restoration programme).
- And we will undertake a review of the current definition of peatland, taking expert advice on whether it should be revised and a stricter definition imposed.

The provisions which have been taken forward in the Bill are [explored further in the following sections on the Bill itself](#). Some of the recommendations are non-legislative or are otherwise not evident on the face of the Bill.

For example, the Werritty review recommended that “increased training should be required for any land manager directly involved in setting and managing fires”. [Training was raised by some respondents to the Scottish Government’s consultation on the Bill](#), e.g. as a condition of carrying out muirburn, or as a way of licensing an individual practitioner to carry out muirburn on completion of training.

The Policy Memorandum does not specifically address the Werritty recommendation around increased training for muirburn, and a requirement for training is not on the face of the Bill, but in its discussion of the conditions which may be attached to licences, the Policy Memorandum acknowledged that “the Werritty review report gave the following examples of conditions that could be attached to such a muirburn licence; ‘Substantial compliance with the Muirburn Code (and any subsequent updates); Mandatory training for the staff directly involved in setting and managing fires; Keeping a record (ideally a map showing the location and date) of each operation.’”

Adding additional requirements, such as training or record keeping, to the existing legislation was considered, but was not favoured as an alternative to the proposed licensing approach in the Bill. The Policy Memorandum explains that additional requirements to existing legislation:

“...could include requiring the individual undertaking the muirburn to have completed a certified training course or that a record is kept of the operation and area affected. This would require additional concerns to be clearly specified and enforcement would rely on the use of the police and the standard criminal justice systems. This option was discounted as it does not allow for the flexibility required in enforcement. The inconclusive nature of the scientific research relating to muirburn, as well as the high number of variables means that a more flexible approach to regulating muirburn is required”

What the Bill does: Sections 9-19 - Muirburn

Part 2 of the Bill concerns muirburn, and aims to provide greater oversight of the practice by introducing a licensing regime.

The provisions on muirburn apply to all land in Scotland.

The [Scottish Government’s consultation on the Bill acknowledged the uncertainty around muirburn](#), but stated that, “given the importance of peatland to Scotland’s net zero target,

the Scottish Government takes the view that a precautionary approach is required until there is more consensus on the impacts of muirburn.”

Section 9 - Requirement for a muirburn licence

Section 9 provides that **a licence is required to make muirburn at any time of year**. Previously, a licence was only required in the closed season.

This section provides that it is an offence for a person to make muirburn without a licence, or to cause or permit another person to make muirburn without a licence.

This section also provides that where a person has been granted a licence to make muirburn on land that is not peatland, but it is later discovered to be peatland, an offence has not been committed.

Stakeholders responding to the Scottish Government’s consultation on proposals for the Bill had mixed views on licensing. Views are largely split based on the type of organization. [The analysis of responses](#) noted that, among organisations who responded, 50% of those who answered the question agreed with licensing, while 42% disagreed, and 8% were unsure:

“ A clear majority of ‘Animal welfare’, ‘Conservation’, ‘Public body’ and ‘Other – non private sector’ respondents agreed, while a majority of ‘Land management’, ‘Sporting organisations’, and ‘Other – private sector’ respondents disagreed”

As noted above, the Werritty review recommended that muirburn on any type of land should be subject to increased legal regulation. The group reviewed three options, but favoured a licensing approach. The group recommended that there should be provision for a “general licence (or equivalent) to allow muirburn to take place without seeking individual permission” provided there is:

- Substantial compliance with the Muirburn Code
- Mandatory training for staff directly involved in setting and managing fires,
- Record keeping (a map showing location and date) of each operation).

The Bill and policy note suggest that licenses for muirburn will be specific, rather than general. The Policy Note states that:

“ “The owner or occupier of an area of land, or a person authorised by the owner or occupier of the land, may apply to NatureScot for a licence to undertake muirburn. A licence will only be granted for specific purposes as set out below and the application must set out the purposes for which the licence should be granted. The application must also specify the area of land to which the application relates and whether this land is peatland. The licensing authority can also request that such other information as they require is also included in or accompanies the application.””

Section 9(4) provides that "a person who commits an offence is liable on summary conviction to imprisonment not exceeding 6 months, or a fine not exceeding level 5 on the standard scale (currently £5000 ¹⁰)

There is [a current presumption in Scotland against imposing sentences of less than 12 months](#). While courts are still able to impose sentences of shorter lengths, the presumption

is aimed at preventing custodial sentences in instances where they would be counterproductive and aims to encourage other remedies.

However, in providing that a conviction is punishable by imprisonment, other options are also made available to the courts. Under the [Criminal Procedure \(Scotland\) Act 1995](#) (as amended), where an offence is punishable by imprisonment, courts may, instead of choosing to impose a prison sentence, impose a Community Payback Order. Depending on the circumstances of the case, the court may order the person to, among other things, perform unpaid work, to provide compensation, or to participate in a course or planned set of activities if one has been recommended by an officer of a local authority.

Section 10 - Application for muirburn licence

Section 10 provides that an owner or occupier may apply for a licence to make muirburn for specific purposes. Those purposes are:

- Where the land is **not peatland**, and it is within the muirburn season:
 - Managing the habitats of moorland game or wildlife,
 - Improving the grazing potential of moorland for livestock,
 - Conserving, restoring, enhancing or managing the natural environment,
 - Preventing, or reducing the risk of, wildfires causing harm to people or damage to property,
 - research.
- Where the land **is peatland**,
 - Restoring the natural environment,
 - Preventing, or reducing the risk of, wildfires causing damage to habitats,
 - Preventing, or reducing the risk of, wildfires causing harm to people or damage to property,
 - Research.

An application for a licence must identify the land to which the application relates, and specify if it is peatland or not and for which purpose(s) a license is sought, alongside any other information required by Scottish Ministers.

The section **confers a power** on the Scottish Ministers to, by regulations subject to the affirmative procedure, modify the purposes set out above. Before making any modifications, Scottish Ministers must consult with NatureScot (referred to by their statutory name, Scottish Natural Heritage) and any other person they consider likely to be interested or affected.

The policy note states that:

“ “The purpose of the licensing scheme is to ensure that muirburn is being undertaken in an environmentally sustainable manner, with due consideration of all the possible consequences. There is currently no scientific consensus on the effects of muirburn so the Bill will contain powers to modify the regulations of muirburn in the future, as further scientific evidence is developed.””

The section requires the Scottish Ministers to publicise information about the requirements for applying for a licence, including any potential licencing fees.

The section also establishes that it is an offence to knowingly or recklessly provide false information to obtain a muirburn licence.

Section 11 - Grant of muirburn licence

Section 11 provides that Scottish Ministers may grant a muirburn licence only if:

- They consider it appropriate to do so, **having regard in particular to the applicant's compliance with [the Muirburn Code](#)** , and
- And where the land in question is peatland, they are **satisfied that muirburn is necessary** for the specified purpose and **no other method of vegetation control is available**.

Where a person wishes to make muirburn for the purpose of managing habitats for moorland game or wildlife, or for improving the grazing potential for livestock (e.g. the purposes set out in Section 10(2)(i) and (ii)), this section also specifies that licences can only be granted during the muirburn season (1 Oct-15 April, see [Section 16](#)).

This section also permits the Scottish Ministers to only grant a licence to some of the land in the application or for some of the purposes specified in the application, if they consider it appropriate to do so.

Section 12 - Muirburn licences: content and conditions

Section 12 sets out the information that a muirburn licence must include. A licence must:

- specify the person it is granted to,
- identify the land in question,
- specify whether the land is peatland or not peatland,
- specify the purposes for which it is granted,
- and specify a period for which the licence is valid.

This section also provides that a person granted a licence to make muirburn must **'have regard to' [the Muirburn Code](#)**. In addition, any person intending to make muirburn on the land to which the licence relates must have regard to the Muirburn Code, and comply with notification requirements under [section 15](#).

Scottish Ministers may specify other licence conditions if appropriate, including specific provisions of the Muirburn Code, conditions on the person or type of person who may make muirburn under the licence, and reporting and notification conditions. Different conditions may be specified for different purposes, such as at different times of year, or on different land.

The Policy Note highlights that:

“ The ability to impose a wide range of conditions on muirburn licences reflects the recommendation from the Werritty review report: “SNH [NatureScot] should have the power to respond flexibly and proportionately to breaches by imposing tighter conditions, imposing financial penalties, suspending or revoking the licence or referring the matter for prosecution for unlicensed muirburn”.”

The Policy Note also highlights that NatureScot “will issue detailed guidance that outlines the evidence that an applicant must submit when applying for a licence. NatureScot will consult with stakeholders as part of the development of that guidance.”

Section 13 - Modification, suspension and revocation of muirburn licence

This section provides that the Scottish Ministers may modify a muirburn licence at any time. They may also suspend or revoke a licence if they are satisfied that a "relevant person" has committed an offence. They may also suspend a licence if there is "an official investigation or proceedings in relation to an offence under this Part of the Bill" and they are satisfied that if a suspect or accused were convicted of an offence then they would be satisfied that a relevant person has committed an offence.

A "relevant person" is defined as the person to whom the licence was issued, or any other person involved in managing the land to which the licence relates.

The Scottish Ministers must give notice of the modification, suspension or revocation, and set out the reasons for this. A modification, suspension or revocation will not take effect until, in general, 14 days after notice is given, or otherwise after such a period as the Scottish Ministers consider appropriate and specify in the notice.

Section 14 - Muirburn Code

Section 14 places the Muirburn Code on a statutory footing. It specifies that a Muirburn Code on how to make muirburn safely and appropriately must be prepared and reviewed every five years.

The section specifies that the Code may include provision in relation to:

- how the thickness of a layer of peat is to be determined,
- the times of day that muirburn can be made,
- safety requirements when making muirburn.

Before publishing a Muirburn Code, Scottish Ministers must consult NatureScot and anyone else they consider likely to be interested or affected.

As noted previously, a voluntary Muirburn Code has been produced every five years, with the most recent version published in 2021. The provisions in this section and previous sections make the Code a statutory requirement, and make 'having regard to' the Code a condition of a muirburn licence (in effect, a condition of any muirburn), and [a condition of obtaining such a licence in the first place](#).

This follows findings from the Werritty review in relation to the effectiveness of the Code. The review noted that:

“ Given the absence of a robust system of monitoring compliance, it is not currently possible to assess the effectiveness of the Code which has few statutory provisions.”

And they recommended that:

“ the Scottish Government should increase regulatory control relating to the Muirburn Code.”

[As noted in a previous section](#), few provisions of the Code are statutory requirements and the rest is, in effect, voluntary. Therefore, there are only penalties for non-compliance for some provisions of the code. Penalties can be incurred either directly through statutory provisions in the [Hill Farming Act 1946](#), or through compliance systems under agricultural subsidy systems, if those are claimed. The Werritty review noted, for example, that

“ other potentially damaging activities listed in the Muirburn Code, such as burning on steep slopes, thin soils or peatlands, are currently not included in this penalty system.”

Section 15 - Notice of muirburn activity

As in the Hill Farming Act 1946, the Bill provides that a person who intends to make muirburn must give notice in writing to the landowner of the proposed site (if different from the person making the muirburn) and any occupier of land within 1km of the proposed site.

The requirements for notification remain largely the same, with some variations. For example, Scottish Ministers may specify (in the Muirburn Code or elsewhere) and publicise methods of notifying neighbours other than in a local newspaper.

In addition, the section specifies how notice must be given. Either it must be given in accordance with [Section 26 on the Interpretation and Legislative Reform \(Scotland\) Act 2010](#) (on the serving of documents), by leaving notice at an address of a person to be notified, or where the identity of the occupier cannot be ascertained, by affixing a notice to "any occupiers of the land" to any conspicuous object.

Section 16 - Muirburn season

Section 16 provides that the muirburn season is 1 October - 15 April. This is the same as the existing standard muirburn season.

The Hill Farming Act 1946 ('the 1946 Act') made provision for an extended muirburn season to 30 April, which could only be used by the proprietor of the land, or authorised in writing by the proprietor. The Bill no longer makes provision for this extended muirburn season.

However, this section of the bill provides that the Scottish Ministers may, by regulations, extend or reduce the muirburn season. They may only do so if they consider it necessary or expedient in relation to climate change, or for the purpose of managing the natural environment, or preventing or reducing the risk of wildfires causing harm to people or damage to property.

This power is very similar to an existing power in the 1946 Act, which was added by the Climate Change (Scotland) Act 2009. Changes include that the Bill no longer restricts Scottish Ministers' ability to reduce the overall length of time of the muirburn season, that a consultation must be carried out, and that any regulations are subject to the affirmative procedure.

Section 17 - Delegation

This section provides that Scottish Ministers may delegate functions to NatureScot in relation to muirburn licences, preparation of a Muirburn Code, and in relation to methods of notification. They may do so by 'written direction'. Unless otherwise specified, any delegation includes the power to modify, suspend or revoke licences granted before the direction was made.

Section 18 - Interpretation (defining peatlands)

Section 18 sets out interpretation for a number of terms. These are not all repeated here as they have been explained earlier in the briefing. However, it defines two notable terms for the purpose of muirburn licences:

- "peat" means soil which has an organic content (that is, content consisting of living and dead plant and animal material) of more than 60%.
- "peatland" means land where the soil has a layer of peat with a thickness of more than 40 centimetres.

This section also confers a power on Scottish Ministers to, by regulation, amend the definition of "peat" and "peatland", subject to consultation. Any regulations are subject to the affirmative procedure.

This is a change from the current definition in [the Muirburn Code](#) which defines peatland as land with "organic soil, which contains more than 60 per cent of organic matter and exceeds 50 centimetres in thickness".

The Policy Note states:

“ The definition of peatland was required to adequately account for the risks associated with muirburn on peatland. It was decided that, in line with the Bill’s wider muirburn provisions, the precautionary principle should be followed. In recognition of the lack of strong scientific consensus relating to muirburn on peatlands, the Bill contains a regulation making power which allows the Scottish Ministers to amend the definition of ‘peatland’. The Bill provides that the Scottish Ministers must consult with NatureScot and such persons they consider likely to be interested in or affected by the making of muirburn.”

The Policy Note highlights that the 40cm definition is in line with the [Heather and Grass etc. Burning \(England\) Regulations 2021](#), which prohibits burning on peat over 40cm except under licence, though only on designated sites.

The implication of this change is that, for the purposes of making muirburn, areas with peat soils deeper than 40cm, rather than 50cm, would be classified as peatlands. In these areas, it would only be possible to get a licence for muirburn for the purpose of ([Section 10](#)):

- Restoring the natural environment,
- Preventing, or reducing the risk of, wildfires causing damage to habitats,
- Preventing, or reducing the risk of, wildfires causing harm to people or damage to property,
- Research.

In addition, where the land to be licensed is peatland, the licensing authority may only grant a licence if they are satisfied that muirburn is necessary for the specified purpose and no other method of vegetation control is available ([Section 11](#)).

Section 19 - Repeals and consequential amendments

This section repeals relevant parts of the Hill Farming Act 1946. The sections that are repealed are existing provisions in relation to:

- the muirburn season,
- muirburn offences,
- notification of muirburn,
- penalties for muirburn offences.

This section also makes minor consequential amendments. Provisions in relation to the right of tenants to make muirburn notwithstanding terms of their lease remain.

Stakeholder reactions

There is disagreement among stakeholders about the need for licensing and additional regulation of muirburn, and on the Bill's definition of peatland.

These are derived from the [Rural Affairs and Islands Committee's call for views on the Bill. Collated organisational response have been published](#). Please note that this section aims to illustrate the key strands of the debate, rather than provide an exhaustive summary of stakeholders views.

Additional regulation of muirburn: Licensing

There is disagreement among stakeholders on the need for licensing and additional regulation.

Environmental stakeholders in particular agreed with the need for further licensing, and welcomed the broad strokes of the licensing provisions (with some exceptions, see peat depth below). Stakeholders such as Stop Climate Chaos Scotland and RSPB Scotland feel that "the existing regulatory framework does not prevent bad practice in relation to what is a high risk land management activity" (quote from RSPB Scotland), and point to the voluntary nature of the Muirburn Code. [RSPB Scotland highlight](#) that the organisation is often alerted to poor practices by members of the public:

" These images record muirburn that has burned through bird of prey nest sites; takes place too close to raptor nests and results in nest abandonment; has burned into woodland and through naturally regenerating trees; or is on steep slopes or scree used also by nesting birds. The Muirburn Code is meant to help ensure adherence to good practice, but it is, in effect, voluntary. The current Muirburn Code is also explicit that burning should not take place on peatlands but in our experience, and according to public citizen science data submitted [through] our Burning App this provision is widely ignored."

Land management groups such as the British Association for Shooting and Conservation (BASC) the Scottish Countryside Alliance, and Scottish Land & Estates (SLE) disagree with greater regulation and the proposed licences, pointing to muirburn being an important land management tool and research which highlights potential positive environmental outcomes from muirburn.

SLE, in particular, [express concern with what they consider the](#) "excessively broad discretion" for NatureScot to decide if a licence should be granted on the basis that it is "appropriate to do so, having regard in particular to the applicant's compliance with the Muirburn Code" ([Section 11](#)). They believe that "there should be one ground for refusing, suspending, or revoking a licence, and that is robust evidence of a crime in relation to muirburn being committed on the land by a relevant individual".

The organisation also expresses concern at the provisions which allow NatureScot to suspend licences where there is an "official investigation or proceedings in relation to an offence under this Part" ([Section 13](#)). They suggest that it is unclear what is meant by an "official investigation" questioning whether an "official investigation may be commenced simply by the recording of a complaint or report".

Others, such as the [Game and Wildlife Conservation Trust \(GWCT\)](#) point to the gaps in

[evidence](#) around the impacts of muirburn and highlight the need for an "adaptive management approach to muirburn rather than substantial restrictions or a 'no management' approach", though note that "there is a case for updating the existing muirburn code and best practice" provided this addresses knowledge gaps.

Some who expressed concern at some of the proposed provisions still noted that there is a need for additional regulation. For example, [the Scottish Crofting Federation](#) agreed in principle with the need for additional regulation for muirburn but express concerns at the peat depth provisions (see below) and disagree with the proposed licensing system, favouring mandatory training.

Managing wildfires

Stakeholders disagree about the role of muirburn in managing wildfires, particularly on peatlands.

Some stakeholders, [such as BASC](#), note that muirburn is an important tool to manage flammable vegetation in the uplands, preventing uncontrolled wildfires which have a detrimental impact.

Other organisations, [such as the IUCN Peatland Programme](#), argue in relation to peatlands that peatland restoration is a more effective way to prevent wildfire.

[RSPB Scotland states](#) that it is "highly sceptical of a need to burn for restoration and wildfire prevention on peatland" they accept that "NatureScot may wish to retain burning as a tool in the box for restoration". However, caution against wildfire management "becoming a large loophole that would undermine the intention behind the legislation" whereby "a generic fear of wildfire will lead to a default granting of licenses to burn on peatland".

Provisions intending to protect peatlands

Stakeholders disagree on how peatlands should be treated in relation to muirburn.

On one hand, organisations such as [SLE, BASC and Scottish Countryside Alliance](#) point to the remaining uncertainties around the impacts on peatlands, and the studies which have suggested potentially beneficial effects as support for maintaining the current regulatory framework for muirburn.

SLE note further that, while the organisation does not support licensing, if licensing were to be introduced, they do not support different conditions for peatland/non-peatland.

On the other hand, [respondents such as the IUCN Peatland programme](#) argue that burning is not a necessary management tool for peatlands.

[The IUCN Peatland Programme's position statement on burning on peatlands](#) states that:

“Successful restoration of blanket bog on numerous upland sites around the UK, without the use of muirburn or any other form of burning, demonstrates that burning is not a necessary tool for peatland restoration.”

And that:

“more work is required before burning can be considered an effective peatland management tool.”

Defining peat

As outlined elsewhere, the Bill proposes to redefine peatlands as land with organic soil with more than 60% organic matter that are deeper than 40cm. This is a change from the current depth of 50cm set out in the Muirburn Code. There is disagreement about the peat depth threshold among stakeholders along the lines outlined above (e.g. whether or not muirburn is damaging to peatlands). In addition, stakeholders with differing views on peat depth also disagree with the Scottish Government's proposed approach.

Some stakeholders, [such as Scottish Land & Estates, BASC, and the Scottish Countryside Alliance](#) do not feel that this change is necessary, pointing to the uncertainties around the impacts of muirburn on peat soils, and raise potential practical difficulties with measuring peat depth.

The policy note acknowledges a potential difficulty with the new definition: there are currently no maps which classify peat soils based on the 40cm definition (existing maps use a 50cm threshold to classify peat soils). This would mean that peatland identification would be reliant on surveys undertaken by land managers or licence applicants. The policy note states that this would “require only simple equipment such as a peat probe, and no specialist skill or knowledge.”

The [NatureScot Commissioned review of evidence](#) found that “the only practical, reliable and cost-effective approach, is the use of some form of probe to measure either the actual peat depth or to ascertain whether the peat depth is beyond a particular threshold”.⁵

However, SLE pointed out that NatureScot review also noted that “There is however a constraint with this method in terms of the time required to carry out a survey, which will depend on the scale involved and the level of detail required”. SLE noted that “Scale – particularly for large landholdings – is a foremost concern for Scottish Land & Estates, and we do not consider it practical nor possible to determine peat depth on large estates”. The scale would depend on the area for which a muirburn licence is sought.

The NatureScot review described the methodology:

“ measurements [are] taken across the proposed area to be burnt using a 100 m by 100 m grid. This will be much quicker than measuring the full peat depth using interconnecting rods, i.e. less than a minute once the sampling point is located. As such, it could be reasonable to increase sampling intensity if this is desirable, especially if the proposed area to be burned is small, as there can be considerable variation in peat depth on sites, even at nearby points.”⁵

While [SLE on the one hand wish to see muirburn permissible](#) “on all peatland irrespective of the depth of peat”, they also note that the Scottish Government should consider defining peatlands as a layer of peat with a thickness of more than 50 centimetres on the grounds that maps for this exist.

On the other hand, other organisations supported the principle of a peatland definition based on a shallower peat depth on the grounds of vulnerability of shallower peat soils, and in order to have stricter oversight of muirburn over a greater area of peat soils.

However, of those respondents, there was disagreement with the Scottish Government's proposed 40cm depth, arguing that shallower peat soils or even all peat soils should also be included.

The [IUCN Peatland Programme raised concerns](#) about “false distinctions” between deep and shallow peat soils which function as one system. They noted that:

“ Peatland science in the UK and Internationally frequently uses 30% organic content in defining peat and many peatlands can be much shallower than 40cm (Joosten et al., 2017, Lourenco et al., 2022, UNEP 2022) It is concerning that the definition used in the Bill could leave significant areas of peat and peatland of importance for biodiversity, carbon and water vulnerable to the damaging effects of burning, and potentially increase burning on shallower peatlands by directing muirburn away from deeper peat areas. False distinctions can be drawn between deep and shallow peat in terms of their ecosystem functioning when they often function as part of larger, hydrologically connected peatland systems (Lindsay, 2010).”

[RSPB Scotland suggested](#) that the 40cm definition is not grounded in evidence, and is "simply 'splitting the difference' between the current depth of 50cm and aspiration of peatland interests that, if there needs to be a depth criterion, it should be lowered to 30cm"

The organisation favours no burning on peaty soils, but note that if a depth definition is required, they believe it should be 30cm, in line with definitions in some scientific literature, the UK Peatland Strategy, and the Peatland Code.

The UK Peatland Strategy, produced by the IUCN Peatland Programme, uses the definition set out in [The Wetland Book](#) , a comprehensive reference text on wetlands:

“ A wetland soil composed largely of semi-decomposed organic matter deposited in-situ, having a minimum organic content of 30% and a thickness greater than 30 cm. ¹¹”

In relation to the practical difficulties, some, [such as the Scottish Wildlife Trust](#), noted that peat probing is required in other types of operations such as forestry and windfarm development. They state that:

“ It is not a valid argument to claim that measuring the depth of peat would be too onerous. Regardless of muirburn licencing, landowners should be encouraged to assess the depth of peatland on their land for natural capital accounting and not see the data requirement as a burden, but an opportunity. This data is already needed as part of the Peatland Code to provide assurance for investors in peatland restoration projects and would allow landowners to diversify their incomes and provide public goods.”

Part 3: Miscellaneous and General Provisions

Sections 20 and 21 set out powers of entry, search and seizure for constables where there are reasonable grounds for believing that an offence has been or is being committed under section 1, 2 or 9 of the Bill i.e. in relation to glue traps or muirburn.

The Policy Memorandum sets out, in describing implications of the Bill for human rights, that these powers relate to "the legitimate aim of the prevention of disorder or crime", and that the powers are subject to a number of safeguards, including provision for warrants to be granted, that premises cannot be entered without a warrant, and that the power of entry must be exercised at a reasonable time.

Section 22 sets out provisions on which 'responsible individual' is individually culpable where an offence under section 1 or 2 or Part 2 of the Bill is committed by an organisation., and the commission of the offence involves consent or connivance of that responsible individual.

Sections 23 and 24 set out how provisions of the Bill apply to the Crown. Section 23 provides that nothing in the Bill makes the Crown criminally liable, and section 24 provides that any warrant issued under section 20 (see above) in respect of Crown land requires the consent of the 'appropriate authority' for that land. The appropriate authorities for different types of Crown land are listed in a table.

Sections 25 to 28 are general provisions including on commencement. Other than the commencement provision and short title, provisions of the Bill would come into force by way of regulations introduced by Scottish Ministers.

Appendix 1: List of Werritty review recommendations

This section reproduces the consolidated list of recommendations in the Grouse Moor Management Review Group's 2019 Report to the Scottish Government (Werritty review).

General

1. We unanimously recommend that a licensing scheme be introduced for the shooting of grouse if, within five years from the Scottish Government publishing this report, there is no marked improvement in the ecological sustainability of grouse moor management, as evidenced by the populations of breeding Golden Eagles, Hen Harriers and Peregrines on or within the vicinity of grouse moors being in favourable condition.
2. That a framework Code of Practice on grouse shooting be produced reflecting regulation specific to the sector and advising on best management practices. If statutory provisions are included, the Code would need approval by Scottish Ministers with SNH having oversight and ownership.

Raptors and predation

3. That there should be no change in the legal status of any bird-of-prey species in Scotland.
4. That where particular species are perceived to be limiting the populations of red and or amber-listed ground-nesting birds, including Red Grouse, greater use should be made of the Wildlife & Countryside Act 1981 s16. This existing licensing legislation allows SNH to permit under licence a range of lethal and non-lethal management options.
5. That the brood management programme for Hen Harriers in England should be monitored, and if it is deemed successful in producing an increase in the breeding numbers and distribution of Hen Harriers, then consideration should be given to introducing a similar programme in Scotland.
6. That as much as possible should be done to change the culture of grouse moor management to accept more loss of grouse to avian predators and to allow these predators to nest locally.
7. That SNH, possibly through their licensing agent the BTO, or directly, ensure that the licences issued for the satellite-based tracking of tagged raptors includes a condition that commits the data holder (i.e. the owner of the tag) to: (a) being listed on a register of data holders which SNH, BTO and Police Scotland have access to; and (b) cooperate expeditiously with Police Scotland and SNH in sharing data and associated information regarding tagged birds found dead or missing in suspicious circumstances. That on receipt of shared data and associated information, Police Scotland expeditiously processes the shared data and associated information to determine whether or not it warrants referral to the Crown Office and Procurator Fiscal Service. The current priority raptors for data sharing would be Golden Eagle, Hen Harrier, Red Kite, Peregrine, White-tailed Eagle and Goshawk.
8. That muirburn should be subject to increased legal regulation. This should apply to all

muirburn, not only on grouse moors.

- That the Scottish Government should increase regulatory control relating to the Muirburn Code;
- That SNH and Rural Payments and Inspections Directorate (RPID) should be given power and resources to monitor adherence to the Muirburn Code by any land manager carrying out muirburn, whether or not they are in receipt of muirburn-related support payments;
- That increased training should be required for any land manager directly involved in setting and managing fires;
- That the Muirburn Code should be subject to regular updates to represent best available knowledge and consideration of predicted changes in climate that might require additional changes to parts of the Code.
- That this process be subject to expert peer-review; • That a fire danger rating system for Scotland should be introduced to better support decision-making about where and when to burn;
- That the Scottish Government explore changes to the current RPID support payments that would discourage malpractice more effectively than the current very limited breach and penalty powers;
- That the Muirburn Code published in 2017 should be updated to include the Supplement to the Code: A guide to Best Practice.

Mountain hares

9. That the shooting of Mountain Hares should be subject to increased legal regulation.

- That, where the shooting of Mountain Hares is to be undertaken, land managers should be required to report annually to SNH the number of Mountain Hares present (using a standard counting method) and numbers shot on an area of land;
- That shooting of Mountain Hares should only be undertaken at the times licensed and in compliance with a Code of Practice on the management of Mountain Hares;
- That, to address concerns about the reliability of Mountain Hare numbers, SNH should generate a more robust evidence-base on the distribution, numbers and management influences on Mountain Hares to better inform management as well as Article 17 reporting to the Scottish Government and the EU;
- That adaptive management research should be used to determine relationships between local populations and numbers killed, to help inform and improve management recommendations over time to promote favourable conservation status for Mountain Hares in Scotland.

Medicated grit

10. That the use of medicated grit should be subject to increased regulation.

- That SNH, following consultation with other appropriate bodies, should publish a Code of Practice on the use of medicated grit;

- That all land managers using medicated grit to reduce the worm burden in Red Grouse populations should adhere to the Code of Practice on the use of medicated grit;
- That SNH should have powers to check compliance with the Code on the use of medicated grit;
- That if, after five years or less, following introduction of the Code, noncompliance is widespread, the option of introducing increased legal control should be considered.

Regulation

11. That in accordance with the remit to “ensure that grouse moor management continues to contribute to the rural economy” we do not recommend that grouse shooting be banned.

12. That, in light of announced consultations, the following recommendations of the Wildlife Crime Penalties Review Group (Poustie Review) should be enacted:

Levels of fines and custodial sentences

- That maximum penalties available on summary conviction at least for the more serious offences, are raised to at least a £40,000 fine and up to 12 months imprisonment.
- That conviction on indictment is more commonly made available across the range of wildlife offences with a maximum term of imprisonment of up to 5 years. This would not necessarily require a stand-alone Act but could be achieved as part of the next Criminal Justice or Criminal Proceedings Act.

Alternative penalties

- That forfeiture provisions are extended and these and other alternative penalties are made consistent across the range of wildlife legislation as appropriate.
- That where a firearm or shotgun is involved in the commission of a wildlife crime, the court should have the power to cancel the relevant certificate, as is already the case in the Deer (Scotland) Act 1996.
- That consideration should be given to amending firearms legislation which is reserved to the UK Parliament to allow the Chief Constable to withdraw a shotgun certificate where such a weapon has been involved in the commission of a wildlife crime not just on grounds of public safety but also on the grounds of a threat to the safety of wildlife.

Sentencing Guidelines

- That with the establishment of the Scottish Sentencing Council in October 2015, sentencing guidelines are developed for wildlife offences in order to enhance the consistency and transparency of sentencing.

13. That a wider range of moorland management activities should become eligible for RPID support.

14. That land managers should undertake training on relevant land management activities (muirburn, use of medicated grit, managing Mountain Hares, corvid control and setting of traps) and refresher courses when required, to ensure compliance with relevant Codes of

Practice.

15. That an accreditation scheme on grouse moor management should be developed following widespread consultation across the grouse shooting sector.

16. Given the fragmented nature of current wildlife legislation, we recommend consolidation of this area of law (as recommended by Poustie).

Recommendations on land management practices

17. That muirburn should be unlawful unless carried out under a licence.

18. That SNH embark on achieving a count of Mountain Hare numbers across Scotland, not just on grouse moors nor just where they are being shot.

19. That a Code of Practice on the management of Mountain Hares, including legally enforceable reporting requirements, should be developed.

20. That should the conservation status of Mountain Hares prove to be 'unfavourable' then a licensing system for the shooting of Mountain Hares should be introduced.

21. That Food Standards Scotland should undertake work to identify the levels of flubendazole residues in grouse in the food chain that are judged inimical to human health and establish appropriate monitoring.

22. That there should be wider CPD training for veterinary surgeons on the use of medicated grit.

23. That SEPA should initiate a desk-based study to determine the appropriate nature and extent of a monitoring programme to ascertain whether flubendazole residues exist in water bodies on or downstream from where it is being used, including in association with grouse moors, to conduct such a monitoring programme and to report on its findings.

24. That future monitoring of *Cryptosporidium* in connection with use of medicated grit should be undertaken should the associated risk prove necessary.

25. That new legislation should be introduced to make it a legal requirement that it becomes an offence to set or operate a trap without an operator having successfully completed a course run by an approved and accredited body and dealing with the relevant category of trap (cage and/or spring). A trap operator who has successfully completed a relevant trap training course should apply to their local police station for a unique identification number which must be attached to all traps that are set.

26. That any operator dealing with the relevant category of trap (cage and/or spring) should undergo refresher training at least once every ten years.

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