ENVIRONMENT, CLIMATE CHANGE AND LAND REFORM COMMITTEE

AGENDA

2nd Meeting, 2020 (Session 5)

Tuesday 21 January 2020

The Committee will meet at 9.30 am in the Robert Burns Room (CR1).

1. **Decision on taking business in private**: The Committee will decide whether to take item 3 in private.

2. **Grouse Moor Management Review Group**: The Committee will take evidence from—

   Professor Alan Werritty, Chair, Professor Alison Hestor, Member, and Professor Colin Reid, Member, Grouse Moor Management Review Group.

3. **Grouse Moor Management Review Group**: The Committee will consider the evidence heard earlier in the meeting.

4. **Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Bill (in private)**: The Committee will consider a draft Stage 1 report.

Lynn Tullis
Clerk to the Environment, Climate Change and Land Reform Committee
Room T3.40
The Scottish Parliament
Edinburgh
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The papers for this meeting are as follows—

**Agenda item 2**

Note by the Clerk

**Agenda item 4**

PRIVATE PAPER
Introduction

1. The Committee will hear from the Grouse Moor Management Review Group: Professor Alan Werritty (Chair), Professor Alison Hestor (Member) and Professor Colin Reid (Member) on its report of December 2019. A note of the key findings and recommendations (extracted from the Report) are included as an Annexe to this paper. Following the evidence session, the Committee will consider what further action it wishes to take.

Background

2. The Grouse Moor Management Review Group (the Group) was established in November 2017 to examine the environmental impact of grouse moor management practices such as muirburn, the use of medicated grit and mountain hare culls, and to advise on the option of licensing grouse shooting businesses.

3. The establishment of the Group followed publication of ‘Analyses of the fates of satellite tracked Golden Eagles in Scotland’ (Whitfield & Fielding, 2017), a report by Scottish Natural Heritage (SNH), which recorded that 40 out of 131 young Golden Eagles had disappeared in suspicious circumstances over the period 2004-16, mostly in locations on or adjacent to grouse moors.

4. Additionally, following publication of the Group’s report on 19 December 2019, the Scottish Government also published the Wildlife crime in Scotland: annual report (2018) on 23 December 2019. In the Ministerial Foreword to the wildlife crime report, the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham MSP, noted:

   “Following a fall in recorded wildlife crime incidents for the last two years, it is distressing to see this number rise by 2% in 2017-18. It is disappointing that wildlife crime and raptor persecution continue to threaten Scotland’s natural heritage and risk damaging the reputation of our country.”

5. The Cabinet Secretary also highlighted in the wildlife crime report that “there continues to be persecution of birds of prey. Recorded bird of prey cases more than doubled, from 11 in 2016-17 to 24 in 2017-18, with one incident accounting for almost half of this number.”
Membership of the Group

6. The Group comprised the following members and specialist advisers (biographies of each are provided in Annexe 3):

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<thead>
<tr>
<th>Members</th>
<th>Specialist Advisers</th>
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<td>• Professor Alan Werritty (Chair)</td>
<td>• Dr. Adam Smith</td>
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<td>• Alexander Jameson</td>
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<td>• Professor Alison Hester</td>
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<td>• Professor Colin Reid</td>
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The Final Report

7. The final report was submitted to the Cabinet Secretary for Environment, Climate Change and Land Reform on 18 November 2019. As noted, the report was subsequently published on 19 December 2019. The Committee understands that the Scottish Government will give a formal response to the Group's recommendations before the Scottish Parliament in due course. When publishing the report, the Cabinet Secretary noted the following:

“It is important that we give careful consideration to the recommendations, alongside other evidence, before issuing a response. An important part of this will involve meeting key stakeholders to discuss the findings of the review, and we will publish a full response to the report in due course. At this early stage, however, I believe the option of a licensing scheme will need to be considered and - if required – implemented earlier than the five-year timeframe suggested by the review group.”

Key recommendations

8. The report made a number of recommendations. A note of the key findings and recommendations are included as Annexe 1 and 2 of this paper. The main recommendations are outlined below:

• A scheme of licensing for grouse shooting should be introduced if there is no marked improvement in the populations of breeding golden eagles, hen harriers and peregrine falcons on, or in the vicinity of, grouse moors, in the next 5 years. The Group was evenly split on whether or not to recommend licensing grouse shooting. Professor Werritty sought to exercise a casting vote in favour of the immediate introduction of licensing, but this was contested by two members. In order to have a unanimous recommendation, the Group therefore proposed the 5 year ‘probationary period’, but also agreed that whether and when to licence grouse shooting are political decisions for the Scottish Government.
• Additional **regulation of land management activities** on grouse moors including muirburn (licensing), mountain hare management (increased regulation, failing which licensing) and use of medicated grit (Code of Practice, failing which licensing).

• The introduction of new and improved **Codes of Practice**, training for land managers on moor management activities and an accreditation scheme to encourage best practice, incentivised through moorland management attracting subsidy support.

• Improvements in the regulation of fitting, and use of, **satellite tags** on raptors, including a register of tag owners and a commitment for those parties to cooperate expeditiously with the authorities in the event of suspected wildlife offences.

**Stakeholder reaction**

9. [Scottish Land and Estates issued a statement](#) saying the package of measures proposed in the report would "amount to a real game changer for moorland management in Scotland" and "jeopardise the viability of many shooting enterprises.” They state that stringent legislation is already in place to deal with wildlife crime and enhanced training and codes of practice for muirburn, medicated grit and mountain hare control are the best way forward, rather than licensing and regulatory controls.

10. [Revive, a coalition of organisations campaigning for grouse moor reform](#), described the review as “a missed opportunity” to improve management practices on grouse moors. They said that “the Werritty Commission has failed to recognise the severity of the damaging problems with grouse moor management in its current form, and has missed the single biggest opportunity in our generation to take significant action to reform Scotland’s grouse moors for the benefit of our economy, our people, our environment and our wildlife.” Revive is calling on the Scottish Government to adopt and strengthen the measures recommended in the report.

11. [RSPB Scotland issued a statement](#) supporting the recommendations relating to regulation of muirburn and better safeguards for mountain hare populations but expressing disappointment that the report does not recommend the immediate licensing of driven grouse moors, highlighting that the Scottish Government have publicly stated previously that driven grouse moor owners are ‘in the last chance saloon.’ They state that a licensing framework would “set a new direction for the legal and sustainable management for large areas of our upland landscapes, as well as providing a meaningful deterrent to wildlife crime.”

**Issues to explore:**

12. There are a number of issues to explore with the Group at the meeting on 21 January, including:

   a) The **scope of the review**, limitations and interactions with other work, such as the deer management working group.
b) The **current condition of grouse moors** and the relationship between the protected designations for habitats and species and the **practices** associated with intensive grouse moor management.

c) The **evidence base** to support the need for any changes in approach and regulation on Scottish grouse moors – including:

- The current and potential contribution of grouse moors to Scotland’s greenhouse emissions, and to climate adaptation and resilience, in the context of the **climate emergency** and Scotland’s recently increased climate targets – including their role in peatland restoration.
- The current and potential contribution of grouse moors to Scotland’s **biodiversity** targets and their role in delivering other **ecosystem functions**, such as natural flood risk management and reducing the risk of wildfires, as well as how the recommendations of the report relate to current debates about rewilding and the **public money for public goods**.

d) Any significant **evidence gaps** and the extent to which they need to be addressed to support more sustainable land management of grouse moors, and to what extent the report has also incorporated other types of input - such as local knowledge, industry and NGO input, and expert opinion. Additionally, how the review has sought to navigate areas of conflicting viewpoints or values.

e) The **option of licencing grouse shooting**, including the arguments for and against introducing an overarching system of licensing, the rationale for the 5-year ‘probationary’ period (in the context of the climate and ecological emergences), how licensing may work in practice (e.g. resourcing), and how licensing might interact with more specific regulatory interventions.

f) Levels of **compliance with current regulation**, including how effectively regulators are using existing powers (e.g. restrictions on general licensing) and how compliance mechanisms or other tools e.g. voluntary approaches might be better used to control specific activities on grouse moors (and what their limitations are).

g) Potential relevance of any the recommendations to the scope of the **Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Bill** – for example recommendations regarding more severe penalties and consistent sentencing for wildlife crime to address issues with **raptor persecution** and the use of video surveillance (including the relationship with the recommendations of the Poustie review on wildlife crime penalties).

h) The availability of **socioeconomic evidence** and how it influenced the report's recommendations, such as information on the extent (e.g. land cover) and management of grouse shooting activities and its contribution to the Scottish economy, and how the recommendations in the report could impact on the viability of grouse shooting estates.

i) Specific recommendations, **regulatory options or other interventions available** and how they may be operationalised:
o Muirburn licensing
o Mountain hares – increased regulation (or licensing if ineffective), including the legal implications of the species’ unfavourable conservation status.
o Medicated grit – a voluntary code of practice (or licensing if ineffective)
o Financial support for moorland management activities
o Increased regulation of satellite tagging of birds of prey
o Training and accreditation

j) Any longer-term implications of broader Scottish Government [land-use policy](#) (and potential future direction of travel in light of the climate and ecological emergencies) in areas such as peatland restoration and forestry for the management of grouse moors in Scotland.

Clerks/SPICe
Environment. Climate Change and Land Reform Committee
Key findings from the review – extracted directly from the report

1. Range of available regulatory systems

A wide range of regulatory mechanisms is available for improving the management of grouse moors. These range from self-regulation, financial measures and prohibition, through to licensing or permitting systems often involving Codes of Practice. Such measures are not mutually exclusive and can be adopted in a variety of combinations depending on the level of intervention sought and the practicalities of their implementation. Ideally any newly introduced regulation should accord with the principles of Better Regulation and be transparent, accountable, consistent, proportionate, accessible, effective and targeted only where needed. In addition to regulation, better management can be promoted by accreditation schemes in which, rather than punishing bad behaviour, good behaviour is rewarded. Codes of Practice are already used in the management of grouse moors as a guide to best practice but with few legal sanctions for non-compliance. If such Codes are to ‘have teeth’, they need to be better integrated with one another and incorporate legal controls to the limits of acceptable behaviour beyond which sanctions can be applied.

2. Scientific evidence underpinning greater regulation

**Raptor predation and persecution**

Raptor numbers across Britain were greatly reduced in the 19th-early 20th centuries with five species eliminated altogether. Over recent decades numbers have substantially increased but most species still do not fully occupy their potential range. This is locally attributed to illegal killing, especially in some grouse moor areas. The major predators on grouse (Fox, Stoat, Weasel and Carrion/Hooded Crow) are routinely and legally killed on grouse moors leaving birds of prey as the principal remaining predators. The Joint Raptor Study on Langleih Moor showed that, in sufficient numbers, Hen Harriers can reduce the densities of grouse to such low levels that driven grouse shooting is impracticable. This may also to be true for Peregrines in some areas. During the subsequent Langleih Moor Demonstration Project, with mammalian predators and diseases controlled, 82% of the grouse kills found were attributed to raptor predation or scavenging. After nine years, the project was terminated as the grouse did not achieve sufficient numbers to be shot on a commercial driven basis. In an attempt to reduce grouse predation by raptors we are not convinced that, applied on a wide scale, diversionary feeding is a cost-effective management tool as the known and potential disadvantages out-weigh the advantages, although others disagree.

**Muirburn**

A favoured management tool for centuries, muirburn comprises the controlled burning of vegetation to provide young, more nutritious shoots for grouse and other species, and to destroy regenerating trees, thereby maintaining open moorland. Muirburn is currently regulated by the Scottish Government’s *Muirburn Code* designed to promote best practice and minimise the likelihood of detrimental impacts. 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. In addition to the above impacts, muirburn affects biodiversity, soil stability and hydrology. Both positive and negative effects on all these components of the system have been recorded – in general terms most positive effects of muirburn have been recorded in dry heathlands and most detrimental effects in wet heaths and peatlands. Fires of greater intensity appear more likely to have detrimental effects, but there is much disagreement in the literature and many knowledge-gaps. The relationships between muirburn and wildfires are also poorly understood and the subject of current scrutiny. Given the increased risk of intense, damaging wildfires under climate change, it is critically important to introduce comprehensive muirburn monitoring and ensure compliance with best practice, underpinned by robust scientific evidence, to minimise risk of damaging effects and address potential benefits such as the reduction of fuel loads.

**Mountain Hares**

Mountain Hares are fairly widespread in Scotland and strongly associated with heather moorland, including areas managed for driven grouse shooting where their populations are sometimes harvested and controlled. The number of hares shot during the open season is not regulated, but land managers are expected to exercise restraint, in view of obligations under the EC Habitats Directive. The Mountain Hare is on the Scottish Biodiversity List with the UK Joint Nature Conservation Committee (JNCC) report to the EU for 2013-18 reporting Mountain Hares as being in an “unfavourable-inadequate” conservation status. The current lack of a standardised method for counting Mountain Hares, coupled with no mandatory formal monitoring of populations, makes determining the conservation status of Mountain Hares problematic. All published estimates of Mountain Hare numbers in Scotland to date are at least partially based on ancillary data and primarily non-hare-specific surveys. In terms of the impact of sport shooting on hare populations, it is widely assumed that the numbers of hares killed for sport shooting probably have a limited effect on Mountain Hare conservation status – an assumption that cannot currently be tested on the very limited evidence available. There is no substantive evidence to support the population control of Mountain Hares as part of tick and/or Louping Ill virus control to benefit Red Grouse.

**Medicated grit**

Cyclical fluctuations in grouse numbers with peaks every 6-9 years caused by the presence of the strongyle worm in the gut can be suppressed by the use of quartz grit coated with the wormer flubendazole. Introduced in 2007, this medication enables grouse numbers to be maintained at a consistently higher level than hitherto. The use of medicated grit is controlled by the Veterinary Medicines Regulations 2013 with Guidance Note 13 on the use of Cascade and the Wildlife & Countryside Act 1981. 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. The dosage supplied to birds must be determined by a veterinary prescription reflecting the current worm burden in the grouse in terms of health and breeding success. Not all estates routinely determine worm burdens: some use medicated grit as an insurance and others continue to treat worms against perceived wider risks to the grouse population from weather, predators and tick-borne disease. Land managers must also ensure that no drug is ingested 28 days before the grouse are harvested. There is some evidence that prescription levels are too high,
that gritting holidays are not always observed, and that grit may not always be withdrawn from grouse at least 28 days before Red Grouse enter the food chain. At present there is little evidence of a resistance problem with the use of medicated grit, but there is some evidence that flubendazole is toxic to aquatic organisms.

3. Option of licensing grouse shooting

Licensing is widely seen as an option for regulating grouse shooting and is specifically included in the remit for the review. 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. Licensing can be used to control specific activities such as muirburn to control their potential adverse impacts, or to provide wider oversight of the activity of grouse shooting, which is a driver for these specific management activities and for illegal killing of raptors. In promoting the more sustainable management of grouse moors, licensing schemes represent one possible approach for stronger regulation of muirburn, the management of Mountain Hares and the use of medicated grit. If licensing were to be introduced, SNH should be the licensing authority using procedures allowing for both individual and general licences (as currently used for the control of corvids) and with scope for any initial licensing scheme to be amended as required in response to changing conditions, behaviour, knowledge and understanding of risk. In terms of enforcement options, SNH should have powers comparable to those available to the Scottish Environment Protection Agency (SEPA) which provide fixed or variable monetary penalties to be imposed as an initial response, but with the potential to escalate to criminal prosecution in the event of serious, deliberate or persistent breaches of the law.

4. Recommendations

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 of the Report [also page 13 of this document]). 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.

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. We further recommend additional regulation for the land management practices of muirburn, managing Mountain Hares and the use of medicated grit. For muirburn we propose licensing; for the management of Mountain Hares we propose increased legal regulation; and for the use of medicated grit we propose a voluntary Code of Practice. Should the proposals on Mountain Hares and medicated grit prove ineffective, we further recommend that all three land management practices be licensed. Should the above recommendations on licensing be accepted by the Scottish Government, the resulting SNH register of grouse shooting activity would fill a major evidence gap.
In addition to the specific recommendations on licensing and increased regulation, we make a wide range of other recommendations arising directly from the summaries of scientific evidence (Section 4) and other information gathered during the review. Issues covered in these recommendations include new and enhanced Codes of Practice, training for land managers on relevant land management activities and the promotion of best practice via an accreditation scheme. In terms of incentives, we recommend that a wider range of moorland management activities become eligible for Rural Payments and Inspections Division (RPID) support. The illegal killing of raptors is targeted via a series of recommendations which include: more thorough regulation of the fitting and use of satellite tags coupled with more expeditious sharing of information; and enactment of proposals in the 2015 Wildlife Penalties Review Group on levels of fines and custodial sentences, alternative penalties and sentencing guidelines. To support our specific recommendations on the use of muirburn, management of Mountain Hares and the use of medicated grit, in Section 6 we also explore in detail how these recommendations might be made operational.

A consolidated list of our recommendations is provided in Section 7.
Recommendations: consolidated list – extracted directly from the report

This section brings together recommendations in sections 5 and 6 into a consolidated list.

**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 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.
**Muirburn**

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, non-compliance 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.

Appendix 1: Licensing grouse shooting: arguments in favour and against

The remit for this review invited us “to advise on the option of licensing grouse shooting businesses” and this is an issue to which we have given particular attention.

Any assessment of the position is deeply affected by the lack of clear evidence on many aspects of the background – ecological, social and economic – and on how changes in the regulatory framework will alter the behaviour of key parties. An important point to appreciate is that this issue should not be viewed in isolation but is affected by action taken in relation to other aspects of this review, and to other reviews (e.g. Poustie, Deer Working Group), as well as by the wider choices that affect the policy and finances for various uses of land and the consequences of their implementation. Nevertheless, the discussion below endeavours to maintain a narrower focus, summarising the main arguments for and against introducing a licensing system for grouse shooting.

A preliminary issue to note is that there is no clear definition of ‘grouse shooting businesses’, since shooting on any land may be intermittent, depending on local conditions, and may be undertaken on a non-commercial basis. Consideration of a licensing scheme has therefore proceeded on the basis that the activity requiring a licence would be the killing of grouse. This avoids difficult questions in defining and identifying a ‘grouse shooting business’, a ‘grouse moor’, or in distinguishing between where land is managed for driven shoots (which tends to encourage the more intensive styles of management) as opposed to walked-up shooting.

A radical alternative, adopting an approach taken in many other countries, would be to shift the focus of controls on hunting away from the land where the hunting takes place and its owner and onto the hunter individually, see the SNH report A Review of Game Bird Law and Licensing in Selected European Countries (Pillai & Turner, 2017). Across the UK, hunting laws derive from the property rights of landowners, including the entitlement to hunt on their land, and the right to control who is allowed to take game on their land, with the landowner’s control over access being the major constraint on hunting activity; the same applies to much of the law on fishing. A different perspective is to focus on the individual hunters and place controls and responsibilities on them, e.g. training and reporting requirements and limits on bag-size, with issues relating to access to land fulfilling a secondary role. Introducing such a change for grouse shooting alone would only increase the undesirable fragmentation
of the law, with a clash between two underlying approaches to regulation, and accordingly is not further considered here. Reflection on the fundamental structure of the controls on hunting would be appropriate for a much deeper and more far-reaching review of the law and policy affecting that activity and related land use.

Arguments in favour of and against licensing have been provided by individual members of the Group. Viewed together, they should not be seen as representing the views of the whole Group. For the sake of a clear statement of the range of views reflected, rather than adding careful qualifications to almost every point, the arguments are phrased in terms of what ‘will’ and ‘would’ occur in certain circumstances even though they are often matters of speculation and the likely outcomes are legitimately contested. Accordingly, what follows is stated in more definite and absolute terms than is strictly justified, on both sides of the argument, and does not represent the conclusions of the Group as a whole on any individual matter.

Arguments in favour

1. Grouse shooting and grouse moor management are activities that have a major impact on landscapes, habitats and the populations of wild creatures, but operate under fragmented legal regulation. Some aspects are controlled, e.g. close seasons for shooting and muirburn, but there are no limits on the intensity or forms of management, on the side-effects on other creatures, or on bag sizes. An activity that has such a major impact on our environment should be subject to a degree of control and central record keeping.

2. Although several forms of unacceptable conduct (e.g. killing raptors) have been criminal offences for years, the law is regarded as not being effective. Enforcement is difficult, requiring admissible evidence of specific wrong-doing against particular individuals. Although some improvements in detection and enforcement might be made, these may be matched by the adoption of new methods of offending and the inherent difficulty will remain. Enabling grouse shooting to take place at a fairly intensive level is perceived as a driver behind unacceptable practices, and by threatening the continuation of this activity, an effective deterrent would be provided. Land-owners/managers would be led to do their utmost to see that unacceptable conduct does not occur (even more so than the current vicarious liability which can only take effect when the evidential burden for a successful prosecution has been satisfied).

3. Under a licensing scheme there can be a graduated scale of consequences when inappropriate conduct is detected (e.g. additional reporting requirements, tighter conditions and ultimately revocation of the licence). These can be imposed on the basis of the civil burden of proof and a cumulative record of misbehaviour (as with the current rules for revoking a general licence under the Wildlife and Countryside Act 1981), avoiding the almost overwhelming difficulty of proving specific wrong-doing beyond reasonable doubt.

4. A licensing scheme need not impose substantial additional burdens for most operators, and in any event most substantial land uses, e.g. agriculture, already require some administrative burden, although often related to receipt of financial support. More onerous controls might be imposed only where required in view of particular problems that have been identified.
5. Media attention has been drawn to the activities of some grouse moor managers, mainly over the suspected killing of protected birds of prey, but also over the large-scale killing of hares and other animals, and over other aspects of moor management, such as muirburn, peat destruction and use of medicated grit. Some of these activities have repercussions well beyond the boundaries of grouse moors. The introduction of a centralised licensing scheme would help to reassure the public that government is taking these concerns seriously.

6. In a complex area, a licensing scheme offers greater flexibility rather than the blunt instrument of using the criminal law to prohibit particular unacceptable practices, especially when these may be hard to define and prove in a way that allows the criminal justice process to operate. The flexibility is also beneficial in terms of adopting an adaptive management approach, responding to our changing understanding of the position and the factors that influence it, and of incorporating a number of important public objectives (e.g. climate concerns as well as biodiversity).

7. A transparent licensing scheme would assist those in the industry who already observe high standards. Obtaining and keeping a licence would be a visible sign that the activity is being sustainably managed in an acceptable way and that land is being managed appropriately, directing any public criticism onto those who are not doing so. The potential for meaningful consequences if standards slip would also offer public reassurance. This would help to take the heat out of current polarised discussions where all grouse moors are treated alike.

8. Existing controls are not proving effective in guaranteeing appropriate and sustainable management (although what is ‘appropriate and sustainable’ can be contested). Codes of Practice can capture what constitutes good practice but do not ‘have teeth’. Given the very varied financial positions and ambitions of grouse moor owners, financial incentives and penalties such as are widely used in agriculture and forestry will not always be effective. A licence allows for sanctions to be imposed for non-compliance, without every minor transgression necessarily amounting to a criminal offence.

9. A licensing scheme would allow for information to be gathered at national level, filling the information gaps which this review has shown, including the number, area and locations of grouse moors, the management activities undertaken and the number of animals present and killed. This would provide the basis for sound science to be used in future decision-making at a local and national level and enable an adaptive management approach to be taken, responding to changing circumstances.

Arguments against

1. The main forms of unacceptable behaviour are already unlawful and the emphasis should be on detecting and punishing the wrong-doers, not additional controls on others. The difficulties of effective enforcement are recognised, but there are improvements that can be made and these should be tried before more regulation is placed on all grouse moor owners, regardless of their behaviour.

2. The activities which are already criminal are being carried out by those who are consciously and deliberately breaking the law. Those willing to break the law today would not be deterred by a further layer of regulation, especially when it does not target
them directly. Vicarious liability already places land-owners/managers at risk if they do not take steps to prevent offending by those under their control.

3. The other problems that have been identified in relation to grouse moors are related to aspects of specific land management practices (muirburn, medicated grit, etc.) and there are other more precisely targeted and arguably less burdensome measures to tighten existing controls on these practices which should be tried first. Many aspects of grouse moor management are already affected by legislation. Similarly, there could be more robust use of existing powers (e.g. revocation of general licences under the Wildlife and Countryside Act 1981) to address local problems.

4. Any increased costs or operational constraints arising from a licensing system will fall on all operators, including the reputable and conscientious ones, whilst those individuals willing to break the rules are likely still to escape sanctions in the absence of an unfeasibly high level of effort in detection and enforcement.

5. To meet legal standards, the imposition of any meaningful sanctions still requires a substantial evidential basis, so that although there may be no need to meet the full criminal threshold, there will remain a substantial challenge in establishing the case for stronger intervention. The introduction of a licensing system will not solve the problem of detecting and attributing wrong-doing.

6. A workable licensing system could be devised, but there would be difficult design issues and administrative costs and burdens on the licensing body and those licensed. It would be a disproportionate imposition in policy terms. There are other more precisely targeted and less burdensome measures which should be tried first. Moreover, as a restriction on the freedom of land-owners to enjoy their property as they wish, any licensing scheme may be subject to challenge under the Human Rights Act 1998. Like most forms of environmental regulation, a well-designed scheme should be legally acceptable, but there is a risk of legal challenge that would be a distraction. Dealing with these issues would divert time and resources from making a difference on the ground (c.f. the prolonged litigation over minimum pricing of alcohol).

7. Licensing for grouse shooting would single it out from many other forms of land use that can also have substantial environmental impacts (arable farming, forestry), but are not subject to a regulatory scheme that would not just control particular operations but could bring the underlying land use to an end. Similarly, other forms of shooting (e.g. for pheasants and partridges) are not currently subject to any regulation of the activity as a whole (as opposed to specific aspects of how it is carried out). Licensing can be seen in two very different ways: as a useful regulatory device, or, since the starting point is the outlawing of the activity (unless a specific exception is made), some people may perceive licensing as identifying grouse shooting as an inherently unwelcome activity to be tolerated only under strict conditions. For those people, such a development will not promote a cooperative atmosphere nor the search for mutually accepted solutions. The industry already feels itself under attack and even vulnerable to malicious interference as evidenced by damage to and tampering with snares, traps and cages which are often reported to the Police. Should a licensing scheme be introduced, the grouse sector fears that the incentive for malicious interference could well increase.
8. Although there are still some problems, much of the industry is alert to changing attitudes and conservation needs, and is responding with various measures already in train, e.g. the increased training for gamekeepers that highlights legal and conservation responsibilities, and initiatives such as the East Cairngorms Moorland Partnership.

9. Any increased demands in terms of regulation and implementation costs (e.g. time devoted to a licence application and record-keeping) would have an adverse effect on investment and viability, unless the benefits are greater than the costs. While some estates have wealthy backers, for others grouse shooting is one of several elements in an integrated management and financial system, and any additional costs may threaten the enterprise as a whole unless they bring greater direct benefits.

10. A licensing system that has the ultimate sanction of removing the right to shoot grouse (even if only in extreme circumstances) makes any investment in a grouse moor more precarious than in the absence of a licensing requirement and therefore might make it less likely to happen. The grouse industry is a major reason for investment in some rural areas, sustaining many jobs and services in those areas. This investment comes from the private sector with virtually no state support, whereas alternatives such as forestry and farming can in most cases attract substantial public funding.

11. Recent decades have seen a decline in the area of land managed as grouse moors and therefore of the habitat they provide, which is beneficial for some species other than grouse. Any measure that risks a decline in active management is likely to affect the state of the land in question and have an effect on neighbouring land as well (e.g. in relation to predator numbers) and will be very likely to lead to a further decrease in the area of managed moorland.

12. It is not clear that there are other land uses available for land currently used as grouse moor which can provide the same environmental, economic and social benefits at such low cost to the public purse.

13. With less investment in grouse moors generally and the risk of fewer grouse moors in total, there would be a significant effect on biodiversity (e.g. nesting waders). No other upland activity is likely to carry out significant predator control.
Annexe 3

**Group members**

**Professor Alan Werritty FRSE**

Alan is Professor Emeritus of Physical Geography, University of Dundee and former Research Director of Dundee's UNESCO Centre for Research on Water, Law Policy and Science. He has researched climate change, flooding and societal responses to increased flood risk within the wider context of promoting sustainable river catchments. In 2015 he chaired the SNH Review of Sustainable Moorland Management. He is a past Vice-President of the Royal Geographical Society and former member of SNH's Science Advisory Committee. He has served on the Boards of the Royal Geographical Society, British Society for Geomorphology and the James Hutton Institute.

**Alexander Jameson BLE MRICS FAAV**

Alex qualified as a Chartered Surveyor in 1983. He works for Strutt & Parker as a Partner in their Perth Office. He has had 30 years experience in upland estate management in Scotland and the North of England. Previously he has been on various committees including Scotland's Moorland Forum, the SLE Moorland Groups and the Langholm Moor Demonstration Project. More recently, he is involved locally with the Central Region of Scottish Land & Estates as well as their National Policy Group.

**Professor Alison Hester FRSB**

Alison is a senior scientist and Science Challenge Lead (Environment) at the James Hutton Institute. She has over 30 years international research experience on natural resource management, sustainable land use and drivers of change, including much research on moorlands. Alison works closely with land managers at all levels, from individual to Governmental, and has contributed as an author for UK initiatives such as the National Ecosystem Assessment. Other current committee roles include: Chair of the Natural Capital Initiative; member of the Scottish Forum on Natural Capital; University of Highlands and Islands Science Faculty Board; ALTER-Net Council: Europe's Ecosystem Research Network.

**Professor Colin T. Reid**

Colin is Professor of Environmental Law at the University of Dundee and has written widely on environmental law for varied audiences, with particular research experience in nature conservation and biodiversity law. He is Convener of the Legislation, Regulation and Guidance Group of the Partnership for Action against Wildlife Crime Scotland (PAWS).

**Professor Ian Newton OBE FRS FRSE**

Ian is an Emeritus Fellow of the Centre for Ecology and Hydrology. For his whole working career, he has researched bird populations, including birds of prey, and was involved in the two Langholm projects on raptor-grouse relationships. He is a past Chairman of the Councils of the RSPB and the British Trust for Ornithology, and has served on committees of the Game and Wildlife Conservation Trust and the Wildfowl and Wetlands Trust.
Mark Oddy MRICS CEnv MIoD MI AgrM

Mark joined the Buccleuch Group as estate manager of the Eskdale and Liddesdale estate in 2003. Responsible for the management of this 75,000 acre estate situated on the Scottish Border, his role expanded and became Energy Director for the Buccleuch Group on its energy, mineral and foreshore assets. Since November 2016, Mark is a retained consultant for Buccleuch. Mark is the current Chairman of both the Langholm Moor Demonstrating Project Ltd. and the South of Scotland Golden Eagle Project, represents Scottish Estates Business Group on the Scottish Government PAW committee and is a technical advisor to the IUCN Peatland Code. Before joining Buccleuch, Mark managed public and private estates in North Devon, Exmoor, Lake District and Yorkshire.

Specialist Advisers

Dr Adam Smith

Adam is Director (Scotland) for the Game & Wildlife Conservation Trust. He has 30 years of experience researching and advising on upland land management for game and conservation, with 25 peer reviewed papers and other reports on upland issues. He is a trustee of the Heather Trust and sits on a number of independent, SNH and Scottish Government stakeholder bodies.

Calum MacDonald

Calum is an Executive Director with the Scottish Environment Protection Agency with over 40 years of experience in Environmental protection and regulation. He chairs Scotland’s Environmental Crime Task Force and Interpol's Environmental Compliance and Enforcement Committee's Advisory Board.

Professor Des Thompson FRSE

Des is the Principal Adviser on Science and Biodiversity with Scottish Natural Heritage, he is Chairman of the UN (Bonn) Convention on Migratory Species Technical Advisory Group on the Conservation of Migratory Birds of Prey in Africa and Eurasia. He has published books on upland ecology, raptors and nature conservation, and is actively involved in scientific programmes and policy work supporting Governments. He was involved in the two Langholm projects on raptor-grouse relationships, and chairs the Field Studies Council.

Susan Davies FRSB

Susan is Director of Conservation with the Scottish Wildlife Trust. She has 28 years experience working in conservation science, policy and practice through the UK Joint Nature Conservation Committee and then Scottish Natural Heritage. She was a Director of the Langholm Moor Demonstration Project and is currently a non-executive Director of the James Hutton Institute.