

LINK Deer Task Force evidence to the RACCE Committee of the Scottish Parliament

Deer and Natural Heritage Impacts

1. Introduction

Whilst native deer are recognised by LINK as an important part of our natural heritage, damage caused by high deer populations to natural heritage assets - in the absence of natural predators - is one of the most pressing conservation issues in Scotland.

Our current Scottish upland landscape is the result of several centuries of modification by de-forestation; burning for agricultural “improvement”; management for grouse; and overgrazing by high numbers of domestic livestock and deer. This has resulted in impoverishment of our natural eco-systems, including a reduction in soil quality in many areas. SNH’s Natural Heritage Futures project, first published in 2002, identifies high deer populations in some areas as a significant constraint in terms of meeting the objectives for the improvement of both biodiversity and landscapes in Natural Heritage Zones by 2025. This issue needs to be grasped if we are to meet our international commitment to the 2020 Aichi Biodiversity Targets, as well as our own domestic Scottish Biodiversity Strategy which *inter alia* aims to:

“protect and restore biodiversity on land and in our seas, and to support healthier ecosystems”.

In “Mountains, Moors and Heaths” UK National Ecosystem Assessment Technical Report (Van der Wal et al. 2011) it is stated;

“Grazing; arguably the most significant driver of change in mountain, moorland and Heathland habitat quality has been changes in grazing by sheep and deer in the Scottish Highlands.... . High grazing pressure throughout much of the uplands has substantially reduced the quality and extent of alpine and sub-alpine dwarf shrub heath, moss heath and scrub-rich vegetation.”

In the past 200 years deer populations have been largely managed as a sporting resource. Legislation in the past 50 years, which has been enacted to tackle a growing problem, has failed to make substantial progress. Scottish Government financial incentives designed to improve sustainable deer management practices have proved inadequate. The costs of deer management in Scotland are falling disproportionately on the public sector. Forestry Commission Scotland underpins the national deer cull effort by carrying out 28-30% of the national cull (FCS National Forest Estate Deer Management Review 2013) on 9% of Scotland’s land area.

In 1994, Scottish Natural Heritage produced a policy paper entitled “Red Deer and the Natural Heritage”. We suggest that this document should be an important reference point for the current work of the RACCE Committee. In “Red Deer and the Natural Heritage” it is stated that “SNH has pressed for new legislation which acknowledges unequivocally that management for red deer populations for the protection and enhancement of the natural heritage is a legitimate and necessary provision, equal in weight, and not unrelated to, the need to protect agricultural and forestry interests”. This same report made a series of recommendations to better manage Scotland’s rising deer populations, yet many of these recommendations, including proposals to reduce the red deer population at that time by 100,000 animals have yet to be implemented. Indeed, in 2013 red deer and roe deer populations have risen and the natural heritage problems identified by SNH in 1994 have got even worse.

Deer damage by browsing and trampling is now a chronic problem in many important upland, peatland, and montane natural heritage sites. Many important woodland sites are also heavily impacted by excessive browsing, where older seed trees are dying and replacement saplings are grazed; our finest ancient woodlands are unable to regenerate.

The damage caused by deer (and in some cases also by feral goats and sheep) to priority habitats can be summarised as:

- suppression of tree and shrub regeneration, leading to eventual loss of woodlands.
- eradication of tall herb, scrub and shrub communities and replacement with grasses.
- loss of species’ diversity in the ground layer of many habitats including woodland and species rich grassland.

- locally severe physical poaching by trampling of deer to mires, fens and flushes; increased rates of soil erosion, particularly on blanket mires; increased runoff rates; decreased water quality; and increased downstream flooding risk.
- loss of woodland grouse species through deer fence strikes erected to manage high deer populations and protect natural heritage assets from deer damage.
- habitat compartmentalisation and fragmentation resulting from the erection of deer enclosures.
- Reduction of natural processes in woodlands, such as low level browsing and disturbance when deer are excluded by fencing.

Effective sustainable deer management will also help the Scottish Government to meet its woodland expansion targets as part of climate change mitigation and the wider objectives of the Land Use Strategy. Many important Scottish peatland sites are also deteriorating due to high deer numbers and, because degraded peatlands emit rather than lock up greenhouse gases, this means that Scotland's climate change targets are also being undermined.

In light of the above, LINK are pleased that the RACCE Committee are now considering the issue of deer and natural heritage and we hope that substantive recommendations for improvements to current deer management systems can be made in the lead up to the expected review of Scotland's Wild Deer Strategy in 2014.

Whilst the primary concern is damage to the natural heritage, this is inextricably linked to the way deer are managed in Scotland. For over 30 years in Scotland a voluntary system of deer management has operated and this system has, largely recognised the private sporting interest. During that time both the deer population and damage to designated sites has continued. However, sporting objectives and sustainable deer management need not be mutually exclusive and the former should be seen as a principle means by which Scotland's deer population can be managed sustainably.

2. Impacts on the natural heritage of high deer populations

2.1 Designated sites

There has been ongoing evidence of deer damage to designated sites, especially woodland sites, for many years. 28 out of 54 of our most protected woodlands (EU Natura 2000 SACs) are currently classed by SNH as being damaged by deer. This is unlikely to be compliant with the EU Habitats Directive, which could result in infraction proceedings. It is noted that on some open habitat designated sites, high browsing pressure is required to maintain them in favourable condition and deer have a valuable role to play in these sites.

Overall, 321 out of 1203 designated sites are currently classed as being damaged by deer. Many of these sites have been recorded as damaged by deer for decades by SNH.

Protected species are also indirectly affected by high deer numbers. For example, the Scottish capercaillie population is in trouble. There are now only an estimated 1200 birds, with 75% of the population in Strathspey. On Deeside and in Perthshire the populations of capercaillie are on the verge of localised extinction. Research suggests that part of the problem facing this species is high deer numbers impacting on their woodland and shrub habitats, as well as bird strikes on deer fences. Although a good number of capercaillie Special Protection Areas (SPAs), notified by SNH under the EU "Birds" Directive, are performing badly for capercaillie. Numbers of this species are declining steeply in supposedly their most important sites - for example, Ballochbuie SPA on Deeside. Progress towards reducing deer numbers and removing damaging deer fencing has been slow at some of these sites, including at Ballochbuie..

2.2 Native woodlands

Studies show that excessive deer browsing can prevent tree regeneration of some of our most iconic woodland habitats, including sites designated under the EU Habitats Directive; Caledonian pine forests containing Scots pine (Scott, 1999, Palmer 2002); Atlantic oakwoods (Palmer 2004); and upland birchwoods (Pollock 2004). Due to chronic deer browsing (as well as feral goat and domestic sheep browsing) Scotland has only 2 km of natural tree line in the entire country, and montane scrub ecosystems are virtually extinct. Deer may also consume seeds and fruit of trees and shrubs, which reduces regeneration and dispersal.

A number of selectively preferred trees and shrubs are also important for birds for nesting cover and for food, both in terms of seeds and berries and dependant insects. In upland pine woods, studies have shown for example that deer browsing reduced the biomass of blaeberrries by 50%, and the abundance of caterpillars by 75% (Baines et al. 1994). Density of woodland and variety of tree species is also important for invertebrate abundance, therefore any simplification of structure will reduce invertebrate food supply for birds.

Changes in understory vegetation can affect bird populations by reducing food supply, nest sites and roosting cover; and increasing vulnerability to nest predation. Populations of bird species which have been shown to be affected by loss of woodland understory to deer browsing include dunnoek, song thrush, willow warbler, garden warbler and bullfinch (eg. Fuller, 2001). A number of these species have declining Scottish populations and are of conservation concern.

2.3 Peatlands

The conservation of Scotland's peatlands is of high conservation priority, not just because of their international conservation importance, but also because of their ability to sequester carbon and help with Scottish Government commitments to reduce the impacts of climate change. We believe that reducing grazing pressure on peatlands may be one of the cheapest options for Scottish Government to deploy to achieve its objective of reducing carbon emissions.

Whilst deer grazing at appropriate densities is an important part of maintaining peatland habitats and associated diversity of plants and birds, excessive grazing or trampling may cause peatland erosion, and thereby release greenhouse gases. There is increased susceptibility to erosion at altitude or on exposed peatland sites. Excessive deer trampling accelerates erosion which leads to increased run off and peat discolouration in water sources. The removal of peat discolouration in public water supplies is a significant annual public cost to Scottish Water. **SNH Commissioned Report 325 entitled "Climate Change, Land Management and Erosion in the organic and organo-mineral soils in Scotland and Northern Ireland" 2009, highlights in its findings that erosion is impacting 35% of the peatlands in Scotland. It is stated that;**

"The evidence suggests that overgrazing is probably the main anthropogenic driver, leading to vegetation change and increased susceptibility of organic surfaces and horizons to erosion. The evidence shows that sheep numbers have decreased in recent years, but in Scotland, there is still concern about the numbers of wild deer".

"Possible methods for reducing the risk of erosion in these areas include confining sheep grazing to the growing season (ie. avoid year-round grazing or winter stocking of these sites) and where necessary reduce deer numbers to at or below an overall density of 15 deer per square kilometre. It is also necessary to be aware of the potential role of other herbivores, particularly rabbits, in damaging these areas".

The alteration of deer movement patterns, largely by deer fencing or feeding of deer, can cause serious impacts because of deer trampling on peatlands. Naturally, deer will tend to use peatland areas less for browsing than areas of grassland due to the palatability of the vegetation, however fencing may restrict them onto peatlands, where fences are erected for the protection of agriculture.

2.4 Impacts of deer fencing on birds

Deer fencing costs to the public purse have been rising and are currently estimated at over £5 million per annum. Fencing may move deer impacts, or worse, concentrate effects elsewhere. Fencing deer out of woodland denies them natural shelter and forage. In hard winters, thousands of deer may die of exposure and starvation, with corpses often found up against woodland fences. No less than 13,000 red deer were estimated to have died in the hard winter of 2009/10 alone.

Deer fencing has also been shown by several studies to result in collisions by native grouse species including capercaillie and black grouse, both of which are species of high conservation concern. FCS has issued guidance on the appropriate use of deer fencing (Forestry Commission Guidance Note 11) to prevent damage to important natural heritage interests including woodland grouse.

LINK landowning organisations, some private landowners, and SNH have reduced deer numbers and removed deer fencing at sites such as Abernethy Forest, Glenfeshie Estate, Creag Meagaidh and Mar Lodge to promote habitat regeneration. This approach has been demonstrated to benefit both black grouse and capercaillie populations, both by improving woodland and shrub habitats, but also by reducing grouse mortality through fence collisions.

2.5 Impacts of deer on wider ecosystems

As well as improving Scotland's priority habitats, a reduction in deer numbers could help restore ecosystem health, function and resilience in the face of climate change, which would directly improve the quality of ecosystem services. Examples of ecosystem services affected include: climate regulation - carbon sequestration from peatlands, trees and shrubs; flood alleviation through scrub and woodland regeneration (and less peatland run off) slowing water movement in the catchment; soil formation and quality; improved water quality (because of less peat erosion); timber and forest production; cultural services such as increased biodiversity, aesthetics and inspiration.

3. Deer management

There are an estimated 400,000 red deer in Scotland, an increase from about 150,000 in the 1960s. Estimates for roe deer are more recent, but these too indicate a rise from 300,000 to 350,000 in the last decade. Whilst native deer are an essential part of our natural heritage and can help maintain functioning ecosystems, (such as woodland), with the elimination of their natural predators, locally high deer numbers can also cause serious damage to habitats and ecosystems. This damage is caused by excessive browsing and trampling. As a result, deer populations require to be actively managed by humans.

In comparison to other countries, Scotland has very high red deer populations. For example, in Germany, there are c. 150-180,000; in France c. 35-40,000; Sweden less than c.10,000; and Norway c. 130,000 animals (Royal Zoological Society of London 2013). On this basis Scotland's density of red deer is 5 times higher than Germany; 10 times higher than Norway; and 100 times higher than Sweden or France. The high number of deer in Scotland is largely encouraged and maintained by private estates for sport shooting. In other European countries there are other systems of sustainable deer management, which could help inform new deer management structures for Scotland.

In addition to our native deer populations, there are also substantial numbers of non native introduced species of deer, notably sika and fallow deer introduced originally for ornamental or sporting purposes. In the case of sika deer hybridisation with our native red deer has reached a point where it cannot now be stopped on the mainland. As a result "Red Deer Refugia" have been established to ensure future integrity of our native red deer genotype, and these sites are mainly located on islands (for example the Isle of Rum).

Climate change may result in milder winters and it is widely predicted that deer populations in Scotland will continue to increase (WDNA 2008). Other land use changes, such as increased forestry cover, will also result in higher deer numbers through the creation of preferred habitats, exacerbating already serious deer damage to the natural heritage.

3.1 Problems with the current deer management system

The current system of deer management in Scotland relies to a large extent on a voluntary approach supported by the Deer (Scotland) Act 1996 as amended, and a voluntary Code of Practice on Sustainable Deer Management 2012. The focus on deer management in large areas of upland Scotland in particular remains with private landowners, many of whom wish to maintain high numbers of male deer for sporting reasons.

The capital valuation of upland sporting estates is still predicated partly on the number of sporting stags available to shoot and this leads to the desire in many places to retain high populations of deer.

Recent responses to Parliamentary Questions (October 2013) show that:

No compulsory control schemes for deer have been initiated by SNH since introduction of powers (section 8) under the Deer (Scotland) Act 1996. Whilst these powers were improved to make them more workable in the Wildlife and Natural Environment Act 2011, we believe that the burden of evidence required by SNH to intervene to protect the natural heritage (and wider public interest), remains too complicated and therefore open to legal challenge by resistant landowners. Section 8 compulsory powers are therefore unworkable in the present format.

Whilst section 7 voluntary control measures have been widely deployed by SNH, progress with achieving favourable condition of the features of important natural heritage sites is painfully slow in many cases (see paragraph 2.1). Damage to the countryside and its natural heritage features outside designated sites is also an important consideration if we are to protect our natural heritage (especially peatland and native woodland sites) and we see little progress on sustainable deer management outside designated natural heritage sites.

LINK participates in a number of deer management groups. We see little desire in most DMGs to reflect the Code of Sustainable Deer Management practice in relation to “actions to protect and enhance the environment” whilst accepting that this is work in progress following introduction of the Code in 2012.

Of the current 42 Deer Management Groups in Scotland only 16 have current Deer Management Plans in place. How can we have effective deer management in Scotland without effective planning in both the public and private interest? Those Deer Management Plans that are in place are largely not public documents; they have not had community and other stakeholder engagement; and many focus still to a large extent on the sporting stag resource. Where they are in place, these documents are also not enforceable on the ground. Very limited progress has been made on this issue since the SNH “Red Deer and the Natural Heritage” report in 1994.

The Forestry Commission underpins the national deer cull effort to the tune of 28-30% of the cull on 9% of the land area of Scotland. This cost is put at about £5 million per annum to which costs of deer fencing at a similar level need to be added.

4. LINK Recommendations

Current and long term damage by deer to designated sites, and other important natural heritage features, is a major conservation issue in Scotland. Deer are also having serious impacts on the delivery of important Scottish Government policy, including the Land Use Strategy; Scottish Biodiversity Strategy; climate change adaptation programme and forest expansion targets. The costs to the public purse of deer impacts are currently high and relate to fencing off commercial and native woodland, damage to peatlands and cleaning discoloured water and protecting the natural heritage. We suggest there should be regard to the “polluter pays” principle and a much greater burden of minimising the costs of rectifying the damage to the natural heritage, caused by those who wish to support high deer numbers on their land, should be transferred to the private sector (and not borne as is presently the case by the public sector).

When considering damage to the natural heritage arising from high deer numbers, this must be seen in conjunction with our antiquated system of voluntary deer management structures. The current system of voluntary deer management structures in place in Scotland is not fit for purpose. Put simply, it cannot deliver the required outcome of sustainable deer management. The voluntary Deer Management Groups (DMGs) were established to manage wild deer populations as a sporting resource and are not constituted to reflect the wider public interest in deer management. LINK believes that a new approach is needed, which gives greater recognition to the public interest in deer management alongside that of private sporting interests. **We propose a number of ways forward which the RACCE may want to pursue:**

- As an absolute minimum there should be stronger and swifter action by SNH using existing powers. Deer impacts on designated sites need to be reduced rapidly to restore favourable condition. Priority should be given to reducing deer numbers and removing deer fences at designated sites important for peatlands; native woodlands; and capercaillie in particular. At present a good number of natural heritage sites are in Deer (Scotland) Act 1996 section 7 agreements, yet there is often slow progress towards achieving favourable condition status. SNH has yet to use its section 8 powers of compulsion to reduce deer numbers on designated sites. We believe that the section 8 powers are unworkable and need to be reviewed to ensure they are fit for purpose and can be implemented in a cost effective way without fear of legal challenge
- SNH should develop and consult on a series of options for future deer management planning structures in Scotland, using the valuable and significant experience from other countries (for example Scandinavia and Germany) for wider public consideration.
- At the time of the Wildlife and Natural Environment Act 2011, a statutory duty was proposed by the then Deer Commission for Scotland, which would have required all landowners to manage deer populations sustainably. This proposal was later withdrawn from the public consultation as an option. This proposal needs to be brought

back and given thorough public consideration.

- LINK favours a statutory underpinning approach to deer management, which is the approach in many other European countries. SNH would administer this system, help design effective deer plans for defined geographical areas, which include both public and private interest, and meet the expectations of the Deer Code. The Deer Code should become a statutory document and apply to all private landowners. SNH should help set deer cull targets according to public management plans, and there would be a system of compulsory cull returns, with a requirement for enhanced biological data collection (as in other countries) to help inform adaptive management. LINK has taken legal advice and we believe that such a system could be developed within the requirements of the European Convention of Human Rights. We note, for example, the Association of Salmon Fisheries Boards established to manage a wild natural resource of economic value. Whilst the ASFB may not be the appropriate statutory model for deer management, this shows that it is possible to create such structures.
- The Forestry Policy Group, in its submission to the Scottish Government Land Reform Review Group of 11 January 2013 (and recognising many of the same issues as LINK in this submission), suggested a licensing system for deer management in Scotland. Under that system, licences would be issued by SNH to landowners who meet a Local Deer Management Standard (LDMS), recognising both public and private interests in deer management. The LDMS would identify the target population level for a DMG area. The contribution to the DMG annual deer cull to be made by each landholding. LDMSs would be prepared voluntarily by DMGs advised by SNH, but if these are unforthcoming or inadequate, SNH should have powers to impose them. Standards of these kind are already produced for section 7 control agreements. In the event that an owner fails to qualify for a licence, the system should provide for the allocation of hunting rights on that land to another licence holder. Costs of regulation of the industry would be met by “sporting rates”. This could be a default regime applying until a system of licensing is adopted. On this basis, there is a greater responsibility on the private sector and the charge can be reduced. Licences could be held by any person who holds Deer Management Qualification level 2.
- Consideration might also be given by SNH to a Good Agricultural and Environmental Condition (GAEC) type system, whereby a maximum deer density per square kilometre is set across Scotland to secure the public interest in deer management and protection of natural heritage assets, whilst also maintaining the sporting resource. This approach could also perhaps be refined to be set across Natural Heritage Zones to ensure that the “carrying capacity” of the land to hold deer (for example 15 deer per square kilometre on peatlands according to SNH Commissioned Report 325) is not exceeded. In such cases where deer populations are exceeded, SNH would issue a warning letter to landowners based on deer count data that has been obtained; requiring action to reduce numbers; otherwise control orders would be deployed; and cost recovery for implementation of any reduction cull obtained.

LINK Deer Task Force

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