

THE MUIRBURN CODE
 ISBN 0 7559 1004 4
 &
**PRESCRIBED BURNING ON MOORLAND -
 A GUIDE TO BEST PRACTICE**
 ISBN 0 7559 1003 6

**REVISIONS RELATED TO
 THE OTTER *Lutra lutra*.**

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A. INTRODUCTION.

- 1) During October 2007, Michael Russell, Minister for Environment, opened the UK Biodiversity Partnership conference and said: *“The Scottish Government is firmly committed to safeguarding Scotland’s biodiversity. However it is clear that our natural environment faces major challenges. Over generations humans have destroyed habitat, used resources unsustainably, introduced invasive species, and failed to protect wildlife. We are determined to reverse that damage wherever we can.”*
- 2) The purpose of this document is to highlight the fact that in relation to a European Protected Species, the otter, **The Muirburn Code** does not incorporate European and UK wildlife legislation. This serious omission is bound to foster an ignorance of the law which, though ultimately seen by the Courts as inexcusable, requires a practical remedy if only for the sake of the otter!
- 3) **The Muirburn Code** in association with **Prescribed Burning on Moorland, A Guide to Best Practice** and **The Common Agricultural Policy Schemes (Cross-Compliance) (Scotland) Regulations 2004** has failed to address the crucial issues concerning muirburn and its disastrous effects on the otter and its habitat. Otters are fully protected by virtue of Annex IV of the EC Habitats Directive implemented through The Conservation (Natural Habitats &c.) Regulations 1994 (amended in Scotland in the 2004 and 2007 Acts) and referred to as ‘The Habitats Regulations’ where they are listed in Schedule II.
- 4) The National Survey of Otter *Lutra lutra* Distribution in Scotland 2003-4 showed greater than 92% occupancy in the areas surveyed - Strachan, R. (2007). This followed a series of three surveys in Scotland by the Vincent Wildlife Trust. The first was in 1977-9, the second in 1984-6 and the third in 1991-4 - Green & Green, 1997. The high percentage of occupancy shown in the latest survey indicates that the otter is almost ubiquitous in Scotland. Furthermore the highest concentrations are in the Western Highlands and Islands where vegetation is dominated by heather moorland. That in turn is associated with fresh water in the form of rivers, burns, lochs and lochans and coastal stretches.
- 5) Muirburn is a management tool intended to stimulate food and cover for game birds, especially grouse in the Central and Eastern Highlands. There, generally, discrete areas are burnt to provide a mosaic of various-aged patches of heather. In the Western Highlands and Islands, however, muirburn is used to try and improve grazing for livestock. Regrettably, lack of manpower and organisation often leads to fires running out of control with the inevitable consequence that inland and coastal areas are excessively burned. These include loch and burn banks where of course otters and their associated habitats are most vulnerable. Cutting heather in

these circumstances where suitable terrain allows would remove the threat of fires running out of control and provide less of a threat to otters.

B. OTTERS - their lives explained.

- 1) Otters frequent heather moorland associated with both coastal margins and inland fresh water habitats: rivers, burns, lochs and lochans. It is fresh water courses that dictate much of otters' movement around their territories. Moreover they can cover considerable distances as they travel between the various water bodies.
- 2) **Holts (shelter sites).**
 - Coastal :
 - Tunnel systems may be dug in suitable substrata or natural cavities may be used under rocks. Occasionally disused dwellings or abandoned vehicles provide shelter where natural sites are at a premium.
 - Inland :
 - In heather moorland, tunnels dug in overhanging and eroded loch edges are often favoured. However these are generally smaller holt systems than in coastal habitats. Areas of deep heather provide good cover and multiple paths link to enlarged areas used for grooming and resting. Couches (nests above ground constructed with local vegetation) are used for resting and as natal sites. Some natal couches are occasionally found up to 2 km from the nearest open water where other otters were living - Kruuk, H. (1995).
- 3) **Breeding.**
 - a) This can occur during any month of the year. Significantly in the Western Highlands and Islands, a high proportion of births occur from **October** to **April**, a period which coincides with the main months for muirburn as determined by the Code. Natal and other shelter sites are often associated with fresh water sites in heather moorland ranging from the coastal margin to considerable distances inland.
 - b) Natal holts are where the cubs are born. They are generally far away from any disturbance, either human or otter and can be found in a variety of habitats which are usually associated with water. Occasionally they are established at a considerable distance from the nearest fresh water.
 - c) The female's presence is only recognisable by worn paths to and from the area, as little or no spraint (faeces and urine) is deposited - Kruuk, H. (1995). Consequently natal holts are difficult to identify without direct observation of the female.
 - d) At eight to ten weeks old, when weaning occurs, the cubs are moved by the female to secure nursery holts - commonly close to the coast in a maritime environment.
 - e) Otters can be active at any time of day or night. As cubs grow they start to follow the female around her territory visiting holt sites, resting sites, grooming areas and couches.
- 4) **Fresh Water.**

Fresh water lochs and burns govern many of otters' movements around their territory. In a maritime environment they rely on fresh water as a vital resource to maintain their coat in a healthy condition.

5) Territory Indicators.

Otters demarcate their territory and feeding areas by depositing spraint at prominent sites including around fresh water. Occasionally substrata or vegetation will be scraped together and spraint deposited on top. These are known as sign heaps. Paths connect these sites and are often punctuated with spraint. Importantly, absence of spraint does not necessarily mean absence of otters.

6) Wider Habitat and Food concerns.

- a) Otters living at the coast often forage inland. They follow water courses especially in the springtime when frogs, a favoured prey species, and other amphibians are spawning. Where fresh water lochs are associated with burns draining to the coast, these are visited by otters at any time of the year in search of fish, especially eels.
- b) Damage to riparian habitats may have indirect effects on otters through reductions in prey biomass. In northern Scottish streams salmonid fish are likely to form the bulk of otter diet - Carss et al 1998; Kruuk 2006; Kruuk et al 1998. In smaller streams, including many of those on Skye, trout are the most abundant fish species - Watt, 2006. Trout may be particularly badly affected by damage to riparian habitats since they favour streams that provide abundant bank-side cover. The strong relationship between bank-side cover such as undercuts, roots or draped vegetation and high trout abundance is well documented e.g. Wesche et al 1987, Summers et al 2005.
- c) Burning to the edge of streams damages riparian vegetation, preventing the development of trees and taller vegetation. In many upland areas, the riparian strip is among the most diverse of terrestrial habitats, often supporting the last vestiges of woodland and scrub - Parrott & MacKenzie 2000. In heavily grazed areas, heather growth is often at its most lush along the edge of streams because of the local effects of drainage and limited access for herbivores.
- d) Stream productivity, including aquatic invertebrate abundance (and hence fish food) benefits from rich riparian habitats through inputs of organic material originating from trees, shrubs and herbs - including heather. Furthermore, inputs of terrestrial food may be of importance to trout and salmon in streams where aquatic invertebrate abundance is low. Terrestrial invertebrate abundance may be enhanced by structural diversity in the riparian strip.
- e) Riparian vegetation including smaller species such as heather, myrtle and willow may be of great value in preventing bank erosion. This can reduce cover and directly affect stream carrying capacity for fish.
- f) In streams where salmonid fish are an important component of otter prey, inappropriate burning of the riparian strip is expected to damage otter prey species. Prey productivity is likely to be the most important component of otter habitat and may limit otter populations - Kruuk et al 1998. Inappropriate muirburn may therefore be expected to impact negatively on otters through reducing prey biomass. The value of riparian buffer strips to fisheries is already well recognised by the relevant Scottish agencies, including Fisheries Research Services, SEPA, SNH and the Scottish Executive - see Soulsby 2005. This is yet further evidence of the need to strengthen the Muirburn Code so that protection for riparian habitats becomes a prime feature.

C. THE LEGAL POSITION.

As indicated in section A(3) above, otters are now fully protected by the law. Taken together, the Acts, the Directive and the Regulations make it illegal to:

- 1) deliberately or recklessly capture, injure or kill such an animal;
- 2) deliberately or recklessly:
 - a) to harass a wild animal or group of wild animals of a European protected species;
 - b) to disturb such an animal while it is occupying a structure or place which it uses for shelter or protection;
 - c) to disturb such an animal while it is rearing or otherwise caring for its young;
 - d) to obstruct access to a breeding site or resting place of such an animal, or otherwise to deny the animal use of the breeding site or resting place;
 - e) to disturb such an animal in a manner that is, or in circumstances which are, likely to significantly affect the local distribution or abundance of the species to which it belongs; or,
 - f) to disturb such an animal in a manner that is, or in circumstances which are likely to impair its ability to survive, breed or reproduce, or rear or otherwise care for its young;
 - g) to damage or destroy a breeding site or resting place of such an animal (this does not need
 - h) to be deliberate or reckless for an offence to have been committed).

It should be noted that Regulation 44 of the Habitats Regulations allows actions to take place under licence which would otherwise be in contravention of the law.

D. SYSTEMIC and other DEFICIENCIES.

- 1) **The Muirburn Code** singly or in conjunction with **Prescribed Burning on Moorland - A Guide to Best Practice**, does give good advice about techniques on how, where and when to burn to produce certain benefits for game and stock. Apart from a brief mention of the Wildlife & Countryside Act 1981 some habitats and species are not considered from a wildlife perspective.
- 2) Under Recommendations, page 4, 'Fire Free' areas are identified. There are only two references to wildlife namely :
 - "Where sites traditionally used for nesting by legally protected birds of prey are precluded from any burning within ½ mile of nesting golden eagles after the end of February", and;
 - "Where woodland, woodland edges and scrub are identified."
- 3) Contradictions between **The Muirburn Code** and **Prescribed Burning on Moorland - A Guide to Best Practice** serve only to confuse the conservation issues.
- 4) **The Muirburn Code** states: "*Where possible avoid burning taller vegetation at the edge of water courses*". **Prescribed Burning on Moorland, A Guide to Best Practice** indicates in a selection of internationally used prescribed fire terms "*'Firebreak' - a natural or artificial break in the continuity of the fuel, used to stop or control the spread of a fire*". However on page 23 it states: "*Firebreaks may be natural or man-made such as banks of snow, grassy greens, rivers, lochs and tracks*".
- 5) The front cover of the Code shows people inappropriately dressed in contravention of the recommendations in the document.
- 6) It is regrettable that in the Western Highlands and Islands, **The Muirburn Code** is generally not adhered to with result that hundreds of thousands of hectares of moorland are inappropriately burned annually. This is mainly because of inadequate education, planning, manpower, organisation and supervision - seemingly without redress at the present time. The outcome of many of these inappropriate fires is to destroy otters' habitat, their shelter sites, potentially otters themselves and generally to cause wider degradation of biodiversity. Disappointingly the education element regarding Muirburn is sadly lacking and as a consequence the majority of muirburn is undertaken in ignorance of the consequences.

- 7) Whilst ignorance of the law is no defence, it needs to be recognised that if the Code or the Guide fail to deal directly with protection of habitats and species covered by legislation, then perhaps a degree of sympathy with the perpetrator of destruction is understandable. Given that most such perpetrators deny responsibility and the problem of obtaining sufficient proof of guilt, prosecution is seldom even considered. On occasions, when proof of culpability in clear breach of EC Habitats Regulations affecting Schedule IV species is provided, the judiciary have not prosecuted when they might otherwise have done so.
 - 8) Deleterious effects of Muirburn could be reduced by improvements in education and enhanced awareness. A revised **Muirburn Code and The Prescribed Burning on Moorland - Guide to Best Practice** in conjunction with demonstration days coupled with certification could provide vital tools in the implementation of best practice.
 - 9) There is a contradiction between these two documents. **The Muirburn Code** states, "Where possible avoid burning taller vegetation at the edge of water courses". **The Prescribed Burning on Moorland - A Guide to Best Practice** document indicates "Firebreaks may be natural or man-made, such as banks of snow, grassy greens, rivers, lochs and tracks". For the otter and its environs this is a recipe for disaster. Not only do they use water bodies in all forms but they also traverse moorland taking short cuts to burns, rivers and lochs. Shelter sites may be encountered on routes to and from water bodies, and adjacent to the water's edge or nearby.
 - 10) **The Common Agricultural Policy Schemes (Cross-Compliance) (Scotland) Regulations 2004** is a document designed to inform where penalties might occur with various payments. However information presented therein alludes only to the taking or killing of European Protected Species.
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E. RECOMMENDATIONS.

- 1) Amend **The Muirburn Code and Prescribed Burning on Moorland - A Guide to Best Practice**, to reflect the importance of the otter and its habitat. Any assistance needed from us will be given gladly. In any event, consultation with us on proposed amendments would be appreciated.
- 2) Amend the Cross Compliance document instructions to reflect changes in **The Muirburn Code and Prescribed Burning on Moorland - A Guide to Best Practice**.
- 3) Grazing clerks or a nominated person should be designated as being responsible for their area with regard to Muirburn. Potentially with a remit to police illegal burns in their area.
- 4) Provide the updated **Muirburn Code and Prescribed Burning on Moorland - A Guide to Best Practice** together with information about the EC Habitats Regulations to all affected communities - specifically to those having direct responsibility for muirburn.
- 5) Education in the form of seminars and demonstration events should be organised along with a certification scheme as proof of competence.
- 6) At present **The Muirburn Code** suggests planning a burn one year in advance. This should be enforced and coupled with registering the proposed area or areas with Scottish Natural Heritage (SNH) to enable avoidance of potentially hazardous burning.
- 7) Establish a register of people competent to assess an area of intended muirburn for otter interest. This should be lodged with SNH and SEERAD.
- 8) Cutting heather to achieve a mosaic of variable sward heights should be a primary technique on suitable ground. This technique has been successfully used at the Lake Vyrnwy reserve in Wales managed by the RSPB in partnership with Severn Trent Water.

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IMAGES OF BURNED OTTER SITES.



Site 1. Skye - 8th April 2007



Site 2. Skye - 8th April 2007



Site 3. Skye - 6th April 2007