66 In addition to the deer damage by grazing and browsing, another indirect cause of damage to the natural environment is the use of muirburn as part of deer management. Muirburn in Scotland is regulated by the Hill Farming Act 1946 and for some decades there has been a Muirburn Code providing non-statutory guidance on the standards of muirburn expected by the Government in Scotland. The recently revised version of the Code includes for the first time, in contrast to previous versions, references to muirburn for deer with the clear implication that it is a legitimate activity under the Code.65

67 The Code identifies the possible benefits of burning heather or grass for deer as being to provide “*greater short-term grazing capacity*” and to “*attract deer to specific areas*”.66 This practice of burning off the existing vegetation to produce a fresh flush of growth is used for open hill red deer in some situations. The fires typically involve significantly larger areas in comparison to muirburn for grouse, where a mosaic of small areas is recommended to support higher densities of grouse. Where the purpose is deer grazing, small areas are liable to be subject to heavy grazing that can damage the re-growth.

63 SNH (2016) *Op cit,* p.96.

64 First Minister’s Climate Emergency Statement 28 April 2019; ‘The Global Climate Emergency - Scotland’s Response’ Statement by Climate Change Secretary Roseanna Cunningham to the Scottish Parliament on 14 May 2019

65 SNH (2017). The Muirburn Code: Management of moorland by burning and cutting. SNH/Scottish Government, produced by Scotland’s Moorland Forum.

66 SNH (2017) *Op cit,* p.18.

68 There is no information available on the extent of muirburn for red deer, which tends to occur to the north and west of the main grouse moor management areas in the Eastern and Central Highlands. As muirburn is done for sheep as well as deer, the purpose in some situations may be unclear to an observer. However, the removal of sheep from many of the areas in the Highlands where muirburn for red deer has traditionally occurred, now makes muirburn for deer conspicuous in those areas. The larger fires used for deer management burn hotter than smaller fires for grouse. They also tend to burn longer and with greater severity as they are typically less closely managed than muirburn for grouse.

69 The wide ranging environmental impacts of muirburn have been the subject of many research studies and will likely be considered in the report of the Grouse Moor Management Group.67 However, in the context of deer management, the research is clear that the larger the size, severity and duration of the fire, the greater its impact on the soil structure and above ground biodiversity.68 This is also reflected in the Muirburn Code, which warns against large fires as they “*burn indiscriminately, including areas that are suitable for burning and those that are not*”.69 In addition, there are the wider environmental effects of muirburn (e.g. particle emissions, increased water run-off).70

70 The Group does not consider that muirburn for deer is still particularly widespread. However, the Group considers there is no public interest justification for continuing to allow a general right of land owners and occupiers to carry out muirburn for deer. The environmental costs of these fires in upland environments is at odds with the Scottish Government’s healthy ecosystem approach and its measures to mitigate climate change.

71 The Scottish Parliament amended the Hill Farm Act 1946 to make climate change one of the reasons for which the permitted seasons for muirburn could be varied. The Group considers that the Scottish Government should now, firstly, remove references to deer from the Muirburn Code and, secondly, make it an offence under the 1946 Act to carry out muirburn for the purpose of deer management without a licence from SNH.71 SNH is already responsible for licensing any out of season muirburn and the scope to licence muirburn for deer would retain that option if needed for a wider environmental purpose in some instance.

72 The Group also considers that the current use of public funds to support muirburn for deer should be ended. ‘Muirburn and Heather Cutting’ is included in the Rural Payments and Services Agri-Environment Climate Scheme, under ‘Management options and capital payments’.72 On moorland, this item must be combined with the Moorland Management option if deer or livestock are present. The muirburn under the scheme needs to be carefully managed to receive the rate of payment per hectare. However, the Group considers, as argued above, that there is not a public interest case for muirburn for deer.

67 The Grouse Moor Management Group was established by Scottish Government in November 2017 to examine the environmental impact of grouse moor management practices. The Group is due to report in late 2019.

68 Brooker, R., Hester, A., Newey, A. and Pakeman, R. (2018). Socio-economic and biodiversity impacts of driven grouse moors in Scotland: Part 2 Biodiversity impacts of driven grouse moors in Scotland. Report to Scottish Government.

69 SNH (2017) *Op cit,* p.17.

70 Brown, L.E., Holden, J. and Palmer, S.M. (2014). Effects of moorland burning on the ecohydrology of river basins. Key findings from the EMBER project. University of Leeds.

71 The Group recognises that it may not be possible to distinguish muirburn for deer in some situations where sheep use the same area. However, implementation of the measure could, for example, use satellite images and agricultural information on the distribution of hill sheep to identify potential instances of muirburn for deer.

72 Scottish Government Rural Payments and Services, ‘Muirburn and Heather Cutting’, last published 15 December 2017.