

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	Border Mires, Kielder - Butterburn
Unitary Authority/County:	Cumbria, Northumberland
SAC status:	Designated on 1 April 2005
Grid reference:	NT684013
SAC EU code:	UK0012923
Area (ha):	11851.77
Component SSSI:	Butterburn Flow SSSI, Caudbeck Flow SSSI, Kielderhead and Emblehope Moors SSSI, Kielder Mires SSSI, Lampert Mosses SSSI, Muckle Moss SSSI, Spadeadam Mires SSSI

Site description:

Border Mires, Kielder – Butterburn is made up of several individual sites running north-east from Carlisle. This complex is part of what was once the largest continuous tract of blanket bogs across northern England and is particularly important for the quality of the transition it represents between blanket bog and raised mire. Although much of the land has been afforested, significant areas of the original bog remain throughout the forested expanse. The climate is wetter here than in some other parts of northern England and this is reflected in the composition of the vegetation, which is dominated by species of cottongrass *Eriophorum* and a reduced cover of heather *Calluna vulgaris*. At Butterburn Flow the wetter climate is also emphasised by quite distinct surface patterning of bog-moss *Sphagnum* hollows separated by *Sphagnum* ridges in the largest of the open areas. It is a very good example of the *Sphagnum*-rich cross-leaved heath *Erica tetralix* and *Sphagnum papillosum* vegetation type. The transition mire element of these sites is relatively small but is an important component of one of the least-damaged and more valuable species-rich mire complexes in England.


On steep slopes the bogs give way to dry heath, including the damp facies with bog-mosses *Sphagnum spp.* and lesser twayblade *Listera cordata*, and on the gentler slopes, to wet heath with heather, deergrass *Trichophorum cespitosum* and purple moor-grass *Molinia caerulea*.

Where calcareous rocks influence the base status of the soil as on the numerous streams and seepages, tufa formations occur as do several plants and mosses which rely on a base-rich substrate: tawny sedge *Carex hostiana*, carnation sedge *C. panicea*, yellow sedge *C. viridula*, *Sphagnum squarrosum* and *S. contortum*. Such areas are best developed in Caudbeck Flow SSSI, especially on Greene Knowe and on the upper reaches of White and Broadford Becks.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Blanket bogs*
- Petrifying springs with tufa formation (*Cratoneurion*). (Hard-water springs depositing lime)*
- European dry heaths
- Northern Atlantic wet heaths with *Erica tetralix*. (Wet heathland with cross-leaved heath)
- Transition mires and quaking bogs. (Very wet mires often identified by an unstable 'quaking' surface)

Annex I priority habitats are denoted by an asterisk (*).

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0012923
Date of registration: 14 June 2005
Signed: 
On behalf of the Secretary of State for Environment,
Food and Rural Affairs