

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

Citation for Special Area of Conservation (SAC)

Name:	River Derwent and Bassenthwaite Lake
Unitary Authority/County:	Cumbria
SAC status:	Designated on 1 April 2005
Grid reference:	NY262207
SAC EU code:	UK0030032
Area (ha):	1832.96
Component SSSI:	Bassenthwaite Lake SSSI, Braithwaite Moss SSSI, Buttermere SSSI, River Derwent and Tributaries SSSI

Site description:

The Derwent is a large nutrient poor (oligotrophic) river system with high water quality and a natural channel. There is a natural succession of plant communities from source to mouth reflecting a slight increase in nutrient status downstream. The Derwent flows through two lakes (Derwentwater and Bassenthwaite), as does its major tributary the Cocker (Buttermere and Crummock Water). These lakes have a hydrological buffering effect which helps stabilise the flow regimes.

Bassenthwaite is a large lake with an extensive catchment and consequently is subject to rapid through-flow of water and moderate nutrient status (mesotrophic). A wide variety of pondweeds *Potamogeton* spp. are found, including perfoliate pondweed *Potamogeton perfoliatus*, small pondweed *P. berchtoldii* and curled pondweed *P. crispus*, which are widespread, whilst red pondweed *P. alpinus*, various-leaved pondweed *P. gramineus* and lesser pondweed *P. pusillus* are more locally distributed. Uncommon species present in the community are autumnal water-starwort *Callitriche hermaphroditica* and six-stamened waterwort *Elatine hexandra*. The shorelines are long and relatively undisturbed compared with other major Cumbrian lakes. Much of the shore is of shingle or gravel, but soft peat has accumulated around Bowness Bay. Several sedge species are found in such areas, including a local northern species, water sedge *Carex aquatilis*. On stony shores common spike-rush *Eleocharis palustris* is locally abundant amongst species such as globeflower *Trollius europaeus*, saw-wort *Serratula tinctoria* and the nationally rare thread rush *Juncus filiformis*.

Derwent Water is the broadest and shallowest of the major Cumbrian lakes. The aquatic flora is indicative of a relatively low level, nutrient poor (oligotrophic/mesotrophic) lake. Derwent Water and Bassenthwaite Lake have healthy populations of floating water-plantain *Luronium natans* in extensive, species-rich beds of aquatic macrophytes. In Bassenthwaite Lake it also occurs on muddy lake-shores.

Between Derwentwater and Bassenthwaite higher plant species are an important component of the aquatic flora with intermediate water-starwort *Callitriche hamulata*, common water-crowfoot *Ranunculus aquatilis* and alternate water-milfoil *Myriophyllum alterniflorum* co-dominating with the lichen genus *Verrucaria* and the moss *Fontinalis antipyretica*. Below the confluence with the Cocker, the Derwent becomes a large mesotrophic river. Algae, liverworts and mosses are abundant, while dominant higher plants include water-crowfoots and alternate water-milfoil.

The River Cocker differs from the main river in being smaller with a more stable flow regime and channel substrates. The stable flows enable a rich and varied flora, including alternate

water-milfoil, intermediate water-starwort, shoreweed *Littorella uniflora* and bulbous rush *Juncus bulbosus*, to develop on pebbles and gravel.

The fish fauna includes salmon *Salmo salar* and sea *Petromyzon marinus*, river *Lampetra fluviatilis* and brook lampreys *Lampetra planeri*. Important salmon spawning areas are found below Bassenthwaite Lake and Buttermere, and in the Rivers Greta, Glenderamackin and Marron, as well as St John's, Naddle, Whit and Sandy Becks. There are extensive sea and river lamprey nursery grounds below Bassenthwaite Lake. Juvenile brook lampreys are also found on the lower river. Nursery grounds of river and brook lampreys also occur between Derwentwater and Bassenthwaite and below Buttermere. Vendace *Coregonus albula* are found in Derwentwater and Bassenthwaite Lake, their only localities in the UK. Arctic charr *Salvelinus alpinus*, present in Crummock Water only occur in the Lake District in England. The lakes and rivers represent suitable conditions that support otters *Lutra lutra*.

Braithwaite Moss, on the flood plain area to the south of Bassenthwaite Lake, supports marsh fritillary butterflies *Euphydryas aurinia*. It comprises areas of marshy grassland and rushy pasture intimately mixed with smaller areas of woodland and scrub. Devil's-bit scabious *Succisa pratensis*, the larval food plant, is found throughout the site. The adult butterflies feed on nectar provided by flowers in the species rich grassland. They are weak fliers and benefit from shelter provided by the shrubs and areas of woodland. Structural diversity is also important in the grassland for the provision of suitable larval web sites.

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:

- Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoeto-Nanojuncetea*. (Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels)
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation. (Rivers with floating vegetation often dominated by water-crowfoot)

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

- Atlantic salmon *Salmo salar*
- Brook lamprey *Lampetra planeri*
- Floating water-plantain *Luronium natans*
- Marsh fritillary butterfly *Euphydryas* (*Eurodryas*, *Hypodryas*) *aurinia*
- Otter *Lutra lutra*
- River lamprey *Lampetra fluviatilis*
- Sea lamprey *Petromyzon marinus*

This citation relates to a site entered in the Register of European Sites for Great Britain.

Register reference number: UK0030032

Date of registration: 14 June 2005

Signed: *Trevor Salmon*

On behalf of the Secretary of State for Environment, Food and Rural Affairs