

County: Cumbria

Site Name: Bassenthwaite Lake

District: Allerdale

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981.

Local Planning Authority: Lake District Special Planning Board.

National Grid Reference: NY 215295 **Area:** 668.41 (ha) 1,651.6 (ac)

Ordnance Survey Sheet 1:50,000: 89, 90 **1:10,000:** NY 13 SE, NY 22 NW, NY 23 SW

Date Notified (Under 1981 Act): 1994 **Date of Last Revision:** 1994

Other Information:

1. The site is considered to be equivalent in status to those sites listed in 'A Nature Conservation Review', edited by D. A. Ratcliffe, 1977, published by Cambridge University Press.
2. The site includes Bassenthwaite Lake National Nature Reserve, which is to be declared during 1993 under Section 35.1 (c) of the Wildlife and Countryside Act, 1981.
3. The site also forms part of the proposed Derwent and Cocker River System SSSI.
4. The site boundary has been revised by extension at this revision.
5. The citation has been revised at this revision.
6. The site lies within the Lake District National Park.

Description and Reasons for Notification:

Bassenthwaite Lake lies in a wide valley between the Thornthwaite and Skiddaw Fells and approximately 4 kilometres north of Keswick. It is a large and relatively undisturbed mesotrophic lake (moderately rich in nutrients). It has a varied and typical aquatic flora and fauna and in addition has diverse fringing habitats of reedswamp, fen, flood-plain fen, wet grassland, willow scrub and alder woodland.

Of the major lakes in Cumbria, Bassenthwaite together with Derwentwater contrast in productivity with the oligotrophic (nutrient-poor) lakes of Wastwater, Buttermere and Ennerdale and the more eutrophic (nutrient-rich) Esthwaite Water. Bassenthwaite Lake ranks as the fourth largest in the Lake District (surface area 5.2 km²) and it is the shallowest. It also has the largest catchment area (238 km²) and consequently is subject to rapid through-flow of water and wide fluctuations in level.

The combination of shallowness, large volumes of through-flow and moderate nutrient status provide a good habitat for an abundance of water plants. A wide variety of pond-weed *Potamogeton* species are found. *P. perfoliatus*, *P. berchtoldii*, *P. crispus* and *P. natans* are widespread while *P. alpinus*, *P. gramineus* and *P. pusillus* are more locally distributed. Nuttall's waterweed *Elodea nuttallii* is abundant; amongst other submerged species are the uncommon autumnal water-starwort *Callitriche hermaphroditica* and six-stamened waterwort *Elatine hexandra*.

The lake supports one of only two populations of a rare fish, the vendace, known in Britain. Now extinct in Scotland, the vendace is found also only in Derwentwater, within the same catchment as Bassenthwaite.

Bassenthwaite has one of the most extensive undisturbed shorelines compared with the other major Cumbrian lakes. Much of the shore is shingle or gravel but soft peat stretches are found in Bowness Bay and at the south end of the lake. Reed canary-grass *Phalaris arundinacea* is the main emergent plant while areas dominated by common reed *Phragmites communis* are limited. Bulrush *Scirpus lacustris*, bottle sedge *Carex rostrata*, bladder sedge *C. vesicaria* and common spike-rush *Eleocharis palustris* are locally abundant.

On stoney shores the diverse vegetation includes species such as globeflower *Trollius europaeus*, saw-wort *Serratula tinctoria*, hemlock water-dropwort *Oenanthe crocata* and lesser meadow-rue *Thalictrum minus*. The nationally rare slender rush *Juncus filiformis* is also found on the stony lake shores.

Sedges *Carex* spp. are abundant on peaty shores, and include the local northern sedge *Carex aquatilis*. Around Bowness Bay, emergent vegetation grades into a range of wet grassland and fen communities. Sedges *Carex* spp., rushes *Juncus* spp., and tufted hair-grass *Deschampsia cespitosa* are locally abundant and associated herb species include marsh-marigold *Caltha palustris*, ragged robin *Lychnis flos-cuculi*, yellow flag *Iris pseudacorus*, meadowsweet *Filipendula ulmaria*, greater burnet *Sanguisorba officinalis*, common valerian *Valeriana officinalis*, wild angelica *Angelica sylvestris* and marsh cinquefoil *Potentilla palustris*.

The transitions from emergent vegetation inland to wet grassland, mixed fen, willow and alder woodland are particularly well developed around the northern and southern ends of the lake and the Broadness-Bowness Bay stretch. Fringing willow scrub is extensive particularly at the northern end while at Lakeside Wood and Moss Wood, alder woodland occurs, merging in places to drier ash, elm, oak and birch woodland. These hydroseral successional sequences are one of the outstanding features of this site.

The extensive flood-plain fen at the south end of the lake is one of the best remaining examples in Britain. The fen meadows are dominated by reed canary-grass *Phalaris arundinacea* and tufted hair-grass *Deschampsia cespitosa* with a rich tall herb flora including meadowsweet *Filipendula ulmaria*, common valerian *Valeriana officinalis*, yellow loosestrife *Lysimachia vulgaris*, yellow flag *Iris pseudacorus* and wild angelica *Angelica sylvestris*. Ditches and low-lying ground are dominated by bladder sedge *Carex vesicaria* and the Northern sedge *Carex aquatilis*. In contrast, the acid mire vegetation to the west of Newlands Beck is dominated by purple moor-grass *Molinia caerulea* and cottongrasses *Eriophorum* spp. or by bog mosses *Sphagnum* spp. and a species-rich vegetation including devil's-bit scabious *Succisa pratensis*, common sedge *Carex nigra*, marsh violet *Viola palustris* and marsh cinquefoil *Potentilla palustris*.

Bassenthwaite has considerable ornithological interest. The food from an abundance of water plants, sheer size of the lake and diverse fringing habitats support a varied bird fauna. Over 70 breeding species have been recorded around the lake. Birds breeding in the vegetation cover of the water margins include, little grebe, red-breasted merganser, mute swan and the locally uncommon great crested grebe. Several pairs of sandpipers breed on the open stoney shores. The fringing woodlands harbour species such as sedge warbler, willow warbler and redpoll. Reed bunting and grasshopper warbler inhabit the fen vegetation and the wet grasslands hold redshank, snipe and lapwing. Significant numbers of birds come to the lake in winter to roost and feed. Over 2,000 birds may be present at one time, particularly in the sheltered water at the southern end and Bowness Bay. Species recorded include teal, widgeon, goldeneye, tufted duck and mallard.