

**County:** Cumbria

**Site Name:** Buttermere

**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 182157      **Area:** 93.0 (ha) 230.0 (ac)

**Ordnance Survey Sheet 1:50,000:** 89, 90      **1:10,000:** NY 11 SE, NE

**Date Notified (Under 1949 Act):** 1975      **Date of Last Revision:** –

**Date Notified (Under 1981 Act):** 1983      **Date of Last Revision:** –

**Other Information:**

1. The site lies within the Lake District National Park.
2. The site is listed in 'A Nature Conservation Review', edited by D. A. Ratcliffe, 1977, published by Cambridge University Press.
3. The site forms part of the proposed Derwent and Cocker River System SSSI.
4. The boundary of the site remains unchanged.

**Reasons for Notification:**

Buttermere is one of the best examples in the Lake District of an oligotrophic (nutrient-poor) lake. It lies 14 km south of Cockermouth, 20 km east of Whitehaven and just 1 km south of Crummock Water which shares the same glacial trough.

Of the larger Lake District lakes only Wastwater and Ennerdale have lower levels of nutrients and a lower productivity. Buttermere contrasts with these as a smaller (area 93 ha) and shallower (mean depth 16.6 m) lake. It lies on the Skiddaw Slate but its water catchment, like Wastwater, is predominantly on Borrowdale Volcanic rocks. Buttermere is fed and drained by the River Cocker. It is one of the lakes that has been least affected by man, with few people living in the catchment and with negligible water abstraction. As such the lake is an important extant example of this once more typical situation.

The shoreline is generally stony but in places maintains vegetation typical of the lake's oligotrophic status. This vegetation consists of a belt of shoreweed *Littorella uniflora*, common spikerush *Eleocharis palustris* and reed canary-grass *Phalaris arundinacea* in shallow water at the lake margin. Beds of quillwort *Isoetes lacustris*, bulbous rush *Juncus bulbosus* var. *fluitans*, alternate water-milfoil *Myriophyllum alterniflorum*, water lobelia *Lobelia dortmanna* and, more notably, intermediate water-starwort *Callitriche hamulata* occur in water to about 3 m depth.

The fish fauna includes charr, a member of the trout and salmon family which in England is found only in the Lake District. It is an important relic species as it is believed that the population within each particular lake was isolated in that locality after the last Ice Age. Other fish species include perch, pike, three-spined stickleback, brown trout, eel and salmon.

The lake invertebrate fauna is typical of oligotrophic conditions but the great diversity of water fleas *Cladocera* is of special interest. Buttermere differs from Wastwater in that the water flea *Daphnia hyalina* is present, and the bottom dwelling, invertebrate fauna is richer both

numerically and in variety. For example, two additional species of flatworm, *Polycelis tenuis* and *Planaria torva*, three additional leech species, including *Glossiphonia heteroclita* and one additional snail, *Planorbis contortus*, have been recorded. The freshwater shrimp *Gammarus pulex* is also present in small numbers.