

Date Notified: 28 February 1990

File ref: NY 40/3

**County:** Cumbria     **Site Name:** Troutbeck

**District:** South Lakeland

**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 424080     **Area:** 773.8 (ha) 1,912.1 (ac)

**Ordnance Survey Sheet 1:50,000:** 90     **1:10,000:** NY 40 NW, NY 40 SW, NY 41 SW

**Date Notified (Under 1949 Act):** 1965     **Date of Last Revision:** 1975

**Date Notified (Under 1981 Act):** 1990     **Date of Last Revision:** 1990

**Other Information:**

1. This site lies within the Lake District National Park.
2. The site boundary has been amended by extension at this revision.

**Description and Reasons for Notification:**

Troutbeck SSSI lies some 4 km north east of Ambleside and covers two valley systems: the Trout Beck catchment from Thresthwaite Crag at the head of the valley down to (but not including) Hird Wood in the south together with the Hagg Gill valley and the intervening hill known as The Tongue. The altitudinal range is from 200 m to over 700 m on the steep slopes below Froswick and Ill Bell. These glacially eroded valleys are broadly north-south orientated and overlie rocks of the Borrowdale Volcanic Series through which the rivers and streams have cut through exposing lavas and tuffs of both acidic and basic composition. The bedrock is generally close to the surface and frequently outcrops, while along the valley bottom, and on gentler slopes, deposits of glacial till and boulder clay are found.

The main interest of the site is the range and extent of flushed grassland and fen vegetation types, which include examples of locally-uncommon communities as well as those characteristic of South Cumbria. Similar 'flush' habitats do occur on High Lickbarrow SSSI, Whernside SSSI and Loughrigg Fell, but these are less extensive and more limited in variety.

The flushes along the Trout Beck tend to occur along the valley bottom on gentle slopes, with the vegetation typified by rush pastures of two distinct types: the soft rush-marsh bedstraw fen and the star sedge-bog moss (*Sphagnum recurvum/auriculatum*) mire. Both generally develop on waterlogged peaty soil, the former in more nutrient-rich situations, but the two can occur in close proximity. The soft rush-marsh bedstraw fen supports a number of flowering plants including ragged-robin *Lychnis flos-cuculi*, wild angelica *Angelica sylvestris*, marsh hawk's-beard *Crepis paludosa*, marsh valerian *Valeriana dioica*, heath spotted-orchid *Dactylorhiza maculata* subsp. *ericetorum*, and marsh willow herb *Epilobium palustre*. Associated grasses include purple moor-grass *Molinia caerulea* and creeping bent *Agrostis stolonifera* together with the moss *Calliargon cuspidatum*. By contrast, the star sedge – bog moss mire is dominated by bog moss species such as *Sphagnum palustre* and *S. recurvum*,

with star sedge *Carex echinata*, common cottongrass *Eriophorum angustifolium*, bog asphodel *Narthecium ossifragum*, marsh violet *Viola palustris*, lesser spearwort *Ranunculus flammula* and the moss *Polytrichum commune*.

Mixed with the rush pastures, there are areas of shorter sedge-dominated swards, again of two types depending on the nutrient status of the ground water. More acidic situations are characterised by the occurrence of bottle sedge *Carex rostrata*, carnation sedge *C. panicea* and star sedge with the bog mosses *Sphagnum papillosum*, *S. palustre* and *S. recurvum*. Where the water is more nutrient-rich, tawny sedge *C. hostiana* and common yellow-sedge *C. demissa* occur, together with flowering plants such as devil's-bit scabious *Succisa pratensis*, round-leaved sundew *Drosera rotundifolia* and bird's-eye primrose *Primula farinosa*, and a range of mosses including *Scorpidium scorpioides*, *Campylium stellatum* and *Sphagnum contortum*.

The richest display of these vegetation types described above occur in the lower part of the valley adjacent to The Tongue but they continue right up the valley to Park Head Fell and to below High Bull Crag where the flushes, rush pastures and mires are associated with a series of tributary streams which eventually flow into the main valley.

The valley of the Hagg Gill is much more glacially smoothed than that of Troutbeck producing a contrasting range of flushes, these tending to be fewer and, on the whole, more discrete, arising from spring-heads on the upper slopes. This part of the site is characterised by calcareous small-sedge mires of two main types; a dioecious sedge – common butterwort mire and common yellow-sedge – yellow saxifrage stony flush both of which typically merge at the edge into either a species-rich calcareous or species-poor acidic grassland. These two flush types are characterised of the north and west of Britain with the latter, in particular, having strong affinities with sub-montane and montane locations. In Troutbeck both are grazed and trampled by sheep which, combined with nutrient impoverishment, help maintain them in a generally rich, varied and open state.

Very fine examples of these mires have developed on the steep slopes to the south of Blue Gill. Here several streams, derived from springs above an allotment wall, pass down towards the Hagg Gill spreading out over a continuously irrigated, shallow rocky bed. Species associated with these areas include tawny sedge, common yellow-sedge, dioecious sedge *C. dioica*, carnation sedge, flea sedge *C. pulicaris*, bulbous rush, grass-of-Parnassus *Parnassia palustris*, marsh arrowgrass *Triglochin palustris*, bog pimpernel *Anagallis tenella*, lousewort *Pedicularis sylvatica*, common butterwort *Pinguicula vulgaris*, common scurvygrass *Cochlearia officinalis* and bird's-eye primrose. The montane character of the vegetation is emphasised by the presence of yellow-saxifrage *Saxifraga aizoides* which is confined in its distribution to Scotland, the Lake District and isolated localities in the Pennines. Other rare upland species include starry saxifrage *S. stellaris* and, the Arctic-Alpine, chickweed willowherb *Epilobium alsinifolium*. The latter however, is more generally confined to the variety of montane, spring-head communities, of varying base status, that occur in Troutbeck and also include such species as blinks *Montia fontana*, opposite-leaved golden saxifrage *Chrysosplenium oppositifolium*, starry saxifrage and the moss *Philonotis fontana*.

Added habitat diversity is provided by a range of other, predominantly upland, vegetation types. These include the ubiquitous sheep's fescue – common bent – heath bedstraw acidic grassland which has a species-rich calcareous counterpart typified by the presence of wild thyme *Thymus praecox*, fairy flax *Linum catharticum* and lady's bedstraw *Galium verum*. Species-poor blanket mire dominated by hare's-tail cottongrass has developed on gently sloping ground, high up on the ridge from John Bell's Banner and has only a sparse and local occurrence of the dwarf shrubs bilberry and heather. Wet alder wood occurs on the western

slopes of The Tongue towards the southern boundary of the site and contains a ground flora which is essentially a woodland variant of the rush pasture together with tall-herb species such as marsh-marigold *Caltha palustris* and marsh thistle *Cirsium palustre*.

Of particular interest amongst the range of other habitats are the rock-ledge and scree communities. The best example of the former is found along Sad Gill, a shallow gorge between High Bull Crag and Doup Crag. The gill contains a range of ungrazed northern montane species which are known from only a few other sites in South Cumbria, such as Dungeon Gill SSSI and Tilberthwaite Gill SSSI, and includes alpine lady's mantle *Alchemilla alpina*, roseroot *Sedum rosea*, mountain sorrel *Oxyria digyna*, alpine willowherb *Epilobium anagallidifolium*, green spleenwort *Asplenium viride* and at least three species of saxifrage: yellow, mossy and starry saxifrage and several uncommon montane mosses: *Isopterygium pulchellum*, *Anoetangium aestivum*, *Plagiobryum zieri*. Below Doup Crag, a rock scree flora is present with a reasonably diverse fern community including the local parsley fern *Cryptogramma crispa*, lemon-scented fern *Oreopteris limbosperma* and oak fern *Gymnocarpium dryopteris*. Alpine lady's-mantle and a small population of juniper *Juniper communis* are found in adjacent grassy banks.