

**County:** Cumbria

**Site Name:** Blelham Tarn & Bog

**District:** South Lakeland

**Status:** Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981. Part National Nature Reserve (NNR).

**Local Planning Authority:** Lake District Special Planning Board

**National Grid Reference:** NY 365005      **Area:** 49.0 (ha) 121.0 (ac)

**Ordnance Survey Sheet 1:50,000:** 90      **1:10,000:** SD 30 SE

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

**Date Notified (Under 1981 Act):** 1985      **Date of Last Revision:** –

**Other Information:**

1. The site lies within the Lake District National Park.
2. The site now includes Blelham Bog National Nature Reserve which was declared in 1954.
3. The site was formerly known as Blelham Tarn.

**Reasons for Notification:**

Blelham Tarn is located approximately 2½ kilometres north-east of Hawkshead and about 1 kilometre from the west shore of Lake Windermere. This tarn lies at an altitude of 46 metres and after Elterwater (15 ha) is the largest south Cumbrian medium-enriched (meso-eutrophic) lowland tarn (10.5 ha). However, Blelham has a catchment underlain by Silurian Coniston Flags which is more base-rich than that of Elterwater.

The site comprises the tarn and its inflows along with fringing bog and mixed fen, marshy grassland, wet heath and wet woodland. This variety of relatively undisturbed habitats support a wide range of invertebrates including a number of rare and uncommon species. The tarn has been subject to some nutrient enrichment from man's activities and the effects of this on the phytoplankton populations has been studied over several decades by the Freshwater Biological Association. Major studies of the tarn's invertebrate populations have also been carried out.

Aquatic vascular plants in the tarn are not well developed since the shore is steeply shelving although stonewort *Chara* sp., shoreweed *Littorella uniflora*, greater bladderwort *Utricularia vulgaris* agg., alternate-flowered water-milfoil *Myriophyllum alterniflorum* and the pondweeds *Potamogeton alpinus*, *P. berchtoldii* and *P. obtusifolius* occur locally. A narrow fen community occurs around the edge of the tarn consisting mainly of common reed *Phragmites australis*, bulrush *Schoenoplectus lacustris* and small bur-reed *Sparganium minimum*, with occasional great reedmace *Typha latifolia*, the less-common lesser reedmace *T. angustifolia*, tufted sedge *Carex elata* and floating bur-reed *Sparganium angustifolium*.

On the north-west side of the tarn is Blelham Bog NNR. Research has shown that the bog comprises two basin mires, with deep layers of peat, which have developed over the lake sediments of two small glacial basins (kettleholes) – one at the eastern end and one at the western end of the reserve. The present vegetation on the western basin is predominantly

wooded with common willow *Salix cinerea*, birch *Betula pubescens*, alder *Alnus glutinosa* and occasional alder buckthorn *Frangula alnus*. The ground flora includes plants which are typical of wet woodland such as wild angelica *Angelica sylvestris*, remote sedge *Carex remota*, marsh violet *Viola palustris* and the bog mosses *Sphagnum palustre* and *S. recurvum*. The eastern basin mire has a more open character with a complex mosaic of bog plants such as purple moor-grass *Molinia caerulea*, bog myrtle *Myrica gale*, bog asphodel *Narthecium ossifragum*, the bog mosses *Sphagnum papillosum* and *S. plumulosum* interspersed with common reed. Scattered birch and common willow bushes are present over all of the area of the bog.

At the south-western and north-western ends of the tarn and to the south of the reserve are areas of marshy grassland dominated by soft rush *Juncus effusus*, but associated with a wide variety of other species such as purple loosestrife *Lythrum salicaria*, marsh marigold *Caltha palustris*, ragged robin *Lychnis flos-cuculi* and gypsy-wort *Lycopus europaeus*. At the south-western end of the tarn there is also an area of wet marshy grassland which shows some elements of wet heath. Purple moor-grass, mat-grass *Nardus stricta*, heather *Calluna vulgaris*, and cross-leaved heath *Erica tetralix* predominate in the upper drier areas and grade into wetter areas with scattered bog myrtle, and a range of herbs and sedges. In places quaking mats of bog moss *Sphagnum* spp. occur with species such as marsh arrow-grass *Triglochin palustris*, sundew *Drosera rotundifolia* and bogbean *Menyanthes trifoliata*.

The tarn is a nationally important site for caddis fly species with records for 48 species including the only British record for *Cyrtus insolutus* and the nationally rare *Setodes argentipunctellus*. Other very local caddis flies include *Anabolia brevi-pennis*, *Erotesis baltica* and *Metatype fragilis*. The nationally scarce snail *Vertigo lilljeborgi*, the local flat valve snail *Valvata cristata* and the nationally scarce flatworm *Bdellocephala punctata* also occur on the site. Records of rare spiders include the raft spider *Dolomedes fimbriatus*, *Eboria caliginosa* and *Maro lepidus*. The notable and uncommon Downy Emerald dragonfly *Cordulia aenea* has also been recorded.