

Date Notified: 31/10/1986

File ref: NX 90/2

County: Cumbria **Site Name:** Silver Tarn, Hollas and Harnsey Mosses

District: Copeland

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

Local Planning Authority: Copeland Borough Council

National Grid Reference: NY 998068 **Area:** 5.30 (ha) 13.00 (ac)

Ordnance Survey Sheet 1:50,000: 89 **1:10,000:** NX 90 NE, NY 00 NW

Date Notified (Under 1949 Act): 1969 **Date of Last Revision:** –

Date Notified (Under 1981 Act): 1986 **Date of Last Revision:** 1986

Other Information:

1. The site boundary has been modified by extensions and deletions at this revision.
2. The site was previously known as Silver Tarn and Harnsey Moss.

Description and Reasons for Notification:

This wetland site lies within ½ km of the West Cumbrian coast, midway between the villages of Nethertown and Braystones and approximately 4 km south of Egremont. The site comprises a suite of three separate but related features originating as post glacial hollows in boulder clay and later forming kettlehole tarns. The site exhibits typical stages in the development of kettlehole vegetation from open water, represented by Harnsey 'Moss', through the acid poor-fen of Silver Tarn, to a transitional basin fen stage reflected in the Hollas Moss communities. Additional associated communities include: inundation, tall fen/emergent vegetation, acid flush and carr.

These wetland habitats are becoming increasingly scarce in the intensively farmed lowlands both locally and nationally. This is one of only two known examples in the country of a suite of intact, small, kettlehole formations, the other being Whitlaw Mosses National Nature Reserve in the Borders Region. The broad range of communities supported by this small site complement those of other lowland wetlands in West Cumbria. In addition Harnsey Moss is the best example of a small, nutrient rich tarn in this scheduling unit.

The open water of Harnsey Moss supports a flora characteristic of a small, shallow, naturally nutrient rich tarn. The open water community comprises common water-starwort *Callitriche stagnalis*, broad-leaved and bog pondweed with thread-leaved, round-leaved and pond water-crowfoots *Ranunculus* spp., nearer the tarn margins. Emergents occur along two thirds of the edge and include bogbean *Menyanthes trifoliata*, lesser marshwort *Apium inundatum* in abundance, with branched and unbranched bur-reeds and common spike-rush particularly along the north west shore. Amphibious bistort *Polygonum amphibium* and water-purslane *Peplis portula* are common species of the broad zone of seasonal inundation along the south western shore with frequent nodding bur-marigold *Bidens cernua* and marsh pennywort *Hydrocotyle vulgaris* occasional ragged-robin *Lychnis flos-cuculi*, water mint, water forget-me-not,

cuckooflower, lesser spearwort, square-stalked St John's-wort *Hypericum tetrapterum* and marsh cinquefoil *Potentilla palustris* in seepage areas. This gives way to acid marshy grassland dominated by jointed rush *Juncus articulatus*.

Silver Tarn is the largest mire of this kettlehole complex lying across two hollows forming linked units referred to as Silver Tarn east and west. The permanently high water table is maintained by ground water springs, surface seepage and rainfall, with a movement of water from east to west and beyond. Silver Tarn west drains slowly to the sea less than 300 metres away. The eastern moss is particularly wet comprising only a thin mat of vegetation (schwingmoor) overlying open water or semi-liquid peat. Silver Tarn west, although quaking in places is generally firmer. Together these mosses support a mosaic of poor-fen communities. Bog mosses *Sphagnum* spp., dominate, forming mossy lawns across the central areas and also occur in association with one or more of the following: bottle sedge *Carex rostrata*, common cottongrass *Eriophorum angustifolium*, sharp-flowered rush *Juncus acutiflorus* and in firmer areas purple moor-grass *Molinia caerulea*. Additional species include bog pondweed *Potamogeton polygonifolius*, round-leaved sundew *Drosera rotundifolia*, heath milkwort, common and carnation sedges *C. nigra* and *C. panicea* and the uncommon bog sedge *C. limosa* which is restricted to the western mire. White, star, hairy and oval sedges have also been recorded. Where the influence of ground water is less marked and conditions are more acidic, heather *Calluna vulgaris*, cranberry *Vaccinium oxycoccus* and cross-leaved heath *Erica tetralix* are locally abundant.

The flush communities typical of the mire edges and particularly the western part of Silver Tarn west comprise soft and sharp-flowered rushes, with bottle sedge, water horsetail *Equisetum fluviatile* and a rich variety of herbs. These include marsh cinquefoil, marsh speedwell, marsh violet, ragged-robin, devil's-bit scabious *Succisa pratensis*, marsh-marigold, wild angelica *Angelica sylvestris*, parsley water-dropwort *Oenanthe lachenalii*, ivy-leaved crowfoot and the nationally uncommon marsh St Johns'-wort *Hypericum elodes* which is locally frequent at Silver Tarn west. These grade into slightly more acid areas with locally abundant marsh lousewort *Pedicularis palustris*, cranberry, occasional orchids *Dactylorhiza* spp., hair moss *Polytrichum commune* and *Sphagnum* patches.

Hollas Moss is the most acidic part of this kettlehole complex. Its quaking surface is slightly raised supporting a mosaic of vegetation types associated with increased acidity compared with the acid poor-fen of Silver Tarn. This is particularly pronounced towards the centre of the moss which is more influenced by direct rainfall, i.e. ombrotrophic. Hollas Moss is therefore a transitional basin fen with both acid poor-fen and raised bog communities. The mire is dominated by *Sphagnum* spp. which form extensive lawns in places and also occur in association with heather, cross-leaved heath and cranberry, these being locally abundant especially towards the centre of the moss. Marginal areas support acid poor-fen with bottle sedge, common cottongrass, a scattering of hare's-tail cottongrass and purple moor-grass with soft rush restricted to the periphery. Additional species include orchids and bog asphodel *Narthecium ossifragum* associated with the *Sphagnum* lawns and bogbean.

Carr woodland is typically associated with the fringes of the open-mire communities and is particularly well developed at Hollas Moss where it forms a characteristic marginal belt almost completely surrounding the mire. Here is comprises mainly grey willow *Salix cinerea* with down birch *Betula pubescens* and at Silver Tarn east alder *Alnus glutinosa* and goat willow *Salix caprea* are also included. Silver Tarn west only supports a broad strip of grey willow. Carr emerges from standing water with a scattered ground flora comprising sneezewort *Achillea ptarmica*, bogbean, bulrush *Typha latifolia*, water horsetail, lady-fern *Athyrium felix-femina*,

narrow and broad buckler-fern *Dryopteris carthusiana* and *D. dilatata*. Of special interest is the royal fern *Osmunda regalis* which is restricted to Silver Tarn east.