

**County:** North Yorkshire    **Site Name:** Newtondale

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

**Local Planning Authority:** North York Moors National Park, (Ryedale District Council)

**National Grid Reference:** SE 820915

**Ordnance Survey Sheet 1:50,000:** 100    **1:10,000:** SE 89, 88, 78

**Area:** 935.5 (ha) 2,311.1 (ac)

**First Notified:** 1955 \*

**Date of Revision:** 1987

**Description:**

Newtondale is a classic geomorphological feature consisting of a deeply incised glacial melt water channel now occupied by the Pickering Beck, the site also including parts of the valley of the Levisham Beck and the Eller Beck. This site provides a fine example of the succession of habitats between the upland and lower valley regimes which includes woodland, grassland, fen, valley mire, marsh and moorland edge. These habitats are maintained here largely due to the continuation of traditional farming practices and the inaccessible terrain.

Although parts of the valley have been extensively replanted with conifers, large areas of broad-leaved woodland remain. Acidic woodlands of oak *Quercus* spp., birch *Betula pendula* and rowan *Sorbus aucuparia* are typical of the northern part of the dale, whilst woods of wych elm *Ulmus glabra*, ash *Fraxinus excelsior* and holly *Ilex aquifolium* occur towards the southern end.

Areas of alder *Alnus glutinosa* woodland are an integral part of the wetland communities adjacent to the Pickering Beck and locally contain globeflower *Trollius europaeus*, marsh hawk's-beard *Crepis paludosa* and greater tussock-sedge *Carex paniculata*. The associated marsh and fen communities in the valley bottom are of particular importance. These range from damp hay meadows with species such as great burnet *Sanguisorba officinalis* and brown sedge *Carex disticha* to grazed marshes with sharp-flowered rush *Juncus acutiflorus*, meadowsweet *Filipendula ulmaria* and wood club-rush *Scirpus sylvaticus*. Also present are sedge beds dominated by lesser pond-sedge *Carex acutiformis*, stands of common reed *Phragmites australis* and wood small-reed *Calamagrostis epigejos*. Notable plants include saw-wort *Serratula tinctoria*, meadow thistle *Cirsium dissectum* and common meadow-rue *Thalictrum flavum*.

In the northern part of the dale areas of poor fen support bog myrtle *Myrica gale* together with purple moor-grass *Molinia caerulea*, cross-leaved heath *Erica tetralix*, bog cinquefoil *Potentilla palustris* and bottle sedge *Carex rostrata*. Flush communities on the valley slopes are particularly rich and some support black bog-rush *Schoenus nigricans*, grass-of-Parnassus *Parnassia palustris*, bog pimpinell *Anagallis tenella* and marsh lousewort *Pedicularis palustris*.

Fen Bog lies at the watershed between the Pickering Beck and Eller Beck. It is a nationally important example of an oligotrophic valley mire, an acidic habitat supporting plants such as the bog mosses *Sphagnum papillosum* and *S. rubellum*, bog bean *Menyanthes trifoliata* and sundew *Drosera rotundifolia*. Many locally occurring species are associated with the less acidic margins; these include bog-sedge *Carex limosa* and many-stalked spike-rush *Eleocharis multicaulis*, whilst white beak-sedge *Rhynchospora alba* occurs on the main mire surface. This is also an important reference site for interpreting the Flandrian vegetation history of the North York Moors.

On the valley slopes south of Levisham Station are neutral herb-rich grasslands containing species such as betony *Stachys officinalis*, devil's-bit scabious *Succisa pratensis* and adder's-tongue fern *Ophioglossum vulgatum*.

The upper slopes of the northern part of the valley support moorland edge plant communities with heather *Calluna vulgaris*, bilberry *Vaccinium myrtillus* and extensive areas of chickweed wintergreen *Trientalis europaea*. Bracken *Pteridium aquilinum* dominates parts of the valley slope in late summer.

Newtondale lies outside the limits of the last (Late Devensian) glaciation and was explained in the classic and influential theory of P. F. Kendall as a proglacial lake drainage channel, but more recent studies suggest that it formed, at least in part, subglacially before the Late Devensian.

**Other Information:**

1. Fen Bogs is a nationally important site listed in "A Nature Conservation Review", edited by D A Ratcliffe, 1977. Cambridge University Press.
2. Hagg Wood Marsh and Fen Bogs are managed as nature reserves by the Yorkshire Wildlife Trust.
3. During the 1987 revision the boundary of this site has been amended to include land not previously notified\*, and to exclude land previously notified\*.
4. The site is adjacent to Haugh and Gundale Slacks SSSI, Newbridge Quarry SSSI and the Hole of Horcum SSSI.

\* Under Section 23 of the National Parks and Access to the Countryside Act, 1949.