

Notification date: 18 July 1990

COUNTY: DERBYSHIRE

SITE NAME: BEES NEST &
GREEN CLAY PITS

DISTRICT: DERBYSHIRE DALES

SITE REF: 15 WM6

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

Local Planning Authority: DERBYSHIRE COUNTY COUNCIL, Derbyshire Dales District Council

National Grid Reference: SK 240547

Area: 14.4 (ha.) 35.6 (ac.)

Ordnance Survey Sheet 1:50,000: 119

1:10,000: SK 25 SW

Date Notified (Under 1949 Act): –

Date of Last Revision: –

Date Notified (Under 1981 Act): 1990

Date of Last Revision: –

Other Information:

New site.

Description and Reasons for Notification:

The Carboniferous Limestone outcrop in north-west Derbyshire contains about 60 known 'pocket deposits' which are filled with silica sand, clay and pebble bands. Bees Nest and Green Clay Pits are representative of such deposits, lying some 5 km west of Wirksworth, east of Brassington village. Silica sand has been commercially extracted from the pits for many years and a limited extraction of material still takes place. Where sand extraction has ceased the site has acquired both geological and biological interest.

Geology

The site is of national importance for its deposits of fossil plant material, being the only remaining site which exposes the Miocene Kenslow Member of the Brassington Formation. This contains fragments of leaves, seeds, wood and pollen in excellent preservation, showing a flora dominated by extinct types of conifer, including close relatives of pines, taxads, sequoias and spruces. Remains of flowering plants of the *Liliaceae* and *Cyrillaceae* families and an extinct moss have also been found here. This is the only known Miocene flora in Britain and is thus of considerable importance for understanding the evolution of floras in this region.

Biology

The vegetation of both areas consists of complex mosaics of acidic and calcareous communities, together with open water, wet and flushed areas, and communities of disturbed ground. Examples of both tall ungrazed, and short rock-ledge limestone grassland communities occur on the limestone around the pocket deposits. Typical species include common rock-rose *Helianthemum nummularium*, quaking-grass *Briza media*, fairy flax *Linum catharticum* and wild thyme *Thymus praecox*. The most interesting acidic communities are found on the stabilised slopes of old excavations to the north of Green Clay Pit and include scattered heather *Calluna vulgaris* and adder's-tongue *Ophioglossum vulgatum*. This site is of particular importance, being the only site where the three species of clubmoss found in Derbyshire occur together – fir clubmoss *Huperzia selago*, alpine clubmoss *Diphasiastrum alpinum* and stag's-horn clubmoss *Lycopodium clavatum*. These species were previously frequent in moorland habitats and are now occasional colonists of acid refractory sands.

Both areas contain well established ponds fringed by common spike-rush *Eleocharis palustris* and bulrush *Typha latifolia* with aquatic communities dominated by broad-leaved pondweed *Potamogeton natans* and stoneworts *Chara* spp. Both ponds contain great crested and common newts with indications of a diverse aquatic fauna including the locally uncommon water beetle *Hydroporus logulus* and the nationally scarce *Stictonectes lepidus*.