

**COUNTY:** KENT

**SITE NAME:** WYE AND CRUNDALE DOWNS

**BOROUGH:** ASHFORD; CANTERBURY CITY

**Status:** Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 as amended. Part of this site has been designated a National Nature Reserve under Section 16 of the National Parks and Access to the Countryside Act 1949.

**Local Planning Authority:** Ashford Borough Council, Canterbury City Council

**National Grid Reference:** TR 080470                      **Area:** 348.5 (ha.) 861.0 (ac.)

**Ordnance Survey Sheet 1:50,000:** 179                      **1:10,000:** TR 04 SE, 04 NE, 05 SE

**Date Notified (Under 1949 Act):** 1951                      **Date of Last Revision:** 1981

**Date Notified (Under 1981 Act):** 1989

**Other Information:**

This site is listed in 'A Nature Conservation Review' and also includes the Devil's Kneading Trough Geological Conservation Review site. There have been several boundary amendments at renotification, including extensions and deletions.

**Reasons for Notification:**

**Biological Interest**

This site contains a mosaic of different habitats including species-rich chalk grassland, neutral grassland, calcareous fen-meadow communities, scrub and woodland on chalk, and wet alder woodland. The grassland and woodland contain outstanding assemblages of plants including 2 rare species which are specially protected. It also supports an outstanding assemblage of invertebrates including many local and rare species. The species-rich grassland provides a particularly good habitat for moths and butterflies including a specially protected moth. The woodland and scrub also support a diverse breeding bird community. Part of the site, the Devil's Kneading Trough, is of importance for its fossil remains and geomorphological interest which extends on to the Gault clay plain to the south west.

Throughout Britain calcareous (calcium-rich) grassland has been lost through agricultural intensification and lack of management. On this site most of the species-rich grassland is within the National Nature Reserve. In the grassland, tor-grass *Brachypodium pinnatum*, sheep's fescue *Festuca ovina*, and upright brome *Bromus erectus* are the most abundant species, but the turf is rich in other typical downland plants. These include horseshoe vetch *Hippocrepis comosa*, autumn gentian *Gentianella amarella*, cowslip *Primula veris*, squinancywort *Asperula cynanchica* and common milkwort *Polygala vulgaris*. Also present are several orchids including the rare and specially protected early and late spider orchids *Ophrys sphegodes* and *O. fuciflora*, and the rare dwarf or Kentish milkwort *Polygala amarella*. In some places, scrub has developed; this is mainly hawthorn *Crataegus monogyna*, but other species characteristic of the chalk, such as wayfaring tree *Viburnum lantana*, wild privet *Ligustrum vulgare* and traveller's joy *Clematis vitalba* are also found.

A variety of woodland types are found on the site associated with different soils. On the steep chalk slopes beech *Fagus sylvatica* and ash *Fraxinus excelsior* high forest predominate; where heavier clay soils overlie the chalk, ash, hazel *Corylus avellana* and hornbeam *Carpinus betulus* coppice occur under oak *Quercus robur* standards. The shrub layer includes field maple *Acer campestre*, wild cherry *Prunus avium*, wych elm *Ulmus glabra* and whitebeam *Sorbus aria*. The ground vegetation is dominated by bluebell *Hyacinthoides non-scripta*, dog's mercury *Mercurialis perennis*, wood anemone *Anemone*

*nemorosa* and bramble *Rubus fruticosus* agg., together with a rich variety of other woodland plants. Of particular note are colonies of green hellebore *Helleborus viridis*, and lady orchid *Orchis purpurea* which is restricted in Britain to Kent. The woodlands support a rich community of breeding birds such as hawfinch *Coccothraustes coccothraustes*, lesser-spotted woodpecker *Dendrocopos minor* and nightingale *Luscinia megarhynchos*.

Beneath Wye Downs a calcareous (calcium-rich) stream flows through grassland and woodland on Gault clay, to give rise to marshy grassland, flushes and wet alder woodland-habitats. The grassland and flushes support pepper saxifrage *Silaum silaus*, hay rattle *Rhinanthus minor*, adder's-tongue fern *Ophioglossum vulgatum*, ragged robin *Lychnis flos-cuculi*, sedges and rushes including round-fruited rush *Juncus compressus* (scarce in Kent). Areas of taller vegetation are dominated by lesser pond sedge *Carex acutiformis* with giant horsetail *Equisetum telmateia*, hemp agrimony, *Eupatorium cannabinum*, fleabane *Pulicaria dysenterica* and wild angelica *Angelica sylvestris*. The wet alder woodland includes old alder *Alnus glutinosa* and ash coppice stools under scattered mature oak standards. This area has a ground flora which includes pendulous sedge *Carex pendula*, greater tussock sedge *Carex paniculata* (scarce in Kent), remote sedge *Carex remota*, dog's mercury and ramsons *Allium ursinum*; opposite-leaved golden saxifrage *Chrysosplenium oppositifolium* grows beside the stream. Species-rich ground flora in drier parts of the woodland includes herb Paris *Paris quadrifolia* and greater butterfly orchid *Platanthera chlorantha* (scarce in Kent).

The mosaic of habitats within the site and in particular the species-rich grassland, support an outstanding invertebrate community with records of at least 86 nationally rare or scarce species. The site is important for moths and butterflies and 24 of those recorded recently are nationally scarce including the plumed prominent moth *Ptilophora plumigera* and the Duke of Burgundy butterfly *Hamearis lucina*. The rare black-veined moth *Siona lineata* occurs here at one of its very few locations in Britain and is specially protected under Schedule 5 of the Wildlife and Countryside Act 1981.

### **Geological Interest**

The Devil's Kneading Trough Geological Conservation Review site is a key site for Quaternary studies, providing detailed lithostratigraphic, biostratigraphic and geomorphological evidence for Devensian Late-glacial and Flandrian environmental changes. An important part of the interest comprises a tufa deposit with molluscan faunas that permit a reconstruction of early to mid-Flandrian (Mollusc zones a to d) environmental changes at a time when the landscape became increasingly afforested.

The site is an outstanding geomorphological and stratigraphic locality demonstrating a classic dry valley and associated scarp-foot fan. The deposits in the fan, which overlies a fossil soil and radiocarbon-dated marsh deposits, date from the Late glacial Stadial and represent remarkably intense and rapid erosion, possibly a product of local conditions. The fan deposits and those of postglacial age in the valley floor are particularly important for their Mollusca stratigraphy, which together with the lithostratigraphy, has provided very detailed evidence of changing environmental conditions over a period spanning from the Late Devensian to the present day. Devil's Kneading Trough is therefore one of the most important periglacial sites in Britain for its classic forms, erosional history and the biostratigraphy and lithostratigraphy of its associated deposits.

\* 'A Nature Conservation Review' edited by D A Ratcliffe 1977, Cambridge.