

COUNTY: KENT  
ESCARPMENT

SITE NAME: WOULDHAM TO DETLING

DISTRICT/BOROUGH: TONBRIDGE AND MALLING DISTRICT; MAIDSTONE  
BOROUGH

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

Local Planning Authorities: TONBRIDGE AND MALLING DISTRICT COUNCIL,  
Maidstone Borough Council

National Grid Reference: TQ 753609 Area: 296.3 (ha.) 732.15 (ac.)

Ordnance Survey Sheet 1:50,000: 188 1:10,000: TQ 75 NE, TQ 76 SW, SE

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

Date Notified (Under 1981 Act): 1990

#### Other Information:

1. Listed in 'A Nature Conservation Review', D A Ratcliffe (ed), Cambridge 1977.
2. Will be listed in the forthcoming Geological Conservation Review.
3. Several areas within the site are managed by the Kent Trust for Nature Conservation as nature reserves.
4. The boundary has been amended at renotification by several extensions and deletions.
5. The site lies within the Kent Downs Area of Outstanding Natural Beauty.

#### Reasons for Notification:

This 10 km stretch of the chalk escarpment to the north of Maidstone includes representative examples of woodland, scrub and unimproved grassland habitats on chalk, which support a number of rare\*\* and scarce\* species of plants and invertebrates. The Culand Pits are also of importance because of their rich and unique fossil fauna which includes a variety of fish and reptiles.

#### Biological interest

Much of the site would traditionally have been managed as open grazing land, but in common with most surviving rough grazing land in the south-east, continued lack of grazing has led to the development of scrub and woodland, leaving more limited areas of open grassland.

Although most of the woodland is recent in origin, it has already acquired a rich community of plants and animals. The tree canopy is dominated by various proportions of beech *Fagus sylvatica*, ash *Fraxinus excelsior*, whitebeam *Sorbus aria*, wild cherry *Prunus avium*, silver birch *Betula pendula* and yew *Taxus baccata*. Understorey shrubs include hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, midland hawthorn *C. laevigata*, elder *Sambucus nigra* and privet *Ligustrum vulgare*, while the ground flora includes dog's mercury *Mercurialis perennis*, ivy *Hedera helix*, lords-and-ladies *Arum maculatum* and spurge laurel *Daphne laureola*. Scarce\* plants include lady orchid *Orchis*

*purpurea* and stinking hellebore *Helleborus foetidus*. Box *Buxus sempervirens*, a rare\*\* small tree, is native here at one of a handful of sites in the south-east. The storm of October 1987 has added variety to the woodland by opening up some of the areas with a closed canopy.

Scrub on the site includes the full range of succession from open grassland to the woodland already mentioned. Scattered clumps of hawthorn and wild rose *Rosa* spp. (including the scarce Kent<sup>+</sup> species *R. rubiginosa*) gradually merge and a varied scrub develops, with more than a dozen shrub species, including dogwood *Cornus sanguinea*, privet, hazel, hawthorn, wayfaring tree *Viburnum lantana*, yew and the rare\*\* box. Eventually tree species become dominant and woodland develops. The ground flora, which begins as rank chalk grassland, becomes shaded by the developing scrub, eventually resembling that of the woodland.

Chalk grassland survives as fragments within the scrub, and a number of larger areas also occur. The most open areas are dominated by fine grasses including red and sheep's fescues *Festuca rubra* and *F. ovina*, with low-growing broadleaved plants such as stemless thistle *Cirsium acaule*, fairy flax *Linum catharticum*, bulbous buttercup *Ranunculus bulbosus*, wild thyme *Thymus praecox* and salad burnet *Sanguisorba minor*. Most of the grassland is taller, dominated by upright brome *Bromus erectus* with broadleaved plants including hairy violet *Viola hirta*, marjorum *Origanum vulgare* and cowslip *Primula veris*. Other plants in the grassland include: a number of orchids – fragrant orchid *Gymnadenia conopsea*, common spotted orchid *Dactylorhiza fuchsii*, twayblade *Listera ovata* and pyramidal orchid *Anacamptis pyramidalis*; several plants scarce in Kent<sup>+</sup> such as chalk milkwort *Polygala calcarea*, dropwort *Filipendula vulgaris*, burnet rose *Rosa pimpinellifolia* and adder's-tongue fern *Ophioglossum vulgatum*; several nationally scarce\* species such as man orchid *Aceras anthropophorum* and ground pine *Ajuga chamaepitys*; and the nationally rare\*\* meadow clary *Salvia pratensis*.

The site supports a rich insect assemblage typical of southern calcareous grassland, including a number of uncommon species. The moths (Lepidoptera) of Culand Pits have been best studied and the fauna includes 11 scarce\* species, most notable of which is the straw belle *Aspitates gilvaria*, and one rare\*\* species. *Oncocera obductella* all associated with chalk grassland plants. A further 6 scarce\* species of grasshopper (Orthoptera), bug (Heteroptera) and beetle (Coleoptera) have been recorded, as well as a rare bug *Hallodapus montandoni*, which is associated with ants in short grassland: these species are all typical of chalk grassland. In addition 3 scarce\* woodland moths and one scarce\* beetle *Mordellistena neuwaldeggiana* typical of woodland edge, are known from the site.

#### Geological interest

The geological interest within the site occurs in the Upper and Lower Culand Pits. The sequence of Chalk in these pits has yielded rich and diverse collections of fossil fishes which complement those from Lewes in Sussex. The material is superbly preserved, frequently without significant crushing or distortion, and the fish are usually articulated, and thus have been the subject of much scientific research.

Type fish material from this locality includes *Cantioscyllium decipiens*, *Sardinoides illustrans*, *Ischyodus incisus*, *Scyliorhinus antiquus*, *Pachyrhizodus basalis*, *Osmeroides levis* and *Plethodus pentagon*. Most species from here have a widespread distribution;

however, the site has also yielded some uncommon species of which the following are of importance: 4 species of *Pachyrhizodus* occur at this site -- this is a problematical teleost genus known from England, North America and Australia, whose relations are poorly known; *Dinelops ornatus* is known only from a handful of specimens; *Tomognathus* is poorly known and is the first reported member of the helosaurs, a group of deep-sea fishes of which only 3 are known, one from here; the type and only specimen of the shark *Cantioscyllium* is from this site – the specimen is a vertebral column and associated braincase, rarely preserved in sharks.

The Lower and Middle Chalk (Cenomanian/Turonian) of these pits has been an important source of reptiles. These include turtles (*Chelone*, *Protostega*), plesios (*Cimiliosaurua*), pterosaurs (*Ornithocheirus*) and the type specimen of a lizard (*Delichosaurus*). These quarries have yielded one of the best Lower/Middle Chalk reptile faunas.

\*\*rare: recorded from 15 or less of the 10 × 10 km squares in Britain.

\*scarce (ie nationally scarce): recorded from 16 to 100 10 × 10 km squares in Britain.

+ scarce in Kent: recorded from between 1% and 5% of the 2 × 2 km tetrads in Kent.