

COUNTY: EAST SUSSEX

SITE NAME: BREDE PIT AND CUTTING

DISTRICT: ROTHER

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

Local Planning Authority: ROTHER DISTRICT COUNCIL

National Grid Ref: TQ 832184

Area: 0.54 (ha.) 1.33 (ac.)

Ordnance Survey Sheets 1:50,000: 199

1:10,000: TQ 81 NW

Date Notified (Under 1981 Act): 1990

Other Information:

This is a new site and is to be included in 'A Geological Conservation Review'.

Reasons for Notification:

Wealden Interest

This site formerly exposed the top 2m of the Ashdown Sand Formation, and the bottom 1.5m of the Wadhurst Clay Formation of the Hastings Beds Group.

This is the type section for this junction, the pit formerly displaying a sequence of all known beds indicating change from shallowing fluviatile to deepening lake/lagoonal environments. The sequence is: sandstone (with recycled Portlandian glauconite); erosion surface; graded Top Ashdown Pebble Bed (lake/lagoon upper shoreface Portlandian and Dinantian clasts); thin lenticular sandstones, siltstones, clays (fragmented *Neomiodon*, *Viviparus*, plants) with Brede Bone bed (fish, reptiles) and upstanding *Equisetum lyellii* in growth position (transition from lower shorefaces to horsetail reedswamp); ostracodal clays (with seam of soft, crushed aragonite *Neomiodon* shells), and clay-ironstone nodules enclosing *Viviparus*; and thin sheets of calcareous sandstone (base of Cliff End Sandstone Member). These beds are widely distributed in the High Weald, but are seldom all seen together. They are closely analogous to those at the Lower Tunbridge Wells Sand–Grinstead Clay junction seen at West Hoathly.

The adjacent road (Tank Shaw) is in a typical East Sussex 'hollow', marking a site where the basal Wadhurst ironstone and Cliff End Sandstone 'Tilgate Stone' facies were formerly quarried.

This is a key section for the study of palaeogeography, sedimentology and palaeoecology of the Hastings Beds Group.

Jurassic-Cretaceous Reptilia Interest

This site shows the Wadhurst Clay Brede Bone Bed. This unit, somewhat older than the Telham Bone Bed, occurs to form lenticles which contain casts of bivalve, fish teeth, scales and bones, and reptile remains. The latter include turtle shell fragments, crocodile teeth *Goniopholis*, and dinosaur bones. This site has good potential for

future excavations and for the detailed study of its fauna, which may include some smaller reptiles.