

SITE NOTIFIED TO THE SECRETARY OF STATE ON THE 30TH MARCH 1992

COUNTY: DERBYSHIRE **SITE NAME:** BOULTON MOOR

DISTRICT: DERBY CITY **SITE REF:** 15W1G

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, Derby City Council

National Grid Reference: SK 381317 **Area:** 3.9 (ha.) 9.6 (ac.)

Ordnance Survey Sheet 1:50,000: 128 **1:10,000:** SK 33 SE

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

Date Notified (Under 1981 Act): 1992 **Date of Last Revision:** –

Other Information:

New GCR site.

Description and Reasons for Notification:

This area is underlain by an important glacial and fluvial sequence, including two different types of till and organic deposits from at least two different temperate intervals. The basal Quaternary deposits comprise a glacial complex filling an E-W trending trough excavated in bedrock. Channelled into this are gravels containing a typical Ipswichian (last interglacial) mammalian fauna (including hippopotamus), associated with which are mollusc-rich horizons. These channels are truncated by a later gravel sequence containing further organic horizons, probably representing interstadials within the Devensian (last glacial) Stage. These deposits are capped by a veneer of probable solifluction deposits. The site lies on the surface identified as the Beeston Terrace of the River Trent. The sediments at Boulton Moor have not been studied fully to date, but sufficient information is available to identify this site as one of the most important in the Trent basin. It can provide a crucial link between the glacial and fluvial sequence in this valley and is one of very few sites in the East Midlands which have evidence from temperate periods. The latter are of great importance for the reconstruction of Pleistocene climate and geographical evolution. There is great potential for further research at Boulton Moor.

Explanatory Geological Note

The purpose of this note is to describe the nature and importance of the site, avoiding specialist terms, for the site owner and/or occupier. This note does not form part of the format notification documents.

Boulton Moor, Derbyshire

This site consists of an area of land underlain by glacial deposits and river gravels. The site boundaries, enclosing the area where these deposits have been found, follow fence lines marking out a roughly rectangular area, about 250 metres long and 150 metres wide. The gravels and glacial deposits date from the 'Ice Ages' or Quaternary period of geological history (see diagram below). The deposits are of special research interest because they record a series of different episodes in the history of the Trent valley. The oldest deposits here are glacial clays, overlain by river gravels of several different ages. The gravels contain fossil remains of animals such as hippopotamus, which lived in Britain during warm intervals within the 'Ice Ages'. This is a site with great potential for future research into the climate and environment of the region during the Quaternary 'Ice Ages' and for studying the geographic evolution of the Trent valley.

Geological period

Present day	Neogene	0	This site *
The ice age	Palaeogene	24	
Extinction of dinosaurs		65	
	Cretaceous		
Origin of flowering plants		135	
First birds	Jurassic		
First mammals and first dinosaurs		205	
Major extinction of marine animals	Triassic	250	
	Permian		
		290	
First reptiles	Carboniferous		
First Amphibians		355	
	Devonian		
First forests		405	
First plants	Silurian	435	
First fish	Ordovician		
	Cambrian	510	
		570	
	Pre-Cambrian eras		
First multicellular animals		700	
	Pre-	700	
Oldest rocks in Britain	Cambrian	2800	
First possible bacteria	eras	3400	
Beginning of the Earth		4600	

Geological timescale

This chart shows the time of formation of rocks at the site in relation to major events in the Earth's history.