

File ref:

County: **Leicestershire** **Site name: One Barrow Plantation**

District: **Charnwood**

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

Local Planning Authority: Charnwood Borough Council

National Grid Reference: SK 465172 **Area:** 1.91 (ha) 4.72 (ac)

Ordnance Survey Sheet 1: 50 000: 129 **1: 10 000:** SK 41 NE

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

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

Other Information:

This site is also included in the 'Geological Conservation Review' listed under the name Blackbrook Reservoir. Part of the site falls within the existing biological Site of Special Scientific Interest known as Blackbrook Reservoir.

Reasons for Notification:

This site is geologically important in interpreting the conditions which existed in the East Midlands in the late Precambrian (Proterozoic). The rocks form a layered sequence belonging to the Blackbrook Reservoir Formation of the Charnian Supergroup, and are thought to be part of a larger sequence of mainly volcanic ashes (tuffs) deposited offshore from a primarily acidic volcanic island arc, similar to those at the present day Pacific Ocean western margin.

Geology:

There are two specific areas of geological interest at this site. Firstly, the sequence is the type section for the South quarry Slump Breccia Member of the Ives head Formation in the Blackbrook Group. This member contains a unit of distorted and dismembered fine grained tuffs of rhyolitic and rhyodactic composition within a coarser grained tuff. These are the oldest such layers in Charnwood, and indicate disruption of unconsolidated layers due to submarine earthquakes probably related to vulcanicity. Secondly, the Blackbrook Group here shows an overall upward increase in the amount of non-volcanic material, which indicates waning volcanic activity with time, and increasing non primary volcanogenic sediment entering the offshore basin.