

COUNTY: NORTH YORKSHIRE
SYSTEM

SITE NAME: UPPER DENTDALE CAVE

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

Local Planning Authority: Cumbria County Council; South Lakeland District Council; Yorkshire Dales National Park Authority

National Grid Reference: SD739864

Area: 60.62 ha. 149.73 ac.

Ordnance Survey Sheet: 1: 50,000: 98

1:10,000: SD78NW

First Notified: 12 February 1998

Description and Reason for Notification

Upper Dentdale Cave System is situated approximately 3 km east of Dent on the northern flanks of Whernside and extends north and south of the River Dee for a length of approximately 1.7 km along the valley floor and lower slopes of the valley sides. The site comprises an underlying cave system that has its surface expression in a number of cave entrances including influent entrances and resurgences.

This group of caves lie in the banks of, and beneath, the River Dee where it crosses the outcrop of the Great Scar Limestone. The caves are unusual in that they demonstrate progressive development beneath the floor of a glacially eroded trough-shaped valley, and while some of the caves carry the modern drainage, except during periods of high flow, the others are fossil passages which have been breached by the downcutting of the surface gorge. Further study is required in order to define an absolute chronology for this site. The results of such a study would be most significant at a site close to the Dales ice centre of the Devensian glaciation.

Upper Dentdale Cave System is a nationally important site and provides a unique insight into cave formation beneath a major valley floor.

Other Information

This is a Geological Conservation Review Site.

EXPLANATORY GEOLOGICAL NOTE

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

notification documents.

UPPER DENTDALE CAVE SYSTEM, CUMBRIA

This cave system is located on the lower slopes and valley floor of Dentdale about 3km east of the village of Dent. The site is approximately 1.7km long and comprises an underlying **cave system** that has its surface expression in a number of **cave entrances**, some of which are occupied by water flowing into (**influent**) and out of (**resurgent**) the system.

Upper Dentdale Cave System is a superb example of a cave system which has developed beneath the valley floor but which has been "broken into" by the modern River Dee as it progressively erodes its beds. Indeed, along much of the length of the river where it crosses the **Great Scar Limestone**, drainage under normal weather conditions is underground and the river is now progressively modifying the pre-existing cave passages. The whole cave system clearly shows the influence of geology on its development. For example, the collapse of weak rocks forming the roof of part of Ibbeth Peril Caves has created one of the largest collapse chambers in Britain spanning 80 x 40m and being up to 12m high.

The cave system is very complex and probably only a small part of the caves have so far been discovered. There is considerable potential for further research on how these caves have developed during and since the last **Ice Age**.

TYPICAL CAVE STRUCTURE –

showing inflating (influent) and outflowing (resurgent) water routeways.