County: Cumbria **Site Name: Gill Beck**

District: Allerdale

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

Local Planning Authority: Lake District Special Planning Board

National Grid Reference: NY 149343 **Area:** 3.21 (ha) – (ac)

Ordnance Survey Sheet 1:50,000: 89 **1:10,000:** NY 13 SW, SE

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

Other Information:
A Geological Conservation Review Site (GCR).
This site lies within the Lake District National Park.

Description and Reasons for Notification:
Gill Beck is situated in a small valley just south of the village of Blindcrake, 6 kilometres northeast of Cockermouth. It forms a short tributary of the River Derwent to the south.

The Cockermouth Lavas, of Dinantian age, record a volcanic episode linked with the initiation of the southern margin of the Northumberland Trough during early Carboniferous times. The volcanism was preferentially located along the hinge zone between areas of subsidence, to the north, and uplift, to the south. The absence of pyroclastic rocks suggests that extrusion was relatively quiet, probably along a series of fissure vents.

The suite is geochemically distinguished by the presence of lavas of intermediate composition, and the Northumberland Basin is, in this sense, transitional between the Scottish Midland Valley where such compositions are relatively common, and Derbyshire where they are unknown.

Gill Beck provides good stream exposures through a circa 60 m thick sequence of the Cockermouth Lavas. The suite is in general not well exposed and this fact makes the Gill Beck sequence especially valuable. At least four lava flows are present including both basalts and tholeiitic andesites. The site is also important as the Ordovician Skiddaw Slates lie unconformably beneath the lavas. Sediments overlying the lavas have yielded a Courceyan stage age, and a sequence of rocks ranging from Courceyan Basement Beds to the Holkerian 7th Limestone is seen. Taken in conjunction with age evidence found below the lavas elsewhere in the area, this enables the age of the volcanism to be tightly established.