

## LEITRIM - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Arroo Mountain Caves</b>
Other names used for site	The Dartry Hills
<b>IGH THEME</b>	<b>IGH1 Karst</b>
<b>TOWNLAND(S)</b>	<b>Gortnacrieve, Corlea, Aghnahaha</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Manorhamilton</b>
<b>SIX INCH MAP NUMBER</b>	<b>4</b>
<b>ITM CO-ORDINATES</b>	<b>589375E 847175N (central area of site)</b>
<b>1:50,000 O.S. SHEET NUMBER 16</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO. 7</b>
<b>GIS CODE LM002</b>	

### **Outline Site Description**

The northeast section of Arroo Mountain, in the Dartry Hills, has a high concentration of karstic landforms, including sinking streams and potholes, as well as many enclosed depressions and limestone pavement.

### **Geological System/Age and Primary Rock Type**

The potholes and their sinking streams and the other karstic landforms are largely post-glacial in age, from the Holocene Period, covering the last 12,000 years. They are formed in, or on, the Dartry Limestone Formation, of Mississippian (Lower Carboniferous) age.

### **Main Geological or Geomorphological Interest**

On the plateau, impermeable rocks of the Meenymore Formation and the Glenade Sandstone Formation and their cover of blanket bog gather rainfall and concentrate it into small streams. Where these streams first encounter the underlying limestone rocks of the Dartry Limestone Formation, they tend to sink underground and form caves. Due to the high proportion of insoluble chert that occurs as beds and nodules with the limestone, the formation of caves tends to occur where there are faults and fractures. This generally leads to potholes that form vertical shafts, rather than more horizontal cave passages developed along bedding planes, as is more common in karstic areas.

The County Geological Site defined on Arroo Mountain includes a number of named potholes that have been explored and surveyed, such as Polldingdang, No Name Pot, Ramsons Pot, Waterfall Pot, Sulphur Pot and Sheepfold Cave, amongst others. There are also very numerous small enclosed depressions (also called dolines or shakeholes) without streams disappearing into them. These indicate the extensive karstification of the limestone below. Some exposed limestone pavement areas, which are sculpted into linear blocks of limestone, are also included. Based on GSI mapping of karst features, areas to the northwest of the plateau have high numbers of enclosed depressions, but lack the caves. The lower slopes of the Glenaniff valley have many karstic springs where the water re-emerges from underground. The plateau also has shallow dry valleys where streams now flow underground instead.

### **Site Importance – County Geological Site**

The wide range of karstic landforms and the high concentration of potholes in this area make it a worthy County Geological Site.

### **Management/promotion issues**

The Arroo Mountain SAC, (site code 001403), covers the bulk of the upland area and although there are some dolines and features outside of the SAC boundary, it is used to define the geological site. As with any caves, and especially vertical potholes, only trained and properly equipped experienced cavers should consider entering the potholes.



The dolines, limestone pavement and swallow holes in the plateau are difficult to see.



The stream sinks in the enclosed depression, into Sulphur Pot, amongst the trees.



A limestone pavement area a little east of Sulphur Pot and Sheepfold Cave.

