

LEITRIM - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Dough Mountain
Other names used for site	<i>Sliabh Dúch</i>
IGH THEME	IGH1 Karst, IGH14 Fluvial and Lacustrine Geomorphology, IGH7 Quaternary
TOWNLAND(S)	Boleyboy, Lissinagroagh, Tawnylust Barr, Glenkeel, Carraun, Lugasnaghta, Killea
NEAREST TOWN/VILLAGE	Manorhamilton
SIX INCH MAP NUMBER	8
ITM CO-ORDINATES	594136E 842305N (summit)
1:50,000 O.S. SHEET NUMBER 16	GS1 BEDROCK 1:100,000 SHEET NO. 7
GIS CODE LM009	

Outline Site Description

Dough Mountain is a domed, upland ridge approximately 5 kilometres northeast of Manorhamilton.

Geological System/Age and Primary Rock Type

The summit of Dough Mountain is capped with sandstones and shales of Namurian age (middle Carboniferous), while the lower slopes are underlain by Mississippian (Lower Carboniferous) limestones (c. 330 Ma), of the Dartry Limestone Formation and the Carraun Shale Formation. The ribbed, hilly forms on the lower slopes of the mountain are Quaternary (Ice Age) features, while deep, karstic cavities formed in the bedrock probably date back to before the last Ice Age. The straight gullies that allow streams to flow off the mountainsides instantly following rainfall were all formed since the Ice Age, in the Holocene Epoch. Blanket peat on top of the ridge is of similar age.

Main Geological or Geomorphological Interest

Though Dough Mountain itself owes its elevation and form largely to the underlying bedrock, this is mostly invisible and has been blanketed by thick Quaternary deposits, left during and since the Ice Age.

Perhaps the most striking features across the mountain top are deep depressions on the western side, where karstic cavities underground in the limestone have opened up at surface, as a result of the ground above them sinking, and forming enclosed depressions (dolines). Some of these are up to 30 m across and 20 m deep, and some in turn have developed into swallow holes. Springs emerge from the mountain side in this general area also, and one of the depression features has become a vertical pothole shaft, at the base of which is a recently-explored cave, Polldough. This cave has a waterfall at its entrance, and is deep and dangerous, with the floor up to 50 m below the surface.

Leitrim is one of the few localities in the world where upland ribbed moraines occur, and they are particularly well expressed on the southwestern side of Dough Mountain, in Boleyboy Townland. The ridges are up to 1km long, 300m wide, and 15m – 20m high.

The southeastern side of Dough Mountain has been blanketed in scree and other slope deposits since the Ice Age, and this has allowed a set of exceptionally straight stream channels to form, flowing off the mountain radially. Such an arrangement is rare hydrologically, and rarely unaltered by humans.

Site Importance – County Geological Site; recommended for Geological NHA

This is a particularly complex site in terms of its' geological history, and has an array of unusual karst features, upland ribbed moraines and straight-as-an-arrow stream gullies. Given the collection of unusual features in a relatively restricted area, the site is recommended for Geological NHA status.

Management/promotion issues

There has been an increase in forestry cover in recent decades on Dough Mountain, which means that many of the best landscape features are becoming invisible. The majority of the karst features are on private farmland and access should only be with owner permission. Polldough Cave itself is a dangerous feature, with a cliffed drop of up to 20m in the middle of a field, so caution is urged in approaching it. Any entrance to this pothole should only be attempted by experienced cavers.



The pockmarked western flank of Dough Mountain, with springs feeding streams which then sink again into enclosed depressions.



The entrance to Polldough, with a vertical drop of 20 m to the cave entrance.



One of the deep gullies on the eastern side of the ridge.



Gullies on the southeastern side of Dough Mountain, viewed from the N16 east of Manorhamilton.

