

DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Barnesmore Gap
Other names used for site	The Big Gap, also known locally as 'The Gap'
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Ardinawark, Keadew Upper, Friarsbush, Tawnawully Mountains, Croaghonagh, Cashelnavean
NEAREST TOWN/VILLAGE	Donegal Town
SIX INCH MAP NUMBER	85, 86
ITM CO-ORDINATES	603344E, 885890N
1:50,000 O.S. SHEET NUMBER: 11	GSI BEDROCK 1:100,000 SHEET NOS. 3, 4
GIS Code DL002	

Outline Site Description

The Barnesmore Gap is a deep pass oriented southwest–northeast, comprising a deep glacial channel. It splits the Blue Stack Mountains in two, with Croaghconnellagh on the northwest side and Barnesmore Mountain on the southeast.

Geological System/Age and Primary Rock Type

The valley was originally interpreted as a glacial spillway by Praeger but has since been re-evaluated as a glacial valley and has even been suggested to have been formed by an ice stream. The feature is Quaternary in age and was formed by the scouring effects of ice during the Last Ice Age.

Main Geological or Geomorphological Interest

The Gap is a straight, steep-sided, rocky valley, just over 4 kilometres long and up to 200m deep. It hosts long, linear accumulations of lateral moraine debris on either side of the valley. A recessional moraine can also be seen at the southern end of the Gap.

The Gap valley follows the Barnesmore Fault, one of the major structural features of the bedrock geology of Donegal. Ice flowed from the northeast down the Gap towards the southwest, as illustrated by glacial striae and roche moutonnees in the adjacent Bluestack Mountains. As well as this, granite which crops out on either side of the Gap, has been carried southwestwards towards Donegal Bay.

The valley floor shows a fine meandering river which has deposited coarse-grained alluvial material along its floodplain. At the northeastern end of the Gap, a landslide which occurred in 1963 can still be seen on the northern footslope of Barnesmore Mountain.

Site Importance – County Geological Site; recommended as Geological NHA

The lateral moraines within the Gap are among the best examples in the country, and seen in contrast to the depth of the Gap itself show how glacial depositional features are miniscule compared to the depth of ice sheet that deposited them. As the N15 road passes through the Gap, their accessibility makes this site all the more important.

Management/promotion issues

The geomorphology of the Gap is quite spectacular and as a glacial channel and moraines are readily seen even by the untrained eye, a promotional signboard at the car park in mid-Gap would prove useful.

Walking on the surrounding hills is not recommended without getting prior permission of local landowners. The southeastern part of the site is within the Barnesmore Bog NHA (002375).



The Barnesmore Gap, looking southwest



The Barnesmore Gap, looking southeast.



The Lowerymore River eroding some of the lateral moraine material on the eastern side of the Gap.

