

LOUTH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Barnavave Summit
Other names used for site	
IGH THEME	IGH11 Igneous Intrusions
TOWNLAND(S)	Commons
NEAREST TOWN/VILLAGE	Carlingford
SIX INCH MAP NUMBER	8
ITM CO-ORDINATES	717737E 810087N
1:50,000 O.S. SHEET NUMBER	36 GSI BEDROCK 1:100,000 SHEET NO. 8/9

Outline Site Description

The site occupies the summit of Barnavave Hill where two elongate crags are separated by a c. 50m-wide flat, northwest-southeast-trending area covered by blanket bog. The latter is Maeve's Gap, or *Bearna Mhedhbh* in Irish.

Geological System/Age and Primary Rock Type

The two crags consist chiefly of gabbro veined by granite that intruded the gabbro as it cooled. Both are part of the Palaeogene Carlingford Igneous Complex.

Main Geological or Geomorphological Interest

The exposed summit location hosts abundant, clean outcrops that allow detailed observation of the relationship between the gabbro and granite. The thickness of granite intrusions ranges from several mm to > 1m. Contacts between the two rocks are typically sharp but in many cases curved or lobate, indicating that while the gabbro had hardened sufficiently to fracture it was not completely solidified when the granite was intruded. The cross-cutting of some granite veins by others indicates a protracted sequence of intrusion during cooling of the gabbro.

Maeve's Gap marks the line of a fault that can be traced northwestwards to Slieve Foy. Preferential erosion along the line of the fault is responsible for the observed break in the outcrop pattern of the otherwise massive gabbro intrusion.

Site Importance – County Geological Site

There are several sites in the Carlingford area displaying gabbro intruded by granite, e.g. Barnavave Quarry and Cooley Castle Quarry, but the outcrops on Barnavave Summit are particularly large and clean, allowing more extensive examination of the contact relationships than at other sites. The northwest-southeast-trending fault is very clearly delineated, an additional feature that adds to the site's importance.

Management/promotion issues

The site is within the proposed Carlingford Mountain NHA. It overlooks the village of Carlingford in an area very popular with hill-walkers. The Táin Way walking route passes over the col 600m to the northwest and a rough track leads from it to Barnavave Summit. The area is unspoilt and there are no obvious threats to the integrity of the site.



Maeve's Gap on the summit of Barnavave, looking southeast along the line of the fault.



Light-coloured granite veins in dark gabbro. Several generations of veins are apparent, later veins cross-cutting earlier ones (left). Contacts are generally sharp but can be irregular (right) or curved (left).



Granite veins are typically less than 100mm thick but can exceed 1m (left). Lobate contacts between granite and gabbro (right) suggest that gabbro had not fully solidified before intrusion of the granite.



