

LOUTH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Barnavave Site C		
Other names used for site			
IGH THEME	IGH6 Mineralogy		
TOWNLAND(S)	Commons		
NEAREST TOWN/VILLAGE	Carlingford		
SIX INCH MAP NUMBER	8		
ITM CO-ORDINATES	718327E 809778N		
1:50,000 O.S. SHEET NUMBER	36	GS1 BEDROCK 1:100,000 Sheet NO.	8/9

Outline Site Description

The site consists of a series of small hillside outcrops on the eastern flank of Barnavave ridge, at an elevation of approximately 150m OD.

Geological System/Age and Primary Rock Type

Lower Palaeozoic limestone, thermally metamorphosed to skarn, is here cut by thin veins of syenite that contains eudialyte and neptunite.

Main Geological or Geomorphological Interest

The outcrops occur long the contact zone between the granophyric microgranite of the Carlingford Complex and the Lower Palaeozoic limestone country rock. The limestone along the contact zone has been thermally metamorphosed by the granophyre to skarn. Nockolds described the occurrence of syenite at several localities in the Barnavave area and he identified eudialyte and neptunite in thin sections of samples from a location in this area. The exact location is uncertain and the field visit for this audit made use of published small-scale sketch maps.

The area containing the outcrop of interest was largely overgrown when visited for this audit. One large outcrop (photo) of flat-bedded skarn was found, along with some smaller outcrops. Thin quartzo-feldspathic veins, corresponding to Nockold's description of syenite found at Barnavave, cut the skarn in places. None of the minerals described by him, in thin section, as occurring here were observed in the field and it is not clear if they can be identified without the aid of high magnification. Large relict fossils are here and there visible in the skarn.

Site Importance – County Geological Site

The mineralogy of the rocks of the Barnavave area was the subject of detailed studies in the first half of the 20th century, leading to the publication of numerous papers by Nockolds, Osbourne and others which contained the first reported occurrence in Ireland of a number of minerals. The importance of the site lies in the fact that it yielded the first described examples of eudialyte and neptunite. However, the minerals cannot be readily discerned in the field and this site, like most other IGH6 sites in Carlingford, is likely to be of interest mainly to the scientific community.

Management/promotion issues

The site is on open mountainside and there are no evident threats. It lies completely within the Carlingford Mountain SAC and proposed NHA. Promotion is not an important issue for this site.



View north on east flank of Barnavave Hill along contact between microgranite of Carlingford Complex and metamorphosed Carboniferous limestone (skarn)



Outcrop of skarn showing near horizontal bedding



Skarn containing remnants of *Lithostrotion* coral (below hammer)



