

DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Breesy Hill
Other names used for site	
IGH THEME	IGH5 Precambrian
TOWNLAND(S)	Carricknahorna
NEAREST TOWN/VILLAGE	Belleek
SIX INCH MAP NUMBER	108
ITM CO-ORDINATES	597656E, 863622N
1:50,000 O.S. SHEET NUMBER: 17	GS1 BEDROCK 1:100,000 SHEET NOs. 3, 4
GIS Code DL004	

Outline Site Description

Extensive outcrop around summit of small, isolated, tree-less hill covered by blanket bog and heather.

Geological System/Age and Primary Rock Type

Precambrian Sliswood Division (Lough Derg inlier) paragneiss with associated metabasite dykes, some of which are migmatized.

Main Geological or Geomorphological Interest

This is a large exposure of Sliswood Division paragneiss, cut by metabasite dykes. The paragneiss is a pinkish, quartzo-feldspathic psammite with darker semi-pelite and some pelite. Excellent exposures show the full range of compositional and tectonic banding that are typical of these rocks, as well as the complex, ductile folding that has resulted from deformation under very high grades of metamorphism. Several metabasite dykes cut the paragneisses. Deformation has boudinaged the dykes and resulted in the formation of pods of metabasite within the host rock. There are some examples of migmatization of the metabasite, where under conditions of high temperature and pressure, partial melting has occurred, producing mixtures of dark-coloured basic rock and light-coloured quartzo-feldspathic "leucosomes" (acid rock).

Site Importance – County Geological Site; may be recommended for Geological NHA

The site is primarily important for the very well exposed examples of paragneiss as well as migmatized and deformed metabasites. The site thus displays two of the significant rock types of the Sliswood Division as well as typical deformation styles. Many previously mapped exposures of the Sliswood Division rocks have been obscured by vegetation or made inaccessible through other factors in the last few decades, emphasizing the importance of preserving excellent exposures such as these.

Management/promotion issues

This is an excellent outcrop, possibly of regional significance, that could serve as a teaching site. The site is readily accessible on foot from the unsurfaced road that passes along the south side of Breesy Hill. The site is wholly within the Lough Golagh and Breesy Hill SAC, designated as such for its largely intact upland blanket bog, and is under no development threat.



Breesy Hill, view from east



Breesy Hill: ductile folds in paragneiss (left) and quartz-feldspar pegmatite vein cutting gneiss (right, lower right corner)



Breesy Hill: quartzo-feldspathic leucosomes (to right of hammer head) in migmatized metabasite (left) and metabasite pod (right of hammer head) in gneiss (right).

