

## NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>An Earagail</b>
Other names used for site	Errigal, <i>An tEaragail</i> , also known as one of the 'Seven Sisters'
<b>IGH THEME</b>	<b>IGH7 Quaternary</b>
<b>TOWNLAND(S)</b>	<b>Beltany Mountain, Procklis, Money More, Dunlewy Near</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Gaoth Dobhair (Gweedore)</b>
<b>SIX INCH MAP NUMBER</b>	<b>33, 34, 42, 43</b>
<b>ITM CO-ORDINATES</b>	<b>592775E 920764N (summit)</b>
<b>1:50,000 O.S. SHEET NUMBER 1</b>	<b>GSi BEDROCK 1:100,000 SHEET NO. 1</b>
<b>GIS Code ND019</b>	

### Outline Site Description

Errigal is a talus-mantled quartzite mountain rising to 751m ASL.

### Geological System/Age and Primary Rock Type

The quartzite making up the mountain is Precambrian in age, but the scree slopes, fossil rock glaciers and other slope features are Quaternary in age. The debris accumulations seem to post-date ice sheet deglaciation, as any granite erratics all occur outside them. Their most probable date of formation is during the Nahanagan Stadial, c. 11-10ka BP.

### Main Geological or Geomorphological Interest

Approximately 50% of the basal circumference of Errigal is occupied by large-scale talus-foot debris accumulations (fossil rock glaciers and protalus ramparts). Five talus-foot debris accumulations have been identified on Errigal. The first is a massive, lobate accumulation of quartzite debris at the base of the southwestern slopes up to 1500m long and 450m wide. The second is an accumulation of quartzite debris along the northwest slopes between c. 275m ASL and 430m ASL, and is c. 1200m long and up to 320m wide. The third, and smallest, accumulation is at c. 400m ASL at the foot of the north-facing talus slopes, 130m long and 40m wide. The fourth comprises boulder ridges and mounds below the northeast-facing talus slopes, c. 730m long and 480m wide. The final accumulation is an arcuate ridge of quartzite boulders at c. 350m ASL below the northwest-facing talus slopes of Mackoght.

The presence of granite erratics on the slopes of Errigal led Charlesworth to conclude, in the 1920s, that the mountain had been overridden by ice from the Derryveagh Mountains during the Pleistocene. Brief reference was made to the debris accumulation at the foot of the northeast talus by both Kinahan at the end of the nineteenth century, and Charlesworth in the twentieth, but neither author recognised the debris slopes along the mountain's western slopes. Working in the 1990s, Peter Wilson was the first to provide a detailed description and explanation for these features. Detailed morphological and sedimentological analysis indicated that the landforms were protalus ramparts and fossil rock glaciers for the first time. The fossil rock glaciers were the first to be recognised in Ireland and testified to an abundant supply of debris and its rapid downslope transport during the late-glacial period.

Errigal was an ice-free nunatak at the last glacial maximum with the ice only reaching as high as approximately 690m elevation on the mountain.

### Site Importance: County Geological Site; recommended for Geological NHA

This landmark site is of special geological and geomorphological interest, hosting excellent landscape features related to slope processes. It is recommended for designation as a geological NHA, and is located in the Cloghernagore Bog and Glenveagh National Park SAC, SPA and pNHA (002047).

### Management/promotion issues

This is a popular hillwalking site. It is important to highlight the sensitivity of tracks on the mountain to erosion by walkers. Geological and geomorphological characteristics should be promoted in any literature or media content pertaining to Errigal.



Errigal, viewed from the southwest.



The talus-foot debris accumulations on the northeastern side of Errigal.



Some of the blockfields on the mountainside.



The razor-sharp summit ridge on Errigal.



