

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	An Mhucais
Other names used for site	Muckish Mountain, The Pig's Back
IGH THEME	IGH5 Precambrian, IGH7 Quaternary, IGH15 Economic Geology
TOWNLAND(S)	Ray, Carrownamaddy, Gortnaleck, Ballyboe Mountain
NEAREST TOWN/VILLAGE	Creeslough
SIX INCH MAP NUMBER	42, 43
ITM CO-ORDINATES	600111E 928457N (summit)
1:50,000 O.S. SHEET NUMBER 2	GS1 BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND017	

Outline Site Description

Muckish is a significant isolated flat-topped mountain in the Derryveagh Range.

Geological System/Age and Primary Rock Type

The mountain is primarily composed of the Ards Quartzite Formation – part of the Dalradian sequence in Donegal.

Main Geological or Geomorphological Interest

The Muckish Mountain site has multiple interests with good exposure of Dalradian rocks and structures, remnants of Ice Age rock glaciers and relatively modern mining of decomposed quartzites as glass sands.

The mountain displays well the Ards Quartzite Formation, a part of the Creeslough Succession within the Appin Group, in the lower part of the Donegal Dalradian succession of Precambrian age. Seen from a little distance away, very large scale folding of the Dalradian succession can be seen (with good clear weather) in the mountain sides. There is a fold pair – two regional structures – the Errigal Syncline and the Aghla Anticline, which are recumbent. This means they have been so overfolded that they are lying nearly flat.

There are superb screes or talus slopes produced by frost shattering around much of the mountain, but especially in the southwest side. A large series of arcuate ridges are seen below them, from the road in the valley, especially noticeable where they have been quarried into. These were previously considered to be rock glaciers that moved over and buried a rock ridge, in colder periods at the end of the last Ice Age. Recently, they have been re-interpreted as simple slope failures.

The quartzite rock of Muckish is a very pure clean metamorphic sand, and in localised areas it has weathered by disaggregating. The main locality is high up in the northern face of the mountain. The high purity quartz sand was extracted from here to make glass. It was easy to dig out and was washed down wooden chutes or launders from the high ground to the road head.

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

This is a site of considerable value in several different themes, and may be of NHA status for any or all of them. It is already designated as an SAC and a pNHA for biodiversity attributes.

Management/promotion issues

The site boundary is coincident with that of SAC Muckish Mountain 1179. The old railway line on the northern side has been much upgraded as a walking/cycling route and there are signs on the road which serviced the glass sand quarry. There are several opportunities, including at the roadhead, for explanatory panels.



Muckish Mountain viewed on a clear day from the south.



Muckish Mountain – the quarries into the rock glacier at the south-western side.



Muckish Mountain sand quarries from the lip, looking into the western side.

