

WICKLOW - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Glenmacnass Valley
Other names used for site	<i>Gleann Log an Easa</i> , meaning "The glen of the hollow of the waterfall"
IGH THEME	IGH7 Quaternary, IGH11 Igneous Intrusions, IGH 14 Fluvial and Lacustrine Geomorphology
TOWNLAND(S)	Laragh, Drummin, Brockagh
NEAREST TOWN/VILLAGE	Laragh
SIX INCH MAP NUMBER	17
NATIONAL GRID REFERENCE	711450E 702808N (at waterfall)
1:50,000 O.S. SHEET NUMBER	56 GSI Bedrock 1:100,000 Sheet No. 16

Outline Site Description

The Glenmacnass Valley is a deep glacial valley in the central Wicklow Mountains. It separate Tonelagee and Brockagh mountain from Scarr Mountain.

Geological System/Age and Primary Rock Type

The bedrock in the upper portion of the valley is porphyritic granite, part of the Lugnaquilla Pluton which is one of the five plutons that comprise the late-Caledonian (405 Ma) Leinster Granite batholith. The contact between the granite and slate and schists of the Lower Palaeozoic Maulin Formation runs through the site, picked out by the waterfall locality. The valley itself and the glacial features within it date from the last Ice Age.

Main Geological or Geomorphological Interest

Glenmacnass is a stunning example of a glaciated U-shaped valley, with oversteepened cliff sides and a flat floor. The valley contains a number of moraines marking positions of the ice front as it retreated back towards the source area of the ice in the centre of the mountains. An especially impressive moraine occurs about half way between the waterfall and Laragh and can be seen as a boulder-strewn mound running right across the valley.

From the viewing point just east of the waterfall, a number of smaller moraines are seen to the east of the river. These are elongate with the valley and face towards the cliff face west of the river. They were deposited at the front of a small glacier that remained here in the shelter of Tonelagee, after ice in the rest of the lower part of the valley had melted. Linear accumulations of boulders close to the waterfall but following the trend of these moraines were deposited either at the margin of this small glacier or snow patch. They probably accumulated by funnelling and sliding down the glacier/snow patch.

The waterfall on the Glenmacnass River has three staggered drops along a vertical distance of about 80m, and falls across whitish to grey-coloured, smooth granite bedrock. On each side of the waterfall further down-valley, dark grey to black, jagged schist rock can be seen cropping out. The waterfall has therefore formed at the boundary between these two rock types.

The river flowing down the valley has beautiful meander bends and small islands within it, typical of a river depositing much of its load within and across its floodplain.

Site Importance – County Geological Site; recommended for Geological NHA

The Glenmacnass site is a superb example of a glacial valley, also with a waterfall at the junction of two rock types. Its abundant and unusual moraine features add considerable interest to the site, and it merits consideration as a Geological NHA.

Management/promotion issues

The site is currently outside the Wicklow Mountains SAC, SPA and proposed NHA, but is within the National Park. A car-park exists just north of the waterfall locality, and a signboard at the waterfall itself would prove useful in terms of explaining various geological aspects of the valley.



The Glenmacnass Waterfall, falling across smooth granite bedrock.



Some of the moraines in the middle portion of the valley.



The boulder accumulations below the waterfall, and the adjacent meandering river.



View down-valley from the waterfall.



