

DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Edergole
TOWNLAND(S)	Edergole, Cornaveagh, Greenan
IGH THEMES	IGH8 Lower Carboniferous
NEAREST TOWN	Donegal Town
SIX INCH MAP NUMBER	85
ITM CO-ORDINATES	596628E, 886783N
1:50,000 O.S. SHEET NUMBER: 11	GS1 BEDROCK 1:100,000 SHEET NOS. 3, 4
GIS Code DL014	

Outline Site Description

This moorland site on the slopes north of Lough Eske comprises outcrop sections in the Corabber River and its tributaries, the Greenan and Edergole streams.

Geological System/Age and Primary Rock Type

The rocks here are part of the Edergole Formation, a clastic sequence of conglomerates, sandstones and some shales, which represent the late-Devonian to early-Carboniferous red-bed (Old Red Sandstone) facies. The formation is entirely fault-bounded at this locality, with the generally east–west-trending Boundary Fault separating the Edergole Formation from Dalradian sequences (Argyll Group) to the north.

Main Geological Interest

The Lower Carboniferous sequences in south Donegal were deposited in a sedimentary basin now folded into a syncline (the Donegal Syncline) the axis of which runs northeast–southwest through Donegal Bay. The oldest rocks in the succession are generally exposed around the margins of the syncline and typically consist of thin (5–10m) beds of clastic sediments called the “Basal Clastics”. These mark the transition from underlying Devonian continental conditions when erosion of the landmass was taking place, to the fully marine conditions of Lower Carboniferous limestone deposition.

At Edergole, sequences similar to the Basal Clastics have a total thickness of c. 400m, in marked contrast to early-Carboniferous sedimentation elsewhere in south Donegal. The conglomerates and sandstones of both the Basal Clastics and the Edergole Formation typically contain clasts of schist and psammite, but those in the Basal Clastics tend to be better rounded and sorted, suggesting a longer transport history. The thick Edergole succession is interpreted as representing rapid deposition as an alluvial fan at the fault-bound margin of the basin by rivers draining the landmass to the north. Dating of miospores within the Edergole sequence indicates a Tournaisian (Ivorian) age, which is slightly older than the Lower Visean age assigned to the Basal Clastics of the Donegal basin. The Formation is therefore believed to represent sediments of the late-Devonian to early-Carboniferous red-bed facies.

Site Importance: County Geological Site, may be recommended for Geological NHA

The Edergole site provides excellent exposure of red-bed facies sediments formed at a fault-bounded basin margin. They pre-date the Basal Clastics that elsewhere underlie the Carboniferous limestone, making this site unique in south Donegal (there is a small outlier of red-bed facies rocks at Ballymacstocker in north Donegal).

Management/promotion issues

The Edergole site is likely to be of interest mainly to geologists and requires no further promotion. Almost all the stream sections with exposures of the Edergole Formation are within the Lough Eske and Ardnamona Wood SAC (00163); the Lough Eske and Ardnamona Wood proposed NHA (00163) contains only those outcrops in the south along the Corabber River.



View upstream toward northwest from Edergole Bridge.

