

DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Clady River
Other names used for site	Lough Eske
IGH THEME	IGH8 Lower Carboniferous
TOWNLAND(S)	Burns Mountain, Friary, Greenan
NEAREST TOWN	Donegal
SIX INCH MAP NUMBER	85, 94
ITM CO-ORDINATES	595647E, 884205N
1:50,000 O.S. SHEET NUMBER: 11	GSI BEDROCK 1:100,000 SHEET NOS. 3, 4
GIS Code DL007	

Outline Site Description

The site comprises outcrops in the bed and on the banks of the c. 2.5 km-long Clady River which drains eastwards from Banagher Lough along the heavily wooded eastern slope of Burns Mountain into Lough Eske.

Geological System/Age and Primary Rock Type

Argillaceous limestone, calcareous sandstone and conglomerate of the Lower Carboniferous Ballyshannon Limestone Formation are overlain by sandstone and conglomerate of the Lower Carboniferous Banagher Sandstone Formation.

Main Geological or Geomorphological Interest

The Clady River section exposes about 200m of the Ballyshannon Limestone Formation, which here comprises mostly calcareous sandstones, sandy limestones and silty shales, passing upwards into a 30m thick fossiliferous (corals and brachiopods) limestone bed. These in turn are overlain to the west by the sandstone and conglomerate of the Banagher Sandstone Formation.

The Lower Carboniferous sequences in south Donegal were deposited in a sedimentary basin, now centred around Donegal Bay. The earliest Carboniferous rocks are those of the Ballyshannon Limestone Formation, consisting mainly of a thick sequence of limestones and argillaceous limestones underlain by thin (5–10m) conglomerates and sandstones called the “Basal Beds” or “Basal Clastics”. The latter 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. The basal clastics are thicker relative to the limestone than is the case towards the margins of the basin, reflecting a greater influence of terrestrial sedimentation. Limestone is thickest towards the centre of the basin where marine sedimentation predominated.

The outcrops in the lower (eastern) part of the Clady River demonstrate the increasing importance of clastic rocks (“Basal Beds”) in the Ballyshannon Limestone Formation in the more marginal parts of the Lower Carboniferous Donegal basin.

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

The site is of considerable significance as it is one of several sites described in the literature that have formed the basis for the stratigraphical and sedimentological interpretation of the Lower Carboniferous succession in Donegal.

Management/promotion issues

The lowermost 700m of the Clady River is within the Lough Eske and Ardnamona Wood SAC and proposed NHA (00163). Access to the Clady River from the Lough Eske road is arduous, up steep, wet, rough grazing and through natural woodland. The site is likely to be of specialist interest and does not require further promotion.



Lough Eske (looking east).



Clady River in flood.

