

WESTMEATH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Fore Hills
Other names used for site	Fore Springs, Shores of Lough Lene
IGH THEME	IGH1 Karst, IGH7 Quaternary, IGH16 Hydrogeology
TOWNLAND(S)	Fore, Windtown, Lakhill and Moortown, Ben, Martinstown, Balnavine, Christianstown, Aghalasty and Ankersland
NEAREST TOWN/VILLAGE	Fore
SIX INCH MAP NUMBER	8
ITM CO-ORDINATES	650990E 770480N (Fore village)
1:50,000 O.S. SHEET NUMBER	41 GSI BEDROCK 1:100,000 SHEET NO. 13

Outline Site Description

A landscape of hills, valleys and lakes, with surface and underground water flow systems.

Geological System/Age and Primary Rock Type

Bedrock comprises Lower Carboniferous Derravaragh Cherts. Landscape morphology is Pleistocene in age; the hills are probably remnants of pre-glacial landscape and the crag-and-tail features were formed during the last glaciation which ended 14,000 years ago.

Main Geological or Geomorphological Interest

Worthy of the title of "fossil landscape", this site hosts several features of geomorphological and hydrogeological interest that provide clues to disclosing past environmental and climatic conditions. Steep, isolated hills with limestone crags are considered residual karst hillocks (tower karst), similar to those found in karst regions in the Mediterranean or south China. The present low-lying area was most likely once a spectacular limestone landscape, with rocky towers and pinnacles, wide chasms and caves, within a subtropical climate. Present-day swallow holes (sinks), such as those on the southeast shore of Lough Lene, conduct water *via* subterranean conduits a distance of 2km north to springs at Fore. The Fore springs rise beside the main road, opposite St. Féichín's Church. Underground flow rates have been measured at 80m per hour from Lough Lene to Fore. This subterranean hydrogeological regime is a classic feature of a karst limestone. First edition OSi 6" maps (1837-1842) note '*The Wiers – Water runs under ground*' on the shores of Lough Lene. The springs at Fore drain west to the Inny River, on to the Shannon and south to the Atlantic Ocean. Water also drains from Lough Lene via a surface channel exiting near the SE shore parking area, and onto the River Deel, and further on to the River Boyne, eventually to the Irish Sea. The wider landscape here comprises crag-and-tail hills and valleys streamlined in a NW-SE direction, with the bedrock 'crag' at the hill head of the feature and sediment tail. The features are classed as subglacial bedforms; the bedrock having been shaped and moulded beneath the ice sheet, with the elongate hill orientation recording the direction of ice flow.

Site Importance – County Geological Site; recommended for Geological NHA

Fore derives from the Irish word *Fobhar*, meaning '*town of the spring or well*'. The hydrology here is of particular interest, in that water from Lough Lene flows to the Atlantic Ocean and to the Irish Sea. The residual limestone hills are clues to the scale of the pre-glacial karst landscape in the Irish midlands. The morphology of these crag-and-tail limestone hills contributes to the understanding of ice flow movement during the last glaciation and to the reconstruction of Ireland's glaciological history. This County Geological Site encompasses several features of geomorphological and hydrogeological interest. Their occurrence within one site makes this a suitable site for recognition as a geological NHA.

Management/promotion issues

Fore is a well-established visitor destination. Many of the historical and pilgrimage features of interest are sign-posted. Interpretation panels promoting the areas past and present geomorphology could be added at the Fore parking area and included in information guides.



Fore springs and mill pond viewed looking southwest to where waters emerge. St. Feichin's Church in background.



Fore springs, viewed looking northwest. St. Feichin's Church across the road.



Derravaragh Cherts exposed in the east face of the rocky crag overlooking Fore. The hill may be a tower karst remnant.



View eastward across Fore valley from the rocky crag overlooking St. Feichin's Church.



South shore of Lough Lene. Springs near shore in distance (right). Surface outflow in bottom left.

