

LOUTH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Linns Moraine
Other names used for site	
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Linns, Castlebellingham
NEAREST TOWN/VILLAGE	Castlebellingham
SIX INCH MAP NUMBER	15
ITM CO-ORDINATES	708330E 794120N (centre of feature)
1:50,000 O.S. SHEET NUMBER	36
GSI BEDROCK 1:100,000 SHEET NO.	13

Outline Site Description

This site comprises a distinctive moraine ridge that extends for approximately 2 kilometres and is c. 10m-15m high over most of its extent.

Geological System/Age and Primary Rock Type

The moraine ridge at Linns and Castlebellingham is comprised of Quaternary glacial sediments, deposited during deglaciation at the end of the last Ice Age. The moraine feature overlies bedrock of Silurian age.

Main Geological or Geomorphological Interest

The Linns Moraine is a marked, northwest-southeast-trending ridge up to 15m high, located just northwest of Annagassan village.

The ridge records ice-marginal dynamics after the ice withdrew a short distance from the large moraine at Dunany Point. The ridge structure is different to that at Dunany Point as it records an ice advance over fossiliferous marine muds, something demonstrated by the orientation and structure of shears within the muds.

The muds yield samples of *Elphidium clavatum*, which is a genus of foraminiferan protozoa, a sample of which, when dated, provided an AMS ¹⁴C age of 14,200 years BP. This constrains the date of the readvance, and the site provides a critical index point for dating readvances of the ice margin in Dundalk Bay. The date is contiguous with Heinrich Event 1, when icebergs broke off from glaciers and traversed the North Atlantic, causing the ocean to become inundated with freshwater and cooling global temperatures..

The muds within the ridge contains the greatest concentration of marine microfauna yet found in glaciomarine sediments anywhere in Ireland.

Site Importance – County Geological Site

The sections cut within the Linns Moraine are important in terms of the information its stratigraphy provides about regional deglaciation in the Irish Sea Basin, and the section shows excellent examples of unsorted, heterogeneous glaciomarine sediment.

Management/promotion issues

The ridge can be seen east of the R166 road northwest of Annagassan, and is also a prominent feature visible from the village itself. The moraine is on private farmland and permission must be sought to walk across the feature. A signboard in Annagassan, at the pier, could highlight the importance of the feature.



View northwards to the Linns Moraine ridge, from Annagassan Pier.



View eastwards from the R166 road just north of Annagassan, with the Linns Moraine ridge clearly seen.



