

LOUTH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Rathcor Complex
Other names used for site	Rathcor Moraine
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Rathcor, Castlecarragh, Galtrim Island, Ardtully Beg, Balymaghery, Rockmarshall, Annaloughan, Rampark, Loughanmor, Maddoxland, Mountbagnall Greenore, Jenkinstown
NEAREST TOWN/VILLAGE	8
SIX INCH MAP NUMBER	718000E 805500N (centre of feature)
ITM CO-ORDINATES	36 GSI BEDROCK 1:100,000 SHEET NO. 8/9
1:50,000 O.S. SHEET NUMBER	

Outline Site Description

The Rathcor Complex includes a large accumulation of hummocky sands and gravels along the southern edge of the Cooley Peninsula.

Geological System/Age and Primary Rock Type

The morainic complex overlies bedrock of Lower Carboniferous age, comprising sandstones, shales and limestones, but the features comprising the complex itself are Quaternary in age, having been deposited at the edge of the northward-retreating ice sheet during deglaciation at the end of the last Ice Age.

Main Geological or Geomorphological Interest

The morainic complex includes an area of hummocky topography between Rockmarshall House and Ballug Point, approximately 8 km x 1 km in extent. Most of the complex comprises west-northwest to east-southeast trending sinuous ridges, which can attain heights of 25m. Single, round-crested ridges are the general rule although pitted, hummocky and flat-to-gently undulating gravelly spreads frequently form an integral part of individual ridges.

The ridges comprise planar cross-bedded gravels interbedded with massive diamicts and fine muds. They record deposition off the glacier into a fan-delta sequence in a restricted shallow water body, which lay south of the Cooley Peninsula during deglaciation. Some interpretations suggest that the eastern end of the system was open to the Irish Sea, and that the water body thus shared the high relative sea level prevailing at the time.

A sample of *Elphidium clavatum*, which is a genus of foraminiferan protozoa, taken from the fine muds within the coastal section at Rathcor provided an AMS ^{14}C age of $14,250 \pm 130$ years, which means the sediments in the Rathcor Complex were deposited around 14,000 years ago. This is an important date in constraining the timing of deglaciation across the Irish landmass. The Rathcor Complex therefore contains extremely important evidence for unravelling the interplay of terrestrial and marine deposition in the northern Irish Sea Basin during deglaciation.

Site Importance – County Geological Site

The feature is a good example of the haphazard, hummocky topography which forms at the end of a melting ice sheet.

Management/promotion issues

This system comprises a fine landform sequence and should be listed as a County Geological Site. The sediments are especially well exposed along the beach at Rathcor and in the harbour at Giles Quay. The importance of the section at Rathcor could be highlighted in promotional material for the Dundalk Bay proposed NHA.



Well drained sand and gravel hummocks forming part of the Rathcor complex, at Ardtully Beg.



Interbedded sands and gravels, and muddy diamicts, exposed along the beach at Rathcor.



