

LOUTH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Bush Delta
Other names used for site	
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Ballaverty, Mullaghatten, Rath, Rath Lower
NEAREST TOWN/VILLAGE	Carlingford
SIX INCH MAP NUMBER	8
ITM CO-ORDINATES	718260E 807400N (centre of feature)
1:50,000 O.S. SHEET NUMBER	36 GSI BEDROCK 1:100,000 SHEET NO. 8/9

Outline Site Description

The Bush 'delta' includes a large accumulation of sands and gravels deposited between two ice lobes centred on Carlingford Lough and Dundalk Bay, and records a topographically-induced parting of the ice sheet in the lee of the mountains.

Geological System/Age and Primary Rock Type

The 'delta' is formed along the boundary between the granites and gabbros of the Carlingford Igneous Complex and the Lower Carboniferous limestone of the lowlands, on the southern side of the Carlingford peninsula. The 'delta' is Quaternary in age, having been deposited at the edge of the northward-retreating ice sheet during deglaciation after the last Ice Age.

Main Geological or Geomorphological Interest

The 'delta' is a striking feature, standing proud of the bedrock-cored Mullaghatten ridge upon which it was deposited. It is comprised of a raised, elevated area of sands and gravels which looks upon first inspection to be a delta surface, but actually has a steeply-sloping face and many incised channels thereon. The sediments are up to 50m thick, and seem to have been deposited subaerially, comprising mainly cross beds. The lack of topsets and a purely flat surface on the feature suggests the subaerial origin.

Previously, the glacial literature recorded the delta as having been built out from ice margins into what is assumed to be a freshwater lake, as no shells were recovered from the feature. However, sedimentological assessment of the feature suggests that the likelihood is that the feature is actually a one-cone sandur formed in fresh water while the 'Irish Sea' glacier was uncoupling from the Mourne Mountains, yet before incursion of the saline sea water. It should be noted that no recorded and detailed, empirical sedimentological research has ever been conducted on the feature.

The delta feature is consequently important in unravelling the sequence of terrestrial to marine deposition in the northern Irish Sea Basin during deglaciation. The sands and gravels within the feature are comprised chiefly of granite clasts.

Site Importance – County Geological Site

The feature is a high, striking example of a dry sand and gravel ridge, and stands proud of the surrounding landscape. This seems to be an excellent example of a deglacial, ice marginal, meltwater-deposited feature.

Management/promotion issues

This system comprises a superb landform sequence and should be listed as a County Geological Site. A signboard at the stone monument at Riverstown, where the feature can be well seen, might help promote the feature.



Gravel pit in the main 'delta' feature at The Bush.



See the flat-topped nature of the 'delta' feature, viewed from the south.



