WICKLOW - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Blessington Delta	
Other names used for site	Blessington Lake Delta Complex	
IGH THEME	IGH7 Quaternary	
TOWNLAND(S)	Deerpark, Dillonsdown, Newpaddocks, Blessir Oldpaddocks, Santryhill, Edmondstown, Hoyv Crosscoolharbour, Haylands	ngton, alley,
NEAREST TOWN/VILLAGE	Blessington	
SIX INCH MAP NUMBER	5	
ITM CO-ORDINATES	698000E 715700N (centre of feature)	
1:50,000 O.S. SHEET NUMBER	56 GSI BEDROCK 1:100,000 SHEET NO.	16

Outline Site Description

The Blessington Delta includes a large accumulation of sands and gravels which has been quarried extensively, just outside Blessington town.

Geological System/Age and Primary Rock Type

The 'delta' is comprised of deep glaciofluvial and glaciolacustrine sediments and bedrock is at great depths throughout the area of the feature. This bedrock is of Silurian age, and consists of greywackes and slates. 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, a large sand and gravel accumulation deposited into Glacial Lake Blessington by meltwaters flowing from the large ice dome covering the Irish Midlands at the end of the last ice age, while its margin lay along the northeast-southwest oriented ridge between Saggart and Ballymore Eustace. The delta was built out from this ridge into the lake, the surface of which was at about 275m above present sea level. The delta surface at this level can be viewed from the road from Blessington to Rathmore *via* Cross Chapel on the N81.

The delta is about 5 kilometres long and up to 1.5 kilometres wide. The sands and gravels are comprised largely of limestone from the Irish Midlands (no limestone bedrock occurs in Wicklow). The sediments are arranged in the typical delta sequence: topset gravels composed of up to 2m depth of horizontally bedded gravels on top; foreset gravels which are steeply dipping and well bedded, deposited at the front of the delta; and bottomset, finer sediments of sands and silts, usually underlying the foresets and representing sediment that was originally deposited beyond the steep delta front on the lake floor.

The sediments in the Blessington Delta are up to 90m deep, and the locality therefore represents some of the deepest glacially-derived sediments in the country. The delta feature is extremely important in unravelling the sequence of terrestrial deglaciation in the northern Irish Midlands at the end of the last ice Age.

Site Importance – County Geological Site; recommended for Geological NHA

The feature is a high, striking example of a dry sand and gravel ridge, and stands proud of the surrounding landscape. This is an excellent example of a deglacial, ice marginal, meltwater-deposited feature. The depth of sediment is extraordinary and the fact that the sediments are so well exposed and have been so well researched historically makes this one of the most important glacial sites in Ireland.

Management/promotion issues

Much of the delta has been removed by quarrying, and access to pits is by permission of the owners or operators and safety protocols must be followed.



Ripple structures and cross beds in fine sand, in one of the faces in the Blessington Pits.



Left: View over one of the large gravel pits in the Blessington Delta. Right: Calcreted gravels at the top of a face.

