

# LONGFORD - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	Lough Kinale and Derragh Lough
Other names used for site	
<b>IGH THEME</b>	IGH7 Quaternary, IGH14 Fluvial and Lacustrine Geomorphology
<b>TOWNLAND(S)</b>	Ballywillin, Springtown, Tonymore North, Tonymore South, Derragh (Longford), Finnea, Kilgolagh (Westmeath)
<b>NEAREST TOWN/VILLAGE</b>	Abbeylara (Longford), Finnea (Westmeath)
<b>SIX INCH MAP NUMBER</b>	11
<b>IRISH GRID REFERENCE</b>	638900E 781200N (centre of feature)
<b>1:50,000 O.S. SHEET NUMBER</b>	34, 41 <b>GSi BEDROCK 1:100,000 SHEET NO.</b> 12

## Outline Site Description

Lough Kinale is a lake covering 250 hectares of open water, with two main basins, almost separated by swamp formations. Derragh Lough is a smaller (35 ha) companion lough to the southeast. They are separated by a peninsular area of well drained land, known as 'Derragh Island'.

## Geological System/Age and Primary Rock Type

The lakes lie in a trough of Lower Carboniferous limestone bedrock. The lake themselves are Quaternary in age, having been scoured out of the bedrock and pre-existing sediment by ice during the last Ice Age, approximately 20,000 years ago.

## Main Geological or Geomorphological Interest

Lough Kinale and Derragh Lough were studied extensively by the Lake Settlement Project of the Discovery Programme, which is funded by the Heritage Council, in the early 2000's, as they are soft-bed lakes that were likely to provide good environmental information. Lough Kinale had previously been shown to have Mesolithic remains, and the lake has three fine crannogs within.

Detailed analyses completed on stratigraphy and geomorphology, as well as pollen, plant macrofossil, diatom, chironomid, testate amoebae and coleopteran analyses, have provided detailed information about the regional and local environmental history of the Lough Kinale-Derragh Lough area since the early Mesolithic. A rise in lake levels during the Mesolithic has been seen from the stratigraphic work, showing that the lake(s) were much more extensive than today. Water levels then fell during the Neolithic, and the retreat of the lakes allowed the development of fen and subsequently moss peat.

This multi-stranded approach therefore provides a very comprehensive picture of environmental change.

## Site Importance – County Geological Site

The multi-stranded nature of this study has shown the advantage of using a range of techniques in combination to provide a comprehensive database with few complications in terms of interpretation. On this basis, and as much of the work was stratigraphical and geomorphological, the site is recommended as a County Geological Site.

## Management/promotion issues

A signboard at the lakes, which are popular with fishermen, which highlights the environmental significance of the studies conducted into the locality, might help promote the features.



Lough Kinale, looking east from 'Derragh Island'.



The ridge that forms 'Derragh Island' between Lough Kinale and Derragh Lough.



Some of the raised peat between the two lakes.



Layers of peat interspersed with lake clays, from a peat core into the lake (2005).

