

## LIMERICK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Ballylanders - Kilfinnane Moraine</b>
Other names used for site	South Ireland End Moraine, Southern Irish End Moraine (SIEM), Ardfinnan Moraine
<b>IGH THEME</b>	<b>IGH7 Quaternary</b>
<b>TOWNLAND(S)</b>	<b>Ballygeagoge, Ballinlyna Lower, Ballyroe Lower, Kilfinnane, Bosnetstown, Moorestown, Cush, Ballinvreena, Glenlary, Ballingarry, Bohereenkyle, Ballynalacken, Ballylanders</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Kilfinnane, Ballylanders</b>
<b>SIX INCH MAP NUMBER</b>	<b>48, 49, 56</b>
<b>ITM CO-ORDINATES</b>	<b>571500E 626500N (central area, on Slieveveagh)</b>
<b>1:50,000 O.S. SHEET NUMBER 73</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO. 18, 22</b>
<b>GIS CODE LK002</b>	

### **Outline Site Description**

The Ballylanders – Kilfinnane Moraine comprises a number of ridges of glacial sediments encircling the Ballyroe and Slieveveagh ridges, at the northeastern edge of the Ballyhoura Mountains, between and around Kilfinnane and Ballylanders.

### **Geological System/Age and Primary Rock Type**

The ‘Southern Irish End Moraine’ (SIEM) was for many years accepted as the limit of the Irish Ice Sheet during the Last Glacial Maximum (LGM), 25,000 to 19,000 years ago. The features at and around Kilfinnane and Ballylanders formed around this time, though during a stillstand during retreat, rather than at the maximum extent of Irish ice cover.

### **Main Geological or Geomorphological Interest**

For much of the 20<sup>th</sup> century, the SIEM was broadly accepted as representing the southernmost limit of ice during the last glaciation. Much of the consensus derived from early work carried out by Carville Lewis in the late nineteenth century, and subsequently by Charlesworth, who coined the term ‘South Ireland End Moraine’ in 1928. Much of the analysis was morphological, with sedimentary data rarely considered adequately. Thus, a ‘morpho-stratigraphic’ interpretation of the ‘moraine’ at Kilfinnane and Ballylanders supported the idea of the SIEM, which was interpreted as delineating the maximum extent of the ice sheet in Ireland at the LGM, and for many years remained an accepted geomorphological feature in the Irish Quaternary landscape.

However, in recent years the significance of the SIEM as the ultimate ‘ice sheet limit’ has been revised and scaled back. Advances in dating methods and the analysis of offshore deposits and seabed topography now attest to a brief and rapid advance of the Irish Ice Sheet to a maximum limit in the Celtic Sea during the LGM. This advance was followed by a retreat and stabilisation of the ice sheet at the SIEM. Thus, the limit demarcates a stillstand during retreat, and nothing more. The Kilfinnane and Ballylanders landforms are thus an important part of the story of how ideas and interpretations evolve when new techniques, data and methods of analysis become available as science progresses.

### **Site Importance – County Geological Site**

Sites associated with the SIEM have played a key role in developing an understanding of past glaciation events in Ireland, and as such make this site an important County Geological Site.

### **Management/promotion issues**

The features are on private land and are not publicly accessible, but are observable from roadsides.



Part of the series of moraine ridges, at Cush, on the slopes of Slieveveagh.



One of the steep-sided moraine features at the edge of Kilfinnane Village.

