

## LIMERICK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Galbally</b>
Other names used for site	Galbally channel, Galbally meltwater channel, Galbally spillway
<b>IGH THEME</b>	<b>IGH7 Quaternary</b>
<b>TOWNLAND(S)</b>	<b>Castlecreagh, Annagh, Galbally, Killinane</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Galbally</b>
<b>SIX INCH MAP NUMBER</b>	<b>49</b>
<b>ITM CO-ORDINATES</b>	<b>579539E 682418N (centre of channel)</b>
<b>1:50,000 O.S. SHEET NUMBER 73</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO. 18</b>
<b>GIS CODE LK014</b>	

### **Outline Site Description**

The site at Galbally comprises a deep channel that was formed by meltwater erosion on the western end of the Slievenamuck Ridge. The channel is oriented generally northwest–southeast, and extends for a distance of approx. 1.2km.

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

The bedrock in the locality is mainly Devonian sandstone, and the channel feature is formed in an area of bedrock outcrop and subcrop, so bedrock outcrops are common along the channel sides and give the feature its 'scalped' appearance. The feature was etched out by meltwater during deglaciation at the end of the last Ice Age, about 12,000 years ago.

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

The channel at Galbally is up to 60m deep and has a U-shaped profile, typical of meltwater channels. The base of the channel hosts a small stream, and the sides of the channel are mostly very steep and are partially covered with coniferous forestry.

The channel at Galbally is considered to have formed completely in the late-glacial period. Previously, a glacial lake was inferred to have formed in the Glen of Aherlow as ice melted across the southern part of Counties Tipperary and Limerick. This lake was interpreted to have been impounded to both the east and west by glacier ice, as well as to the north by the Slievenamuck ridge and to the south by the Galtee Mountains. The meltwater channel at Galbally was historically thought to have drained water out of this lake.

However, the level of the base of the channel at Galbally falls southwards, and has an irregular long profile, which means that meltwater was under huge pressure from ice above, thus proving that the channel was initially subglacial in origin. The channel therefore probably formed initially as a subglacial channel draining an ice sheet to the north of the Glen of Aherlow, but later carried surface glacial outwash into Glacial Lake Aherlow from an ice margin just north of it. A small delta at the southeastern end of the channel records a lake level of 122m of Glacial Lake Aherlow during deglaciation.

### **Site Importance – County Geological Site, may be recommended for Geological NHA**

This is a site with good teaching potential on glacial meltwater erosion, as the feature is accessible, quite spectacular, and easily viewed from roads. The site is at least of County Geological Site importance but may be considered to be of national importance.

### **Management/promotion issues**

The fact that the R662 road passes through the site means it is easily accessible, although the flanks are presumably either privately owned or owned by Coillte. Unfortunately, there is no parking nearby and it is difficult to stop safely on the road. However, a good impression of the feature can still be had by driving through it on the road.



The meltwater channel at Galbally, viewed from the southeast.



Delta surface at 122m AOD at the southeastern end of the channel.

