

## TIPPERARY - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Clodiagh River Meanders</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH14 Fluvial and Lacustrine Geomorphology</b>
<b>TOWNLAND(S)</b>	<b>Garranakilka, Glastrigan, Knocknagarve, Greenan, Cronavone, Cappanavilla, Ballynahow</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Borrisoleigh</b>
<b>SIX INCH MAP NUMBER</b>	<b>33, 34</b>
<b>ITM CO-ORDINATES</b>	<b>596130E 664770N (central portion of meanders)</b>
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>59</b>
<b>GS1 BEDROCK 1:100,000 SHEET NO.</b>	<b>18</b>

### **Outline Site Description**

The site comprises a number of tight meanders along the course of the Clodiagh River, southwest of Borrisoleigh.

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

The river valley and the channel pattern within are of Holocene age, but the river may exploit a subglacially-eroded meltwater channel.

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

Meanders are bends in a sinuous river, and are formed when the moving water in a stream erodes the outer banks and widens its valley; the inner part of the river then has less energy and deposits what it is carrying. The result is a snaking planform as the stream meanders back and forth across its down-valley axis.

The Clodiagh River, a tributary of the River Suir, exhibits approximately 25 meanders along a 2.5 kilometre stretch between Garranakilka and Ballynahow Townlands; such a concentration of meanders is highly unusual in the upland rivers of Tipperary, and indeed in Ireland.

The river also exhibits a number of classic landforms associated with meandering along this stretch, including point bars, slip off slopes, river cut cliffs, incised meanders, abandoned meanders and scroll bars, as well as a wide and level floodplain. Interestingly, no ox bow lakes have yet formed; these are usually the classic feature of tightly meandering rivers.

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

This site is unusual in that Tipperary mountain rivers do not often have meandering stretches, except in their lower reaches as the gradient flattens on the lowlands. The sheer number and concentration of tight meanders of this stretch of channel are especially noteworthy.

### **Management/promotion issues**

The meanders are visible from the third class road which follows their valley along its northern flank, but a superb view is had by turning southeast off this road at Garranakilka, and then taking the minor road southeastwards up the slopes of the ridge at Knockatoora Commons. The formation of the meanders in the context of the Holocene/Quaternary history of the area could be promoted *via* an appropriately located information panel.



The Clodiagh River Valley, looking west from Garranakilka.



A portion of the meandering stretch of river, at Glastrigan.



Point bars being formed on the inside loop of the Clodiagh River at Knocknagarve.



The fast-flowing Clodiagh at Ballynahow. See the wider, steep-sided valley, which is probably a glacial meltwater channel.

