

WATERFORD - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Knockmealdown gullies
Other names used for site	Reanabarna channels, Knockmealdown channels
IGH THEME	IGH14 Fluvial and lacustrine geomorphology
TOWNLAND(S)	Reanabarna, Dyrick, Knockmealdown
NEAREST TOWN	Cappoquin
SIX INCH MAP NUMBER	Waterford 12 and 21
NATIONAL GRID REFERENCE	206267 106016 and 206790 105473
1:50,000 O.S. SHEET NUMBER	74 1/2 inch Sheet No. 22

Outline Site Description

The Knockmealdown gullies comprise two deep gully channels, which have been formed by river incision since the last Ice Age on the southern flank of the Knockmealdown Mountains.

The gullies are oriented northeast to southwest and stretch for lateral distances of 600m-1200m to the northeast off the R669 road, northwest of Cappoquin.

Geological System/Age and Primary Rock Type

The features are formed in an area of glacial till of varying depths, with portions of bedrock outcrop or subcrop along their stretches. This till forms a flat to gently undulating plateau below the backslopes of the Knockmealdown Mountain ridges.

The bedrock in the locality is Devonian Old Red Sandstone of the Knockmealdown Sandstone Formation.

Main Geological or Geomorphological Interest

The gullies are up to 45m deep and that of the Rough Glen River has a particularly V-shaped profile. The stream gully northwest of this has both V and U-shaped profiles along different stretches of its extent.

Though no dating has been completed on the features, they are considered to have formed completely in the Holocene (post-glacial) Period. Given that the Rough Glen River gully is the deepest and up to 45m deep, this implies an erosion rate of 4.5mm/yr since the last Ice Age.

Gullies of such depth, which have formed wholly in the Holocene, are unusual around Ireland.

Site Importance

Gullies of such depth and size are rare in Ireland and this is a site with good teaching potential on river erosion. It is definitely of County Geological Site importance, but may be considered to be of national importance when further work on comparative sites is completed.

Management/promotion issues

The roadside location of the features means they are easily accessible, although they are presumably either privately owned or in commonage. However, there is no parking provided and it is difficult to stop at the features. A disused roadside quarry is present at the edge of the northwestern channel, but no more than 1-2 cars may stop and park at any one time. There is no safe parking space at the Rough Glen River gully.



Steep 'V' shaped profile along bedrock stretch of the northwestern channel, with Knockmealdown in the distance.



The northwestern channel, etched in glacial till, hence relatively gentle slopes.



Steep 'V' shaped profile of the Rough Glen gully, Knocknagnau in the distance.



