

KILKENNY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Ballyfoyle Channels
Other names used for site	
IGH THEME:	IGH 7 (Quaternary), IGH14 (Fluvial and Lacustrine Geomorphology)
TOWNLAND(S)	Numerous
NEAREST TOWN	Ballyfoyle
SIX INCH MAP NUMBER	10, 11, 14, 15
NATIONAL GRID REFERENCE	252600 164300 = S 526 643
1:50,000 O.S. SHEET NUMBER	60, 61 1/2 inch Sheet No. 19

Outline Site Description

A series of deeply incised channels.

Geological System/Age and Primary Rock Type

Quaternary geomorphological features cut into Lower Carboniferous siltstone and mudstone.

Main Geological or Geomorphological Interest

This extensive site represents a series of five north-south trending subglacial channels, known as Nye channels, which deeply cut into the surrounding bedrock. Their formation is dictated by the permeability and erosional strength of the underlying bedrock. The formation of these channels is probably due to the movement of subglacial meltwater, which under high pressure formed deep conduits underneath the ice. The channels occur within Lower Carboniferous siltstone and mudstone, which is relatively impermeable to water and easily eroded. They terminate where they meet Lower Carboniferous limestone. Limestone allows water to pass through its joints and fractures so absorbing the erosive power of the water. When these geomorphological features are compared with the underlying geology it is easy to see how the rock type of an area can control the formation of the landscape around it.

Site Importance

This site represents six major Nye channels in the Ballyfoyle area. These are some of the best examples of geomorphological features of their type in the county and in many locations expose the underlying Lower Carboniferous siltstone and mudstone of the Killeshin Siltstone Formation. This site is definitely a County Geological Site but may also be considered for Natural Heritage Area status once comparisons with other sites are made within the IGH7 Quaternary Theme.

Management/promotion issues

Most of the channels at Ballyfoyle are easily accessible as they are situated along third class roads. Localised dumping was observed in a few areas but generally this site is well maintained by the local farming community. This site is on private agricultural land (mainly livestock and forestry) and therefore is not suitable for general promotion to visitors without permission from various landowners.



Left: An exposed section from one of the Nye channels at Ballyfoyle.
Right: Cross sectional view of a Nye channel at Ballyfoyle.

Ballyfoyle Channels

