

WEXFORD - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Cullenstown		
Other names used for site			
IGH THEME	IGH4 Cambrian - Silurian		
TOWNLAND(S)	Ballymadder, Cullenstown		
NEAREST TOWN/VILLAGE	Wellingtonbridge		
SIX INCH MAP NUMBER	45, 46		
ITM CO-ORDINATES	687180E 607895N		
1:50,000 O.S. SHEET NUMBER	77	GSI Bedrock 1:100,000 Sheet No.	12

Outline Site Description

A coastal section some 1200m long with sporadic rock exposures in the cliff and foreshore.

Geological System/Age and Primary Rock Type

The rocks are classed as the Cullenstown Formation, a part of the Cahore Group, and are of Cambrian age. The rocks are greywackes which have been slightly metamorphosed.

Main Geological or Geomorphological Interest

This is a representative site for a part of the Cahore Group Cambrian succession of rocks in Wexford, which are largely invisible inland, but are best seen in coastal sections. In the section between Cullenstown and Forth Mountain, these rocks are much more deformed than is usually the case, and this is because they are caught up in a shear zone. Tectonic activity has been strong in the Wexford-Cullenstown zone with greater deformation of the rocks. At Cullenstown the rocks are strongly cleaved (i.e. slaty) and have kink bands and strong folds.

The strong deformation has been used in the past to argue that the Cullenstown rocks were Precambrian in age, but now, understanding their importance in terms of terranes in southeast Ireland and how they have been assembled by major sideways (strike slip) movements in shear zones and large fault structures has provided a better understanding of the section here.

The more recent deposits above the bedrock are also of considerable interest. A thin raised beach of black cemented sands is seen in a few places. It is overlain by iron cemented (ferricrete) golden coloured sands. Above these are variable layers of unsorted deposits, which were probably deposited by or in the vicinity of ice – rocks, gravel and sands. Overlying these is a glacial till. The iron cement provides a strength that means a vertical cliff forms along much of the section, in contrast to the expectation that what look like unconsolidated sediments will slump and degrade easily.

Site Importance – County Geological Site

This site is a good representative section deserving of CGS recognition.

Management/promotion issues

The rocks are difficult to interpret and to promote in comprehensible ways for the general public, but any revision or replacement or new signboards at the beach car park could include carefully developed geological information. Some of the glacial geology features in the cliffs are potentially more interesting for a general audience, possibly in relation to climate change, sea level change and the dynamics of a coast.



The Cullenstown site viewed from Ballymadder Point, looking east.



The last phase of deformation of the rocks here is seen as kink bands.



The black raised beach sands and overlying glacial till. Sands are cemented by iron and form vertical cliffs in places.



Exposures of the Cullenstown Formation rocks are seen in patches along the section; this is one of the best developed areas.

