

GALWAY - COUNTY GEOLOGICAL SITE REPORT

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| NAME OF SITE | Ballybanagher M17 Road Cut |
| Other names used for site | |
| IGH THEME | IGH8 Lower Carboniferous |
| TOWNLAND(S) | Ballybanagher, Ballinphuill |
| NEAREST TOWN/VILLAGE | Corrofin |
| SIX INCH MAP NUMBER | 57 |
| ITM CO-ORDINATES | 543584E 744620N (centre of section) |
| 1:50,000 O.S. SHEET No. 46 | GSI BEDROCK 1:100,000 SHEET NO. 11 |

Outline Site Description

This site comprises a 400 m long road cutting along the M17 motorway, with both high and low cliffs of rock overlain by a veneer of glacial till.

Geological System/Age and Primary Rock Type

The rocks are limestones of Carboniferous age (approximately 330 million years). They are part of the Knockmaa Formation.

Main Geological or Geomorphological Interest

The rocks are limestones of Viséan age, from the Lower Carboniferous Period, and part of the Knockmaa Formation. The sections have been cut through a high hill, therefore forming some very high cliffs with spectacular bedrock exposure. The limestone beds generally dip gently to the south, but the beds in much of the cutting are essentially flat lying.

A number of distinct clay wayboards can be seen between beds of limestone on both sides of the cuttings. These wayboards are probably products of contemporaneous volcanic ashfalls. There are also occasional, well-distributed blobs of the white mineral calcite. These may have been developed during the conversion of lime sediment into hard rock (a process called diagenesis). However, they may have replaced the mineral anhydrite which was formed earlier in the process.

A well developed epikarst layer can be seen along portions of the motorway cutting, particularly along the eastern section. Groundwater seeps out from beneath this layer in several places. There also seem to be some small cavities in the bedrock outcrop associated with dissolution and karstification.

The bedrock is overlain by approximately 2 m depth of till (glacial sediment), which was deposited by the last ice sheet to cover the area, and the bedrock has been planed off along a clear erosive boundary while this material was being deposited.

Site Importance – County Geological Site

The site is of County Geological Site importance as a scientifically useful, well exposed representative section of Carboniferous limestone in north central Galway, where it is otherwise poorly exposed. Further comparisons by experts in Carboniferous limestone geology may indicate the bedrock at the site is of national importance, as representative of otherwise relatively poorly exposed Carboniferous stratigraphy in the area around central Galway.

Management/promotion issues

This road cutting is completely unsuitable for any general public visits as it is on a motorway. The GSI will liaise with TII, the County Council and appropriate authorities to discuss appropriate options for dissemination of information about the geological interest of the site.



View north along the Ballybanagher road cut along the M17.



Gently dipping beds of limestone, along the western section of the outcrop. The clay wayboards are clearly seen as black lines through the section.



Groundwater seepage beneath epikarst layer, and potential karstified bedrock cavities.



Nodules of calcite seen as white blobs in the left hand side of this, the eastern section.

