

KILKENNY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Dunbell M9 Cutting
Other names used for site	
IGH THEME	IGH 8 Carboniferous
TOWNLAND(S)	Dunbell Big
NEAREST TOWN	Bennettsbridge
SIX INCH MAP NUMBER	Kilkenny 20, 23
NATIONAL GRID REFERENCE	257131 152584 to 257328 153113 (east side) 257099 152565 to 257144 152744 (west side, northern cut) 257161 152838 to 257308 153136 (west side, southern cut)
1:50,000 O.S. SHEET NUMBER	67 1/2 inch Sheet No. 19

Outline Site Description

Road cutting, 600 m long, along the M9 motorway, in two parts with relatively low cliffs of rock overlain by 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 Butlersgrove Formation.

Main Geological or Geomorphological Interest

The rocks are limestones of Viséan age, from the Lower Carboniferous Period, part of the Butlersgrove Formation. The rocks are generally dipping gently to the south in the southern section but the northern part of the section includes a very clear anticline (an upfold or arch). The northern end of the fold is broken up by two closely spaced faults. The beds in the lower section of cutting are essentially flat lying.

The distinctive characteristic, clearly visible to a passing motorist is the abundant distribution of blobs of the white mineral calcite. It is known that these are of the same composition as the limestone itself, but in a crystalline form which 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.

The bedrock is overlain by approximately 5 m depth of glacial till subsoil, which was deposited by the last ice sheet to cover the area.

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 Kilkenny, where it is otherwise very 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 very poorly exposed Carboniferous stratigraphy in the southeast of Ireland.

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 the NRA, the County Council and appropriate authorities to discuss appropriate options for dissemination of information about the geological interest of the site.



A view looking north, with highly visible white calcite blobs. Close up on the right.



A view looking north, of the cutting. Right hand view from the bridge showing an anticline on the right.



A panorama view of the anticline on the east side of the cutting.



A view of the anticline.



Concrete patch reinforcing weak ground.