

KILKENNY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	King's River M9 Cutting
Other names used for site	
IGH THEME	IGH 8 Carboniferous
TOWNLAND(S)	Rathduff (Bayley)
NEAREST TOWN	Kells
SIX INCH MAP NUMBER	Kilkenny 27
NATIONAL GRID REFERENCE	251067 143250 to 251002 143526 (east side) 251034 143254 to 250975 143525 (west side)
1:50,000 O.S. SHEET NUMBER	67 1/2 inch Sheet No. 19

Outline Site Description

This is a 280 m long road cutting along the M9 motorway, its northern end starting at the King's River bridge.

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 cutting exposes an excellently displayed section of Carboniferous limestone, probably of Upper Viséan age. It is noticeably prolific in white blobs of the mineral calcite (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).

The bedding is poorly developed on close examination, but in a wide view it shows some large but shallow folds in the rock, with a paired anticline (an upfold or arch shape) and syncline (a downfold or dish shape).

On the western face especially a sharp contrast is visible in the rock. One particular bedding plane acts as a barrier to water passing down the joints and along bedding planes in the rock. From the line and below, streaky stains are evident where water, mud and minerals are emerging and then flowing over the rock face. This barrier may be a clay horizon derived from soil formation or a volcanic ash fall.

Site Importance – County Geological Site

The site is of County Geological Site importance as a well exposed scientifically useful representative section of Carboniferous limestone in Kilkenny, where it is otherwise very poorly exposed. This site complements Archersgrove Quarry and Bennettsbridge Quarry, in representing the formation. Further comparisons by experts in Carboniferous limestone geology may indicate this site is of national importance as representative of otherwise very poorly exposed 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 of the King's River cutting with obvious folding on the right hand (east) side.



A view of the west side of the cutting clearly showing the changes in bedding half way up the face and the lime stains of water flows from the bedding plane of the junction.