KILKENNY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Bennettsbridge M9 Cutting**
Other names used for site	
IGH THEME	**IGH 8 Carboniferous**
TOWNLAND(S)	**Rathclogh (southern cutting)** **Kilree (northern cutting)**
NEAREST TOWN	**Bennettsbridge**
SIX INCH MAP NUMBER	**Kilkenny 23**
NATIONAL GRID REFERENCE	**253641 148840 to 253906 149100 (east side, southern cut)** **254119 149312 to 254403 149548 (east side, northern cut)** **253639 148875 to 253887 149118 (west side, southern cut)** **24115 249339 to 254396 249571 (west side, northern cut)**
1:50,000 O.S. SHEET NUMBER	**67 1/2 inch Sheet No. 19**

Outline Site Description
Road cutting along the M9 motorway, approximately 2 km north of junction 9, in two sections each 360 m long with relatively low cliffs of rock.

Geological System/Age and Primary Rock Type
The rocks are limestones of Carboniferous age (approximately 330 million years). They are part of the Ballyadams Formation. This site is complementary to Ballykeefe Quarry and Ballyragget Quarry, a working quarry with glacial till overlying the Ballyadams Formation.

Main Geological or Geomorphological Interest
The cutting has low cliffs of limestone between 2 and 4 m high. The beds of limestone are nearly horizontal throughout the sections. There are localised sections of weathered rock, with red clay infills and brown stained joints, over 4 m in length at one point. This solution weathering of limestone near the surface of the bedrock is called epikarst and is well developed along much of the exposure here. Fossil coral colonies of *Lithostrotion* around 30 cm in height are clearly evident in the section, occurring prolifically in certain beds. In parts there are 0.5 – 1 m thick massed colonies of coral.

Glacial striae, which are scratches and gouges on the surface of the rock, caused by the grinding action of rocks held within the base of an ice sheet as it moved over the locality, are seen in the central portion of the east side of the northern cut, and are oriented 336^{o} to 156^{o}. These show that the ice moving over the locality during the last ice age moved along this direction, north-northwest to south-southeast. As well as this, a 6 m - 8 m depth of glacial till is seen on top of much of the bedrock along the eastern cutting.

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. Further comparisons by experts in Carboniferous limestone geology may indicate this 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.

The cutting looking north on the east side.

Fossil coral colony on the west side.

Massed coral colonies in single beds.

Epikarst – highly weathered top section.

Striations made by boulders carried in passing ice.

Fossil coral colony on the east side.

Panorama view of the cutting looking south from the west side.