GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Toormore M6 Road Cut**
Other names used for site	
IGH THEME	**IGH8 Lower Carboniferous**
TOWNLAND(S)	**Toormore, Gortnahoon**
NEAREST TOWN/VILLAGE	**Cappataggle**
SIX INCH MAP NUMBER	**87**
ITM CO-ORDINATES	**571350E 725710N (centre of section)**
1:50,000 O.S. SHEET No. 46	**GSI BEDROCK 1:100,000 SHEET NO. 15**

Outline Site Description
This site comprises a 400 m long road cutting along the M6 motorway, 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 'Calp' limestone Lucan Formation.

Main Geological or Geomorphological Interest
The rocks are limestones of Viséan age, from the Lower Carboniferous Period, part of the Lucan Formation. The rocks generally dip relatively steeply towards the east, as seen in the structural slope of the internal beds. Structurally also, a well-developed fold can be seen along the western edge of the southern road section.

A well developed epikarst layer can be seen along portions of the motorway cutting, particularly along the northern section. Groundwater seeps out from beneath this layer and a number of tufa curtains have developed along the face. Tufa is usually formed via the precipitation of calcium carbonate, and is spongy or porous in nature. The tufa curtains are partially vegetated, with some of the vegetation calcified.

There are also occasional, well-distributed blobs and veins 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.

The bedrock is overlain by approximately 3 m depth of glacial till subsoil, 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 east Galway, 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 relatively poorly exposed Carboniferous stratigraphy in the area around east Galway.

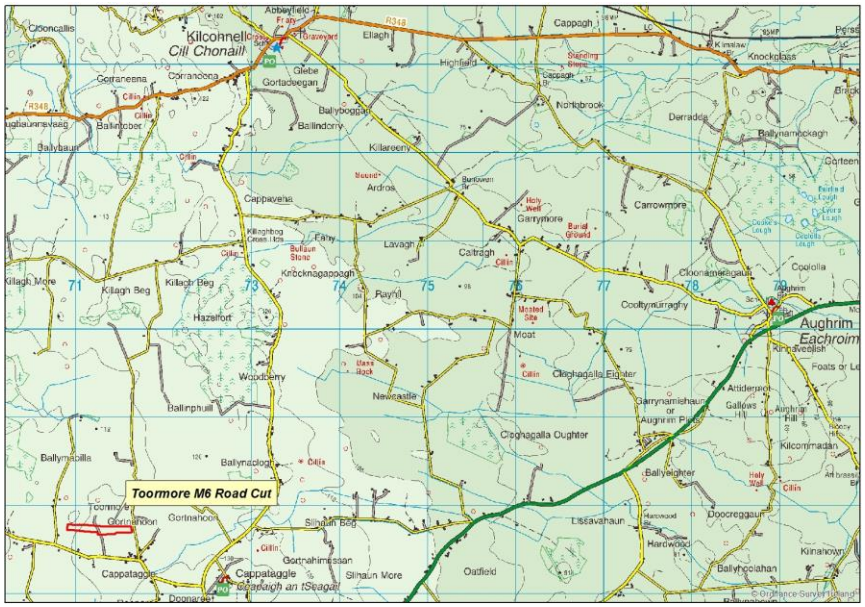
Management/promotion issues
This road cutting is completely unsuitable for any general public visits as it is on a motorway. The GSI will liaise with TII, the County Council and appropriate authorities to discuss appropriate options for dissemination of information about the geological interest of the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

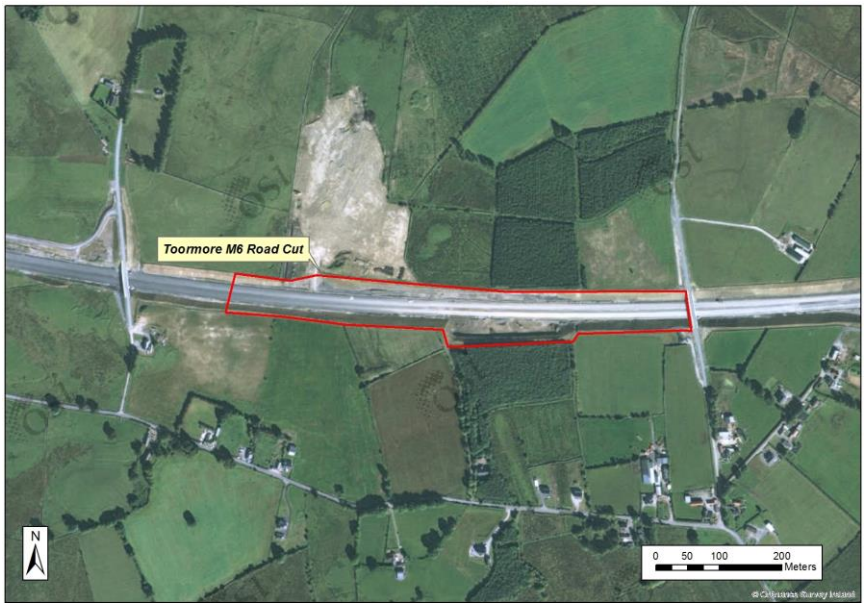
View east along the Toormore road cut along the M6.

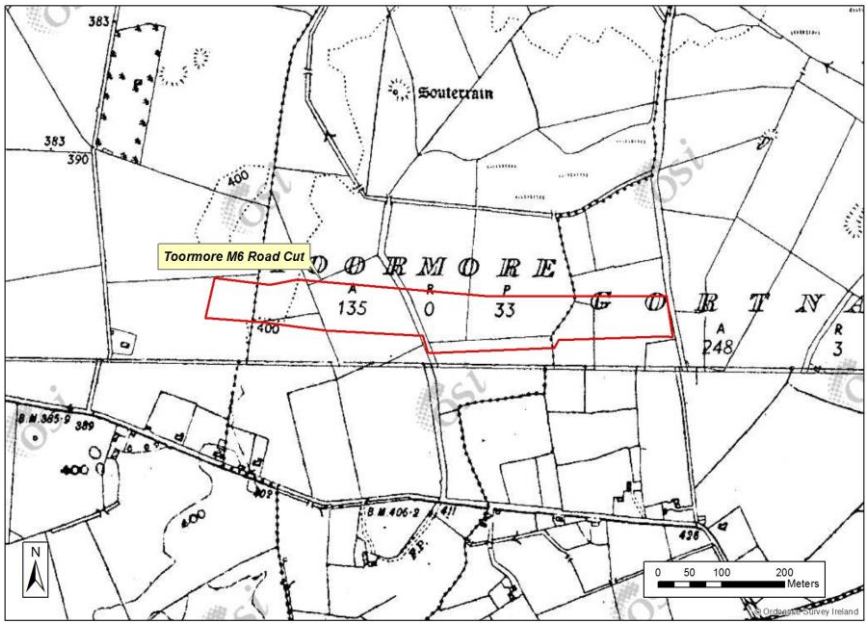
Folded beds of steeply dipping limestone, along the southern section of the outcrop. The eroded, planated bedrock surface on top of the section is clearly seen.

Tufa curtains at groundwater seepage beneath epikarst layer.

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







Meehan et al. 2019. Geological Survey Ireland.