

LOUTH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Mell Quarry
Other names used for site	Tullyallen Quarry
IGH THEME	IGH1 Karst, IGH8 Lower Carboniferous, IGH7 Quaternary
TOWNLAND(S)	Mell
NEAREST TOWN/VILLAGE	Drogheda
SIX INCH MAP NUMBER	24
ITM CO-ORDINATES	707440E 776260N (centre of quarry area)
1:50,000 O.S. SHEET NUMBER	43 GS1 BEDROCK 1:100,000 SHEET NO. 13

Outline Site Description

This complex of disused quarries, which produced limestone for cement manufacture, is adjacent to and northwest of the town of Drogheda. In much geological literature the site has been referred to as Tullyallen Quarry, as opposed to the local name of Mell Quarry.

Geological System/Age and Primary Rock Type

The rock quarried at Mell is Carboniferous limestone, from about 340 million years ago. It is classified as the Tullyallen Formation on the Geological Survey of Ireland's 1:100,000 bedrock map. Some glaciomarine sediments were also described from the site.

Main Geological or Geomorphological Interest

The limestone at Mell Quarry is the best exposure of the Tullyallen Formation in the district. It also shows a high degree of karstification throughout the different parts of the quarry. Virtually all accessible faces show cavities in a range of sizes. Most are small tubes and expanded joints, but there are larger infilled tubes and some open voids. Much of the solution that produced the cavities was probably post-glacial, occurring over the course of the last 10,000 years. However, others are definitely much older and have fillings that look like glacial till squeezed into the cavities under high pressure from overlying ice sheets. Although it is unclear from presently accessible faces, it is quite likely that more significant pipes, which could have been interglacial or preglacial in age, were exposed during quarrying. There are published records of an important glaciomarine deposit, including *foraminifera* protozoa, from between two glacial tills overlying the limestone, but this has all been removed as overburden during quarrying. A supposed Palaeolithic tool was found here, thought to have been brought in by natural agents, such as ice or water, rather than having been deposited by a user in situ.

Site Importance – County Geological Site

The karstification of the limestone is well displayed and this is an important CGS, but the absence of any significant Quaternary tills or associated glaciomarine sediments other than those in solution pipes, mean that research potential is now much diminished.

Management/promotion issues

The ownership here is mostly Drogheda Council or Louth County Council, but sections of the quarry remain in other hands, including an area of buildings and plant on the east side. There are three flooded pits, probably very deep in places, which constitute a hazard to consider, along with high unfenced cliff edges. Part of the site has been backfilled with domestic waste as the local tip, but this is now grassed over and vented for gas, presenting a largely sanitary aspect. Some parts appear to have suffered a degree of illegal dumping but overall it is relatively clear of debris. Whilst the entire site is fenced, vandalism and trespass remain as concerns. The geological heritage could be made accessible and interpreted fairly easily as part of a community park or similar, but would have to be addressed in the context of an integrated plan for the entire complex. Isolation from human interference means that many animal species have made the site their home, and biodiversity must also be considered.



Karstified face at southern end, upper bench.



Glacial till infilling a tube.



Pothole shaft in limestone.



A marked cavity in the face, NE corner.



A panorama of northern quarry lake, with many karstic features in the upper bench facing, viewed from the top of the landfill in the centre of the quarry complex.



