

KERRY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Lixnaw Quarry
Other names used for site	Monument Quarry, Monument Hill Quarry, Kilbinane Hill Quarry
IGH THEME	IGH8 Lower Carboniferous, IGH15 Economic Geology
TOWNLAND(S)	Monument
NEAREST TOWN/VILLAGE	Lixnaw
SIX INCH MAP NUMBER	16
ITM CO-ORDINATES	490600E 629825N (centre of quarry)
1:50,000 O.S. SHEET NUMBER	71
GS1 BEDROCK 1:100,000 SHEET NO.	17
GIS CODE	KY062

Outline Site Description

This site comprises a quarry cut into a low ridge.

Geological System/Age and Primary Rock Type

The bedrock comprises Lower Carboniferous (Mississippian) striped limestone bedrock, specifically of late Asbian to early Brigantian age, within the Lower Carboniferous (i.e. 330 – 334 million years old).

Main Geological or Geomorphological Interest

Lixnaw Quarry has been operational since the 1950s and was initially the source of stone used in the Feale Drainage Scheme. The quarry is owned by Kerry County Council and produces stone for aggregates, chippings, screenings, and drainage stone. The quarry is up to 10 m deep, and the rock unit exposed is a bedded, internally-laminated limestone, which has a complex structure.

Striped Limestone is a poorly understood and rather enigmatic carbonate facies, which occurs widely in the Lower Carboniferous rocks in southwest Ireland. It comprises distinctive alternating light and dark carbonate laminae and it tends to stand in stark contrast to the enclosing sedimentary units, being typically devoid of macrofauna. Striped limestone is well exposed in Lixnaw Quarry.

Another limestone facies, which underlies a zone of striped limestone, is also well exposed in Lixnaw Quarry. This facies changes from a calcilutite to a calcarenite-dominated lithology upwards through the succession. This may indicate a progressive shallowing of water depths at the time the sediments were being deposited.

A development of oncoids (concentric layers of microbial growth around a nucleus) in a thin horizon a short distance beneath the first appearance of striped limestone can also be observed at Lixnaw Quarry. These structures are not comparable with documented deep-water oncolites and are thus interpreted as shallow-water and subtidal in origin. The oncoid band at Lixnaw contains goniatites belonging to the P_{1a} ammonoid Biozone, indicating an age of latest Asbian to earliest Brigantian. Recent work has, however, suggested that the P_{1a} biozone may be located even later in the Brigantian.

Site Importance – County Geological Site

This County Geological Site is an important representative site exhibiting deep, fresh exposures of striped limestone, which are probably the deepest inland in Kerry. The presence of oncoids and goniatites in the striped limestones make the pit even more interesting.

Management/promotion issues

The site is securely fenced off within its own compound, and the quarry is not suitable for general promotion, especially as the base of the quarry is currently active and partly flooded. Many of the rock faces are high, and in parts they may be unstable. Lixnaw Quarry is likely to be of interest primarily to geologists only.



View in from the main entrance into Lixnaw Quarry.



One of the high faces at the northwestern side of Lixnaw Quarry.



Plunging anticline in limestone in Lixnaw Quarry.



Steeply-dipping beds at the southwestern end of Lixnaw Quarry.



Detail of striped limestones in Lixnaw Quarry.

