

WESTMEATH - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Knockastia Hill and Quarry
Other names used for site	Coolatoor Quarry
IGH THEME	IGH8 Lower Carboniferous
TOWNLAND(S)	Coolatoor
NEAREST TOWN/VILLAGE	Rosemount
SIX INCH MAP NUMBER	31
ITM CO-ORDINATES	624055E 743340N (centre of quarry)
1:50,000 O.S. SHEET NUMBER	48 GSI BEDROCK 1:100,000 SHEET NO. 12

Outline Site Description

This site includes both a disused quarry on the west side of Knockastia Hill, and natural exposures on the summit of the hill.

Geological System/Age and Primary Rock Type

The quarry worked Waulsortian Carboniferous Limestone is comprised of massive carbonate mudmounds and coalesced banks. There are also exposed natural weathered outcrops of the same limestone on the summit of Knockastia Hill.

Main Geological or Geomorphological Interest

Quarries into bedrock in Westmeath are relatively few in number and examples such as this provide a good representative window into the otherwise unexposed bedrock geology. This quarry has a high face of massive (without visible beds of limestone rock) Waulsortian Limestone. This 'Waulsortian' formation is a large component of Midlands Carboniferous Limestone geology, and is easily seen in the quarry here.

In a natural weathered state, a few outcrops on the top of Knockastia Hill also reveal its character. In some overhangs there are remnants of large solution avens or scallops, indicating that in the distant past the groundwater was moving through the fractures, joints and bedding planes dissolving the rock. This was perhaps during the Palaeogene Period (up to 65 million years ago) when the landscape was very different to now.

On the southern wall of the quarry there are significant seepages of groundwater from one horizon about 3m above the quarry floor. These are depositing tufa-like orange coloured material down the rock face. Whether this is from a zone with more fractures and joints in the massive limestone, or from an impermeable horizon of clay or volcanic ash between banks of the Waulsortian carbonate muds is not clear.

Site Importance – County Geological Site

The quarry is a good representative site for displaying Waulsortian Limestone. The natural exposures on the summit of Knockastia provide a complementary display.

Management/promotion issues

It is understood that this quarry is managed by the County Council. From a safety perspective it is not suitable for general promotion but could be made accessible with some investment in paths and fencing. The hill is private farmland and should only be accessed with the landowner's permission.



General view of the main face in Knockastia Quarry looking northeast.



Natural weathered exposures of Waulsortian Limestone on Knockastia Hill summit.



View of the Kockastia Quarry southern wall with tufa-like seeps.

