

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Knockmaa Quarries
Other names used for site	Cartron Quarries, Belclare Quarries (collectively); Mortimer Quarries, McTigue Quarry (individually)
IGH THEME	IGH1 Karst, IGH8 Lower Carboniferous, IGH12 Mesozoic and Cenozoic
TOWNLAND(S)	Cartron
NEAREST TOWN/VILLAGE	Tuam
SIX INCH MAP NUMBER	42, 43
ITM CO-ORDINATES	536955E 748500N (centre of boundary between both quarries)
1:50,000 O.S. SHEET No. 46	GS1 BEDROCK 1:100,000 SHEET NO. 11

Outline Site Description

This site includes two large working quarries, side-by-side, on the southeastern slopes of Knockmaa Hill, about 7 km southwest of Tuam.

Geological System/Age and Primary Rock Type

The quarries are excavated in thick-bedded, pure Lower Carboniferous limestones of the Knockmaa Formation.

Main Geological or Geomorphological Interest

Some horizontal limestone beds, as well as blocks of massive limestones, are seen throughout the quarries set into Knockmaa Hill, which provide a deep window into the limestone bedrock which is normally only exposed at the surface in a few localities in mid- to east County Galway.

Thick and massive beds are visible across the quarries. Some of the northern faces in particular, but also faces elsewhere in the quarries, display some karstic solution, with pipes and clay filled cavities, as well as brown calcite stained walls of narrow fissures. Many of these features are similar to those seen around the (adjacent) site at Pollnahallia, and this ancient karstic landscape dates to the Pliocene Period (2.5-5.3 million years ago) within the Cenozoic. Extensive drilling and field investigations in and around this area in the 1990s revealed a network of gorges and caves in the limestone, over which are draped windblown sands, and later glacial sediments including till.

The hill was overtopped by ice sheets during the Ice Age, since there are glacial erratics of limestone on top of Knockmaa Hill at the northwest of the quarry, and deposits of glacial till in portions of the northern faces within McTigue Quarry.

Site Importance – County Geological Site

These quarries provide a good representative site displaying the Carboniferous limestone bedrock geology of mid-Galway, with additional features of pre-glacial and karstic interest.

Management/promotion issues

The quarries are run by two private businesses producing certified stone, building stone, fill, tarmac and asphalt products, as well as agricultural lime. The site is not suited to general promotion of geology.



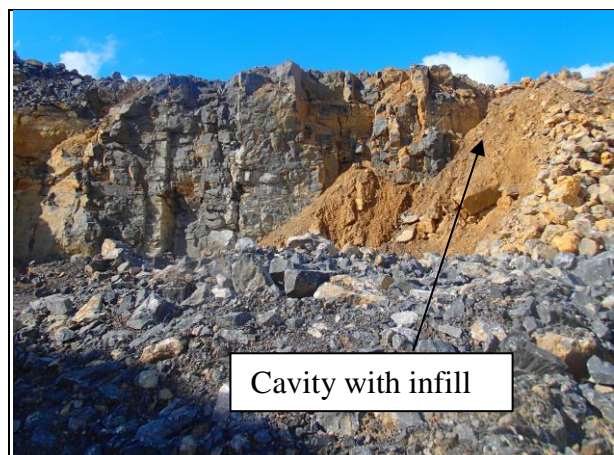
The main face in McTigue Quarry, showing bedded limestones overlying massive rock.



An overview of the workings and the surrounding faces in Mortimer Quarry.



Glacial till above bedrock in the northern face of McTigue Quarry.



Clay-filled cavity in the northern face of Mortimer Quarry.

