

## TIPPERARY - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	Fantane Quarry
Other names used for site	
<b>IGH THEME</b>	IGH4 Cambrian-Silurian
<b>TOWNLAND(S)</b>	Fantane
<b>NEAREST TOWN/VILLAGE</b>	Borrisoleigh
<b>SIX INCH MAP NUMBER</b>	34
<b>ITM CO-ORDINATES</b>	598888E 668557N (centre of quarry)
<b>1:50,000 O.S. SHEET NUMBER</b> 59	<b>GS1 BEDROCK 1:100,000 SHEET NO.</b> 18

### Outline Site Description

A large working quarry, north of Borrisoleigh.

### Geological System/Age and Primary Rock Type

Fantane quarry exploits Silurian aged greywackes and siltstones of the Hollyford Formation, which is mapped all across the Slieve Felim inlier.

### Main Geological or Geomorphological Interest

Despite the extensive area of the Slieve Felim inlier of Silurian rocks, surrounded by younger Devonian and Carboniferous rocks, there are relatively few exposures. A major quarry gives a good representation of the geology. The rocks exposed are Hollyford Formation grey siltstones and greywackes – originally deposited as turbidite deposits in a deep ocean basin, when storms or earthquakes deposited sediment from shallow waters in gravity flows into the basin. The quarry intermittently exposes pale green coloured bands which are the result of volcanic ash falls into the sea, and have the potential to provide very concise age constraints on the strata. The rocks are highly folded and have some faults showing the considerable tectonic affects of the Caledonian Orogeny which occurred at the end of the Silurian Period, and the former Iapetus Ocean closed, joining the two ‘halves’ of Ireland which existed prior to that event.

The quarry also demonstrates the very low permeability to groundwater in the Silurian rocks since little pumping is required at low parts of the quarry, other than to remove rainfall. There is virtually no groundwater present. The rocks are also valued as having a high PSV – or polished stone value. This makes them good for road surfaces in that they provide good friction and do not wear smooth easily, which is important for road safety.

### Site Importance – County Geological Site; recommended for Geological NHA

Fantane quarry is worth defining as a County Geological Site as a rare representative of the Slieve Felim Silurian rocks. It provides a companion site to Reafadda Quarry, Latteragh Quarry and especially for Carrigatogher M7 Road Cut and Birdhill M7 Road Cut.

### Management/promotion issues

The Kellys of Fantane International operated quarry is a privately-operated business and there is no access to the quarry without express permission of the operators.



A view of the Fantane Quarry face with strong folding visible.



A view of the Fantane Quarry face with volcanic ash band visible.



A view of the Fantane Quarry faces.



