

LIMERICK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Cromwell Hill
Other names used for site	
IGH THEME	IGH11 Igneous Intrusions, IGH8 Lower Carboniferous
TOWNLAND(S)	Cromwell
NEAREST TOWN/VILLAGE	Kilteely
SIX INCH MAP NUMBER	33
ITM CO-ORDINATES	573270E 638990N
1:50,000 O.S. SHEET NUMBER 65	GSI BEDROCK 1:100,000 SHEET NO. 18
GIS CODE LK010	

Outline Site Description

Large hill site with pasture on lower slopes and upper moorland area.

Geological System/Age and Primary Rock Type

Limestone of the Ballysteen Formation overlain by trachyte, apparently emplaced as a sill. Both are Mississippian (Lower Carboniferous) in age.

Main Geological or Geomorphological Interest

Cromwell Hill lies 1.5km south of the main area where the Limerick Volcanics occur within the Limerick Syncline. Its elongated summit, oriented east–west, is composed of trachyte, a volcanic rock of intermediate composition. It is a resistant rock, typically forming hills and ridges in the district, and Cromwell Hill is a particularly striking example.

Trachyte occurs widely in the Limerick Volcanics, notably within the Knockroe and Knockseefin Volcanic Formations, as volcanic stocks or plugs filling former volcanic vents. Elsewhere, it occurs as dykes or bedding-parallel sills within the limestone. At Cromwell Hill the trachyte is conformable to the bedding and has the form of a sill. The underlying limestone is part of the Ballysteen Formation, older than the Waulsortian limestone that underlies the Knockroe Volcanic Formation in the syncline. Whether the trachyte is older than the Knockroe Volcanic Formation rocks or is a contemporaneous off-shoot intruded into the older rocks is unclear but it is generally assumed that trachyte bodies such as this are part of the same episode of volcanism that produced the main Limerick Volcanics.

The contact between the trachyte and limestone is mapped close to the summit of the hill but was not observed owing to thick overgrowth. Large outcrops of limestone can be observed on the lower slopes while the trachyte forms a striking crag on the summit.

Site Importance – County Geological Site

This site is a good example of the many trachyte bodies that are mapped as satellites to the main occurrence of volcanic rocks in the Limerick Syncline. It is recommended for designation as a County Geological Site.

Management/promotion issues

The site incorporates a large area largely devoted to livestock farming. Pastureland extends over much of the site. Access is possible only via farmyards or private gardens. As it is likely to be of interest mainly to professional geologists or researchers, further promotion is not recommended.



Cromwell Hill in background, with limestone outcrop in right foreground. View from the south.



Close-up of bedded limestone of Ballysteen Limestone Formation, with summit of Cromwell Hill (trachyte) in background. View from south.



Trachyte at western end of summit, Cromwell Hill.

