LIMERICK - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE Carrigogunnell

Other names used for site Carrigogunnell (Massey's Bridge to the townland of

Newtown), Carrigogunnel, Carraig Ó gCoinneall

IGH THEME IGH8 Lower Carboniferous

TOWNLAND(S) Carrigogunnel NEAREST TOWN/VILLAGE Limerick City

SIX INCH MAP NUMBER 4, 12

ITM CO-ORDINATES 549760E 655225N

1:50,000 O.S. SHEET NUMBER 65 GSI BEDROCK 1:100,000 SHEET NO. 17

GIS CODE LK007

Outline Site Description

A rocky knoll comprising volcaniclastic rocks and site of Carrigogunnell Castle.

Geological System/Age and Primary Rock Type

Bedrock comprises Mississippian (Lower Carboniferous) volcaniclastic rocks, around 335 million years old.

Main Geological or Geomorphological Interest

The volcaniclastistic rocks at Carrigogunnell are part of an area (approx. 4 km x < 1 km) of extrusive igneous rocks that lie around 4 km west of the N18 Limerick Tunnel. The castle ruins sit on a prominent rocky knoll, where the best exposures of tuff (ash) beds can be seen resting on basalts. The volcanic succession around Carrigogunnell is approximately 120m thick.

A lower and upper volcaniclastic unit, separated by a central sequence of five lava flows has been identified in past surveys. The various rock types identified in surveys include vitric (volcanic glass) lapilli tuffs, tuff breccias and basalt. The volcaniclastic rocks are some of the most western igneous rocks of the Limerick volcanic region, the main body of which occurs 20km east-southeast around Caherconlish-Pallasgreen.

Site Importance - County Geological Site, may be recommended for Geological NHA

This is an important County Geological Site because, along with other sites in the Limerick volcanic region, its serves to provide an understanding of the region's active volcanicity during Lower Carboniferous times. Furthermore, the topography of the prominent knoll on which the castle was erected is directly influenced by the siting of these volcanic rocks siting proud of the surrounding low-lying limestone plains and inner Shannon Estuary.

Management/promotion issues

The castle and rocky knoll are accessible via a path. Parking is limited at the end of a narrow track leading to the castle. Carrigogunnel Castle is an Anglo-Norman castle and listed monument (SMR LI004-015). The castle towers and walls are date from the 13th to the 16th century, and are predominantly limestone. Carrigogunnel Castle is in the background of the photograph of U2 on the inner sleeve of the band's Unforgettable Fire album (1984).



Carrigogunnel Castle sitting on rocky outcrops comprising tuff (ash) beds (right) resting on basalts (left).



Tuff beds exposed on west side of rocky knoll.



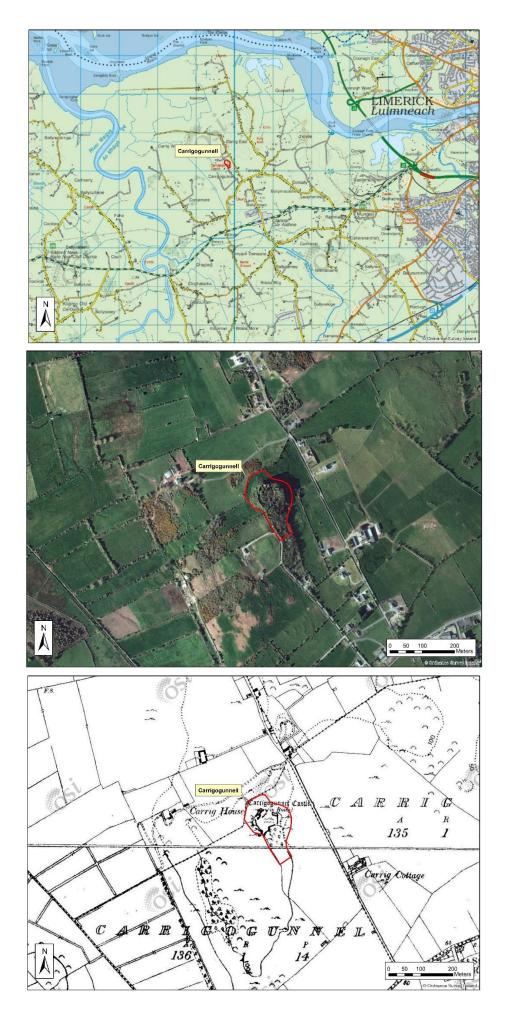
Basalts on west side of knoll.



Agglomerate on pathway leading into castle from south.



Tuff beds resting on basalts on west side of knoll, looking north towards Shannon Estuary.



Meehan et al., 2021. Geological Survey Ireland.