

## LIMERICK - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Carrigogunnell</b>
Other names used for site	Carrigogunnell (Massey's Bridge to the townland of Newtown), Carrigogunnell, <i>Carraig Ó gCoinneall</i>
<b>IGH THEME</b>	<b>IGH8 Lower Carboniferous</b>
<b>TOWNLAND(S)</b>	<b>Carrigogunnell</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Limerick City</b>
<b>SIX INCH MAP NUMBER</b>	<b>4, 12</b>
<b>ITM CO-ORDINATES</b>	<b>549760E 655225N</b>
<b>1:50,000 O.S. SHEET NUMBER 65</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 17</b>
<b>GIS CODE LK007</b>	

### Outline Site Description

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

### Geological System/Age and Primary Rock Type

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

### Main Geological or Geomorphological Interest

The volcanoclastic rocks at Carrigogunnell are part of an area (approx. 4km x < 1km) of extrusive igneous rocks that lie around 4km 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 volcanoclastic 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 volcanoclastic 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, it 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 sitting 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. Carrigogunnell Castle is an Anglo-Norman castle and listed monument (SMR LI004-015). The castle towers and walls are dated from the 13<sup>th</sup> to the 16<sup>th</sup> century, and are predominantly limestone. Carrigogunnell 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.



