

## WICKLOW - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Camaderry Appinite</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH11 Igneous Intrusions</b>
<b>TOWNLAND(S)</b>	<b>Seven Churches or Camaderry</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Laragh</b>
<b>SIX INCH MAP NUMBER</b>	<b>23</b>
<b>NATIONAL GRID REFERENCE</b>	<b>710281E 696895N (centre of outcrops)</b>
<b>1:50,000 O.S. SHEET NUMBER</b>	<b>56 GSI 1:100,000 Bedrock Sheet No. 16</b>

### **Outline Site Description**

The site consists of extensive, large-scale outcrops on the upper part of the southern face of Camaderry Mountain. The mountainside supports thick moorland vegetation.

### **Geological System/Age and Primary Rock Type**

The rock is a coarse-grained hornblende-rich appinite, part of a suite of Late Caledonian appinite intrusions associated with the 405 Ma Leinster Granite.

### **Main Geological or Geomorphological Interest**

Almost 20 Caledonian appinite bodies have been described from southeast Ireland and the Camaderry Appinite is the best known and best exposed example in the region. Appinites are ultrabasic rocks, possible fragments of the mantle that have been emplaced in the upper crust during the Caledonian orogeny. Most appinites in southeast Ireland are within the metamorphic aureole of the Leinster Granite. They post-date folding associated with the regional late-Caledonian deformation but have been affected by late-stage thermal metamorphism associated with the Leinster Granite. They are thus broadly contemporaneous with the Leinster Granite and represent a coeval basic magma. The association of appinites and granitic intrusions is common throughout the Caledonides of Ireland and Scotland.

The Camaderry appinite is a stock-like body with apparently steep contacts to north and south and moderately-dipping, conformable contact with enclosing rocks to the east. Its composition varies from northeast to southwest, ranging from coarse-grained hornblende or hornblende-peridotite, composed of large hornblende crystal with embedded olivine and pyroxene, to hornblende-diorite (hornblende, plagioclase) in the southwest. Pegmatitic variants occur and an actinolite-rich rock is developed along the northern and eastern margins. The massive outcrops on the hillside are characterized by pock-marks that have developed where weathering of pyroxene has led to pitting of the rock face. Large outcrops display fine examples of spherical weathering. On the eastern margin of the appinite body, contact metamorphism is apparent in the strongly hornfelsed country rock phyllites.

### **Site Importance – County Geological Site**

Appinites comprise a well-known sub-group of Caledonian igneous intrusions, with those around the Ardara pluton in Donegal being particularly well studied. The Camaderry site provides excellent exposure of the most significant appinite intrusion in southeast Ireland and, as such, is an important County Geological Site.

### **Management/promotion issues**

The site is within the Wicklow Mountains National Park, close to a hillwalking route on Camaderry Mountain. There are no threats to the site. Signage would be inappropriate but the site merits inclusion in heritage literature for the National Park and the Glendalough area in particular.



Camaderry Appinite: view from south of main outcrop area.



Camaderry Appinite: massive outcrop showing spherical weathering.



Camaderry Appinite: pitting on surface owing to weathering of crystals.



