

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Keem Bay to Rusheen Point</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH5 Precambrian</b>
<b>TOWNLAND(S)</b>	<b>Keem, Keel West</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Dooagh/Keel</b>
<b>SIX INCH MAP NUMBER</b>	<b>53, 54</b>
<b>ITM CO-ORDINATES</b>	<b>457480E 804360N (centre of feature)</b>
<b>1:50,000 O.S. SHEET NO. 30</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 6</b>
<b>GIS Code MO063</b>	

### **Outline Site Description**

A scenic coastal section comprising cliffs and a beach located at the western part of Achill Island.

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

Dalradian age (late Neoproterozoic age, c. 750 - 600 million years ago) Keem Conglomerate Formation bedrock comprising quartz conglomerates and psammite schists.

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

The Keem Conglomerate Formation is well exposed along a coastal cliff section for a distance of c. 3km, and is best observed on the northeast side of Keem Bay and at Rusheen Point. The Keem Conglomerate Formation comprises a 300m thick sequence of metamorphosed sedimentary rocks including psammites, pebbly psammites and cobble-size conglomerates. Heavy mineral bands (magnetite-zircon) and amethyst also occur in the formation.

The clasts within the conglomerates and pebbly psammites are dominated by vein quartz and quartzite. Other clast types include K-feldspar crystals, magnetite-rich quartzose sediments, igneous rocks (mostly quartz-feldspar porphyries), sedimentary and rare metamorphic rocks. Studies carried out on the clasts suggest the source of the clasts was possibly a granitic Palaeoproterozoic crust with ages in the range of 2 to 1.8 billion years ago. The site is of interest because recent studies have suggested that these conglomerates did not originate from recognized Palaeoproterozoic terranes in Ireland and Britain.

### **Site Importance – County Geological Site, recommended for Geological NHA**

The site is significant as it exhibits excellent exposures of Dalradian conglomerate rocks. It is recommended for designation as a geological NHA.

### **Management/promotion issues**

The excellent exposures at Keem Beach are easily accessible at low tide. An information board at the beach parking facility would prove valuable in communicating aspects of the site's geodiversity. The entire coastal section is parallel to and on the seaward, south side of the elevated access road (>150m ASL in places) to Keem Beach. As such it is a scenic location and well known to visitors and locals. Access to cliff sites should be discouraged owing to safety issues.



Quartz cobbles in Keem Conglomerate Formation at Keem Beach looking east.



Keem Conglomerates at Rusheen Point, looking west.



Keem Conglomerates and psammites at Keem Beach.



East dipping (sloping) Keem Conglomerate strata at northeast end of Keem Beach.



