

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Cathedral Rocks (Paraglacial Spread)</b>
Other names used for site	Cathedral Rocks
<b>IGH THEME</b>	<b>IGH7 Quaternary</b>
<b>TOWNLAND(S)</b>	<b>Dookinelly</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Keel/Dooagh</b>
<b>SIX INCH MAP NUMBER</b>	<b>54</b>
<b>ITM COORDINATES</b>	<b>4652780E 802410N</b>
<b>1:50,000 O.S. SHEET NO. 30</b>	<b>GS1 BEDROCK 1:100,000 SHEET NO. 6</b>
<b>GIS Code MO029</b>	

### **Outline Site Description**

Cliff exposures of interbedded gravels and sands, adjacent to cliff exposures of bedrock at the southeast end of Trawmore Beach.

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

The paraglacial boulder/cobble gravel, sand and breccia are Quaternary in age. The bedrock (visible in the rocky cliffs and sea stacks of Cathedral Rocks) is Neoproterozoic age Dalradian (Appin Group) quartzite and schist of the Dooega Head Formation.

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

This feature relates to sediments exposed in a 25m high coastal cliff section at the southeastern end of Trawmore Bay on Achill Island. (The Cathedral Rocks, which are sea stacks, lie just off the coast from the section.) The spread comprises a 25 m thick succession of interbedded sediments (boulder and cobble gravel, sand, breccia) deposited by mass flow processes. The top of the section is characterised by rounded beach gravels. The entire sequence was probably deposited in water flowing off the steep slopes of Minaun (An Mionnán, 466m) at the southeastern side of Trawmore Bay, following deglaciation. Because the sediments are so thick (25m), this paraglacial sequence is probably the deepest and most extensive paraglacial deposit in the country. Lithostratigraphy suggests that the sediments were deposited following glaciation and deglaciation.

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

This is an unusual feature, as paraglacial sequences this thick are very rare in Ireland. The excellent exposure is even rarer. This County Geological Site is of national importance and should be designated as a geological NHA. The site is located along the Keel Machair/Menaun Cliffs SAC (001513) and the Achill SAC (002268) boundaries.

### **Management/promotion issues**

Threats to the features are mainly due to natural weathering and erosion along this Atlantic coast. The site attracts visitors and locals owing to the ease of access to and scenic beauty of Trawmore Beach and its proximity to Keel. Uncontrolled access or development could threaten the integrity of the coastal cliffs. The removal of cobbles and boulders from the cliff deposits for stone 'art and writing' is a prevalent feature at the site and should be discouraged. Any future extraction of sediments should be prohibited.



Cathedral Rocks cliffs, viewed from Tramore Beach looking SE.



South end of Tramore Beach, viewed from top of cliffs.



Tramore Beach, viewed from top of cliffs, looking NW to Keel.



Glacial diamict exposed in cliffs.



Waterfall descending over cliffs. Loose stone 'graffiti' is visible on the low ground.



