

MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Dun na Mo, Oirreas
Other names used for site	Doonamoe Point
IGH THEME	IGH11 Igneous Intrusions
TOWNLAND(S)	Aughernagalliagh
NEAREST TOWN/VILLAGE	Belmullet
SIX INCH MAP NUMBER	2, 9
ITM CO-ORDINATES	464580E 837585N (centre of feature)
1:50,000 O.S. SHEET NO. 22	GS1 BEDROCK 1:100,000 SHEET NO. 6
GIS Code MO051	

Outline Site Description

A coastal cliff section along the northwest coast of the Mullet Peninsula in Erris.

Geological System/Age and Primary Rock Type

Doonamo Formation (Erris Group) bedrock, metadolerite dykes, and Palaeocene (c. 58 million years ago) age dolerite dykes. The Erris Group belongs to the Grampian Group of Dalradian rocks in Mayo.

Main Geological or Geomorphological Interest

The pelite (metamorphosed siltstone) and psammite (metamorphosed sandstone) rocks of the Doonamo Formation are geochemically similar to similar aged Grampian Group rocks found in Scotland. These psammite rocks contain mineral fragments (clasts) of older rocks that have been dated to as old as 1,740 million years ago. Sedimentary structures (cross-beds and layers) preserved within the Doonamo psammites suggest that the original sediments were deposited in a shallow marine environment c. 955 million years ago.

The metadolerite (meta-igneous) rocks at Doonamoo were intruded as a dyke into, and can be seen to cut through, the Doonamo psammite rocks. The dolerites were later deformed and metamorphosed. The metadolerite is rich in the mineral hornblende, along with chlorite and biotite minerals. Both the psammites and metadolerite were deformed during the mountain building event known as the Grampian Orogeny, which occurred during the Ordovician period. Radiometric dating of the rocks at the site indicates that this deformation occurred c. 475 million years ago.

Palaeocene (c. 58 million years ago) analcime-olivine dolerite dykes also occur at the site, where horizontal slickensides are visible on the dyke margins. These features are related to the opening of the North Atlantic Ocean, and are associated with a swarm of dykes in NW Mayo.

Site Importance – County Geological Site

This County Geological Site is located in the Erris Head SAC (001501). The site is significant as it exhibits igneous rocks of varied ages that were injected into pre-existing meta-sedimentary rocks. The Palaeocene dykes are related to the opening of the North Atlantic Ocean.

Management/promotion issues

This site is located in a very scenic location, looking west towards the lighthouse on Eagle Island. This is an exposed Atlantic coastline, and may not be suitable for public promotion, as access to the features is along sections of cliff coastline. However, the significance of the site should be included in any literature relating to the geological history of Mayo. The site is not deemed under any threat apart from natural coastal erosion.



Metadolerite (dark colour) rocks outcropping on the cliff section at Dun na Mo, adjacent to light-coloured psammites. Eagle Island and lighthouse visible to the west.



White quartz vein cutting through metadolerites.



Cross-bedded psammites overlying dark-coloured metadolerite, looking toward Eagle Island.



Dun na Mo headland, looking SW.

