

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	An Mhaoil Rua
Other names used for site	Mulroy Bay, <i>Cuan na Maoil Ruaidhá</i>
IGH THEME	IGH7 Quaternary, IGH13 Coastal Geomorphology
TOWNLAND(S)	<i>Numerous townlands border the bay</i>
NEAREST TOWN/VILLAGE	Milford, Carrowkeel, Carrigart
SIX INCH MAP NUMBER	7, 8, 16, 17, 26, 27
ITM CO-ORDINATES	630000E 934000N (centre of bay)
1:50,000 O.S. SHEET NUMBER 2	GSI BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND046	

Outline Site Description

Mulroy Bay is a large bay complex, with many bounding areas of tidal flats exposed at low tide, and islands.

Geological System/Age and Primary Rock Type

The bay feature has been formed in the Holocene Period, since the last glaciation. It is likely that the macro-structure of the bay dates back through the Quaternary (Ice Age) to the Tertiary Period. The majority of bedrock exposures along portions of the bay perimeter are of Precambrian age (2,500-541 Ma), while some granites are also exposed.

Main Geological or Geomorphological Interest

Mulroy Bay is the most convoluted of the marine inlets in Donegal, and is approximately 12 kilometres long in a north-south direction. The entrance to the bay is a narrow embayment leading to a winding entrance channel 10 kilometres in length. This channel varies in width and depth, with three significant narrows only 100m to 150 m across, where the current reaches maxima of 3-5 knots.

The bay opens southward into the Broad Water, an open shallow sea lough 8 kilometres from north to south and 2.5 kilometres from east to west, which is generally less than 20 m in depth and has many small rocky islands and islets within. Many of these islands just east of Carrigart, and the peninsulas jutting out into the bay in that general area also, are drumlins deposited by glacier ice during the last Ice Age. Broad Water has salt marshes fringing broad areas of intertidal mud.

At the northern extreme of Mulroy Bay, some fine beaches have formed, flanked by dune fields, with individual dunes up to 15m high.

Site Importance - County Geological Site; recommended for Geological NHA

Mulroy Bay is an impressive locality and the associated estuarine flat, beach, dune and slack features, as well as the surrounding headlands and drumlins, make the bay a textbook locality for the recognition of coastal erosion and deposition features. The varying depths within the bay, and the unusual geometry of it, are both unusual in a regional and even national context.

Management/promotion issues

The location of the bay means it is easily accessible, and the recently completed Mulroy Bay Bridge gives fantastic views over the locality. An information board at the viewing points beside the bridge might prove a worthy addition to the site, explaining the formation of the feature and its associated habitats, flora and fauna. The site is already an SAC (002159, Mulroy Bay) and much of it is also a proposed NHA for biodiversity reasons and the geodiversity of the locality should be highlighted in any promotion of this.



Island Roy within Mulroy Bay, viewed from the east of the feature.



View across the extensive intertidal flats at Carrickart.



Estuarine sediments near Milford.



Drumlins at the western side of Broad Water.

