

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Malin Head
Other names used for site	Banba's Crown, Ballyhillin Beach, Breasty Bay
IGH THEME	IGH13 Coastal Geomorphology; IGH7 Quaternary
TOWNLAND(S)	Ardmalin
NEAREST TOWN/VILLAGE	Ballygorman
SIX INCH MAP NUMBER	12
ITM CO-ORDINATES	639700E 959520N (Banba's Tower)
1:50,000 O.S. SHEET NUMBER 3	GSI BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND005	

Outline Site Description

Malin Head is the most northern part of the Inishowen Peninsula, and the island of Ireland. The area comprises present and former cliff-lines and sea-stacks, small bays, and raised beaches with thick accumulations of shingle beach deposits.

Geological System/Age and Primary Rock Type

There are excellent raised beaches and terraces along the east side of Malin Head, and the oldest and best preserved late-glacial fossil coastlines in Ireland between Ineuran Bay and Eskey Bay. These Quaternary age features have formed since the last Ice Age ended in the Holocene, or post-glacial period. Malin Head is almost entirely underlain by Dalradian age quartzite rock (with minor metadolerite), and areas of younger granites (Devonian) near Portronan, which were emplaced around 400 million years ago.

Main Geological or Geomorphological Interest

At Ballyhillin, on the east side of Malin Head a broad lowland exhibits a series of terraces that are separated by low steps (bluffs). The clachan (settlement) at Ballyhillin stands on the uppermost terrace (a massive shingle bar) over 20m above present sea-level (mOD). In front of this late-glacial shoreline, the grass-covered raised beach slopes seawards, and is stepped by younger, former shorelines at around 15mOD and 9mOD. Shingle beaches at Ballyhillin, Eskey Bay, Breasty Bay, and Ineuran Bay consist of well-rounded cobbles of mostly quartzite and gabbro (igneous) rock, as well as some flint. The Ballyhillin shingle beach is renowned for the variety of rock types and pebbles, many of which are derived from glacial deposits. The unconsolidated shingle is easily eroded.

The headland between Breasty Bay and Ineuran Bay hosts fine examples of a fossil cliff-line and raised sea-stacks, such as Cooltor and White Cow. These features mark a former coastline, although the old cliff-line is partly obscured by thick block scree. Uplift of the land relative to sea-level is still considered to be active in the north of Ireland, albeit at slow rates.

Site Importance – County Geological Site; recommended for Geological NHA

The site is located within the North Inishowen SAC (002012). The site is home to some of the best preserved late-glacial fossil coastlines in Ireland (between Ineuran Bay and Eskey Bay), as well as some excellent examples of raised beaches that provide valuable insights into past sea-levels. The area is deemed to be the only well preserved late-glacial fossil coast in Europe and so is of international importance.

Management/promotion issues

This landmark site, as Ireland's most northerly point is a popular visitor destination.

The access road (being re-tarred on the date of the audit survey in Summer 2014) and cliff top walking paths on the top are well managed by the Council for amenity and recreation. A signboard promoting the area's geological heritage is in place, and this is a welcome installation that recognizes the clearly observable geology and glacially influenced coastal landscape at Malin Head. Loose rock graffiti (mimicking the historically significant white stone 'EIRE' sign on the head) should be discouraged.



View southeast from Malin Tower to Ballyhillin raised beach and Crocknalough (254m).



View over Ballyhillin raised beach looking northwest to Malin Tower. Quartzite and meta- dolerite outcrop in foreground.



Fossil coastline (cliffs and raised sea-stacks) between Ineuran Bay and Breasty Bay looking northwest.



Geology information board at Malin Head Tower.

