MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Killary Harbour**
Other names used for site	An Caolaire Rua
IGH THEME	**IGH13 Coastal Geomorphology, IGH7 Quaternary**
TOWNLAND(S)	**Uggool, Derry, Derreennawinshin, Derreenanalbanagh, Bundorragha, Lettereenagh, Letterass, Srathaloe (Co. Mayo) Glennagevlagh, Letterbrickaun, Leenaun, Derrynacleigh, Tullyconor, Bunowen, Foher, Rosroe, Inishbarna (Co. Galway)**
NEAREST TOWN/VILLAGE	**Leenane**
SIX INCH MAP NUMBER	**115a, b, c, d, 166a**
ITM CO-ORDINATES	**487475E 762520N (wide bay near Leenane)**
1:50,000 O.S. SHEET NO. 37	**GSI BEDROCK 1:100,000 SHEET NO. 10**
GIS Code MO069	

Outline Site Description

Killary Harbour is 15km long, over 1km wide at its widest point (near Leenaun), and has an average depth of *c*. 20m. The deepest part is 45m immediately inside the fjord mouth. The fjord opens out to the Atlantic Ocean, and separates SW Mayo from NW Galway.

Geological System/Age and Primary Rock Type

Rocks of the northern side of the fjord belong to Ordovician Mweelrea Formation (red conglomerates, sandstones of fluvial and marine origin, and ignimbrites) and Ordovician Glenummera Formation (green-grey slates with burrow marks of marine origin). Rocks on the south side belong to Ordovician Rosroe Formation (mainly conglomerates and sandstones) and Silurian Salrock Formation (mainly red mudrocks). The fjord is a Quaternary glacial U-shaped valley.

Main Geological or Geomorphological Interest

Killary Harbour is the only fjord on Ireland's west coast. The harbour comprises a deep, U-shaped subglacial valley, the floor of which has been drowned by the sea. The fjord has formed along one of the major fault lines (structural fault) in this region of west Connacht. Much of the fjord is bounded by steeply sloping mountain sides, and several river valleys draining into the harbour. The mountains of Mweelrea (817m) and Ben Gorm (700m) overlook the harbour (on the Mayo side), and are separated by the N-S flowing Bundorragha River that drains Fin Lough and Doo Lough. Salt marshes may be identified along sections of the shore. Many features formed by the movement of ice during the Ice Age may be observed. These include chattermarks (horseshoe shaped features on bedrock formed by abrasive plucking of the bedrock), gouges (long grooves eroded in the bedrock), fractures (formed by the plucking or chipping of bedrock) and rat-tails (long ridges formed by erosion of bedrock), and the major U-shaped valley of the fjord itself.

Site Importance – County Geological Site

Most of the northern shore (and inland) is part of Mweelrea/Sheeffry Hills/Erriff Compex SAC/NHA (001932). The southern shore includes areas within the Twelve Bens/Garraun SAC/NHA (002031) and the Maumturks Mountains NHA/SAC (012008). This is a spectacular and beautiful example of a glacial fjord – and is the only fjord on Ireland's west coast.

Management/promotion issues

The Killary Harbour 'site' is very extensive and may be too big a scale to deal with through NHA designation. The steep sides of the harbour form the natural boundary of the site, however some of the terrestrial areas bounding the harbour could be designated NHA, as this would be important for future promotion and visitor management. .

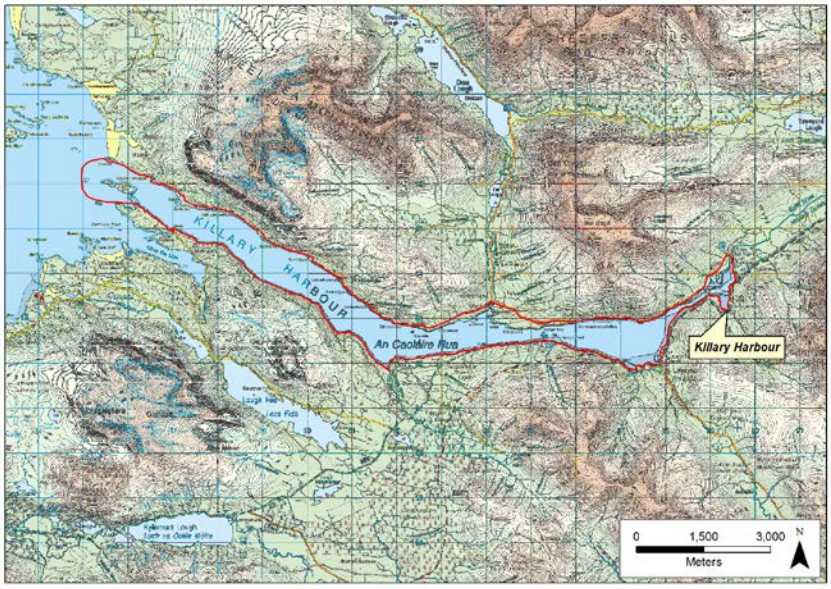
View of Killary Harbour looking east at Devils Mother with Ben Gorm on left and Maumturks on right. Leenaun visible as white feature in middle distance.

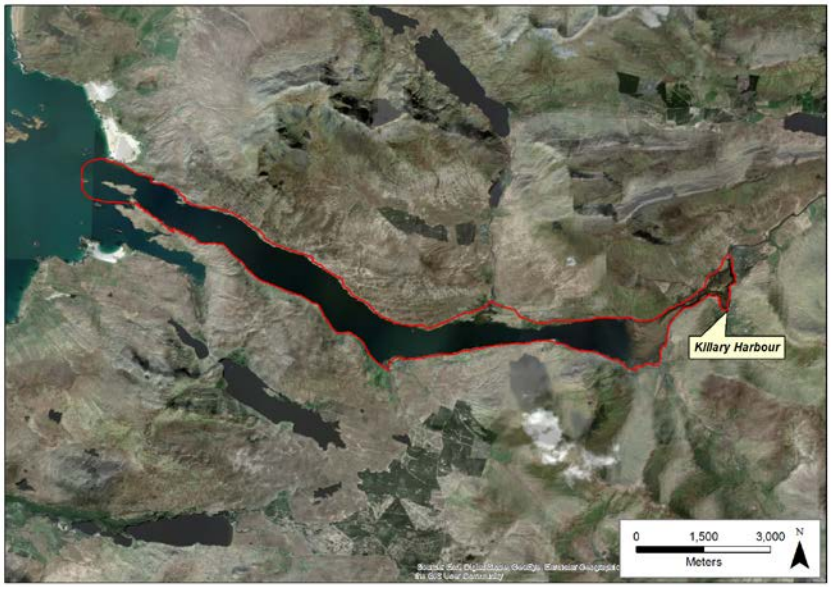
Large (>2m) boulder resting in boulder clay above shoreline on northern shore of Killary Harbour 1.5km west of Clogh Pier.

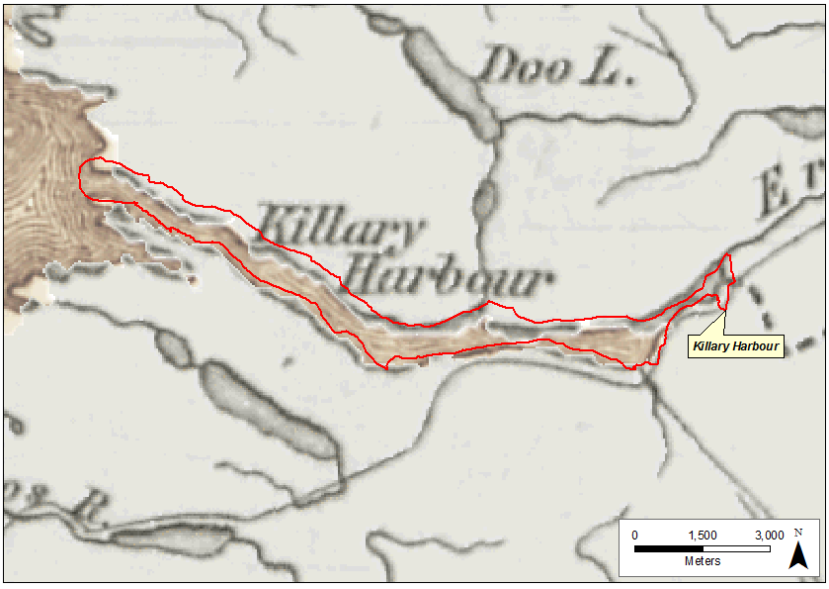
Sharp summit of eastern limb of Mweelrea (left) and Maumturks (right) viewed from southern shore of Killary Harbour. Mussel farming visible in fjord.

Landslide visible on Ben Gorm viewed across Killary Harbour from Leenaun (Date of landslide 2007).

Outcrop of Mweelrea Formation sandstones 200m west of Clogh Pier. Glacial boulder clay profile exposed above bedrock.







Hennessy et al. 2014 (revised 2019). Geological Survey Ireland.