MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Gubnastacky**
Other names used for site	Bellacragher Bay
IGH THEME	**IGH14 Fluvial and Lacustrine Geomorphology**
TOWNLAND(S)	**Claggan Mountain, Owenduff**
NEAREST TOWN/VILLAGE	**Mulranny**
SIX INCH MAP NUMBER	**56**
ITM CO-ORDINATES	**482270E 801610N**
1:50,000 O.S. SHEET NO. 30	**GSI BEDROCK 1:100,000 SHEET NO. 6**
GIS Code MO060	

Outline Site Description

On the eastern side of the mouth of Bellacragher Bay at Gubnastacky, 4.5km north of Mulranny, two river channels (~500m long) cut through bog, flowing westward into the bay. The northern channel is more significant and greater in area. Both channels are easily observed from the N59 road, coming right up to the immediate western edge of the road.

Geological System/Age and Primary Rock Type

The dark-coloured peats are post-glacial, Holocene, and contrast with light-brown coloured, boulder clays underneath. The boulder clays are understood to be deposited towards the end of the last ice age ~15,000 years ago. Large tree stumps protrude from the mud flats, and large tree roots and stumps are visible in the low (<3m) eroded peat-edged shoreline. Trees are certainly post-glacial (Holocene). The underlying bedrock (not exposed at the site) is schist and quartzite of the Dalradian (Appin Group) Cullydoo Formation.

Main Geological or Geomorphological Interest

The main river channel drains into Gubnastacky at the northern mouth of Bellacragher Bay. The river flows westwards into the main tidal channel under a small sandstone road bridge (N59 road). The catchment is an area of open and forest covered bogland and forest to the NE of the site. At full tide, the river channel is flooded up to the immediate western side of the road, 500m east of the N-S oriented mouth of Bellacragher Bay. At low tide, the river meanders as a shallow, narrow stream, floored by pebbles and sand, in contrast to the surrounding mud flats exposed. A stony shoreline is present where glacial deposits have been eroded out and reworked by the tide. A humpbacked mound of glacial sand, gravel and cobble occupies the very western promontory that separates the northern and southern channel in the site, the margin of which is a cobbly shoreline.

Site Importance – County Geological Site

Much of the County Geological Site is located within the Bellacragher Salt Marsh SAC (002005). The site is an important location for visiting natural science student groups and researchers. The site is also very important in terms of the botany present, and in particular some species of brown algae (turf fucoids) that occur especially in salt marshes in the west of Ireland.

Management/promotion issues

Owing to the proximity to the N59 road, the site is easily accessible. A visible threat to the site is illegal dumping, owing to the proximity of the channel and mudflats to the road. Erosion along the peat edges is natural to the development of the site.

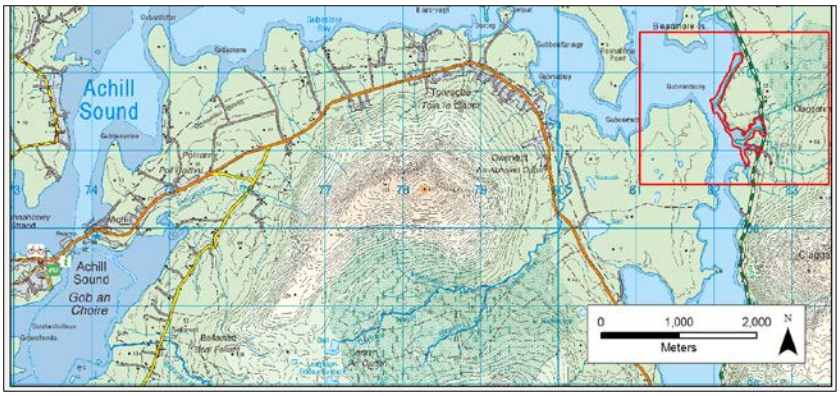
Mud flats at low tide in main river channel flowing west to Gubnastacky. Claggan Mountain on right (SE); Corraun Hill in distance (SW). Lugworm mounds are widespread on the mud flats.

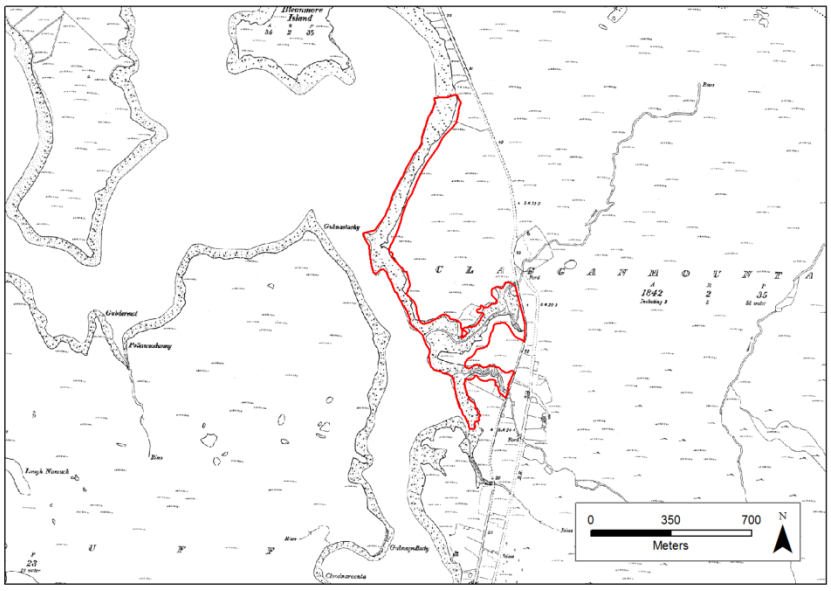
N59 road bridge (sandstone) over the river flowing into the main channel, looking NE.

One metre thick peat layer overlying glacial boulder clays (light brown) at tidal interface. Seaweed in lower right (black).

Tree stumps, evidence of a flooded forest, are visible in eroded peat-cliffs (<3m) and protruding from the littoral salt marsh. Claggan Mountain in distance (south).

Looking south towards Claggan Mountain, from head of river channel. N56 road visible. Tidal zone comes right up to road, cutting into peat layers.





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