# **MAYO - COUNTY GEOLOGICAL SITE REPORT**

NAME OF SITE Other names used for site IGH THEME TOWNLAND(S) NEAREST TOWN SIX INCH MAP NUMBER ITM CO-ORDINATES 1:50,000 O.S. SHEET NO. 32 GIS Code MO099 Uggool (Charlestown) Egool, Glen School IGH2 Precambrian to Devonian Palaeontology Uggool Charlestown 73 552160E 796210N GSI BEDROCK 1:100,000 SHEET NO. 11

# **Outline Site Description**

Small exposures of fossiliferous bedrock along a small stream on the boundary of Uggool townland, 7.5 km southeast of Charlestown.

# Geological System/Age and Primary Rock Type

Silurian (late Telychian, Upper Llandovery Series) fossiliferous marine deposits of the Cloonnamna Formation, overlie unfossiliferous, purple fluviatile sandstones (Glen School Formation). The Silurian marine fossils have been dated to *c*. 436–428 million years ago.

# Main Geological or Geomorphological Interest

Small exposures of rock along a small stream on the boundary of Uggool Townland have yielded a diverse range of fossils of rare corals, brachiopods, molluscs and arthropods. Some are *type fossils*, first described from this site. These fossils date from the very end of the Silurian Period and allow the rocks to be correlated with rock sections in south Mayo. The extremely fossil-rich Uggool Limestone Member (Cloonnamna Formation) horizon at the base of the Cloonnamna Formation contains a diverse selection of corals, and stromatoporoids (sponge-like invertebrates of Ordovician to Cretaceous age).

The Silurian rocks record a marine incursion (transgression) onto older Ordovician rocks. The lower limestones were deposited in shallow marine conditions, and the overlying fossiliferous sandstones probably record a slight deepening of the marine environment.

The Cloonnamna Formation sandstones contain a diverse fossil assemblage of brachiopods, bivalves, gastropods, trilobites, and corals, as well as trace fossils. The Uggool Limestone Member contains 25 identifiable coral species together with 3 stromatoporoid species. The rocks dip southeastwards, and rest unconformably on Ordovician (Arenig) volcanics in the west.

### Site Importance – County Geological Site; recommended for Geological NHA

This is a very important site in terms of palaeontology and understanding the Silurian history of Ireland and Britain. Several species of body fossils (corals, trilobites, molluscs, brachiopods, arthropods) were first identified in rocks here, and are thus called *type fossils*. The Uggool (Charlestown) site is called a *type locality*. These fossils are from the very end of the Silurian Period and allow the rocks to be correlated with rock sections in South Mayo. Exposures of the Lower Silurian succession in the Charlestown inlier (County Mayo) are limited to this short stream section. It is recommended that this site be designated a geological NHA.

### Management/promotion issues

The site is not at any significant or immediate risk, though it should be protected indefinitely. Bedrock exposures are limited in the streambed, and could be threatened by future drainage works, or development.

The site is not deemed of significant public interest owing to the small scale feature of interest. The site is on private land, and as this is also a *type locality*, it should not be the subject of promotion.

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



Looking north towards the site. Bedrock exposures are in the streambed, which follows the margin between the fields in the foreground and the area of gorse (yellow) and forestry.



Incomplete trilobite fossil in loose stone on stream bed.



Solitary coral in streambed rocks.



SE dipping (~60<sup>o</sup>) sandstone layers of the Cloonnamana Formation in the streambed – looking NE towards the forest margin.







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