

MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Tourmakeady (Srah)
Other names used for site	
IGH THEME	IGH2 Precambrian to Devonian Palaeontology
TOWNLAND(S)	Gortbunacullin
NEAREST TOWN	Tourmakeady
SIX INCH MAP NUMBER	109
ITM CO-ORDINATES	510270E 771740N
1:50,000 O.S. SHEET NUMBER 38	GSI BEDROCK 1:100,000 SHEET NO. 11
GIS Code MO097	

Outline Site Description

This site comprises agricultural fields with intermittent bedrock exposed along overgrown stream banks and within fields, on an elevated area overlooking Lough Mask.

Geological System/Age and Primary Rock Type

Early Ordovician (Arenig, 478 - 471 million years ago) age limestone, limestone breccias, and fine to coarse volcanic tuffs, breccias and cherts (Tourmakeady Formation).

Main Geological or Geomorphological Interest

This site has limestone clasts (Tourmakeady Limestone) within a sequence of volcanic tuffs and grits (Tourmakeady Formation). The fossiliferous Tourmakeady Limestone includes a rich marine assemblage of brachiopods, trilobites, crinoids, bryozoa, gastropods, and graptolites, with many fossils being silicified. Hundreds of specimens have been identified, many of which are newly identified genera and species. The shelly faunas of the Tourmakeady Formation (and the associated graptolite fossils) indicate late Arenig age, and are associated with an early Ordovician North American palaeoenvironmental setting. The limestones are understood to have formed in shallow waters at the top of very thick volcanic (rhyolite) domes that extended up to 500m high on the sea floor. The fauna were sea-bottom dwelling (benthonic) animals. The Tourmakeady site is a rare and important representative of fossiliferous rocks from the 'North American' side of a former ocean (Iapetus Ocean) that once separated the northwestern side of Ireland from the southeastern side.

Site Importance – County Geological Site; recommended for Geological NHA

The site is of national importance in terms of its palaeontology, and is recommended for geological NHA designation. As a rare fossiliferous 'piece of North America' it deserves recognition and protection as a geological NHA. The rich fossil assemblage includes 12 new genera and 25 new species of brachiopod, and 1 new genus and 8 new species of trilobite. The faunas are internationally known, and are a rare representative amongst Irish faunas of the early Ordovician (Arenig, Whitlandian to Fennian stage) North American province, with an interesting palaeoenvironmental setting. The site represents a snapshot of early Ordovician marine faunas in northwestern Ireland, which was part of the 'North American' continent during the early Ordovician.

Management/promotion issues

Located on private land, this site is very remote, and difficult to distinguish or delineate in an irregular landscape, although high points offer a commanding view over the scenic background of Lough Mask. Threats to the site include agricultural 'improvement' of fields or building development. The site is not suitable for public promotion.



Landscape at Bunacullin, looking SW across limestones (Tourmakeady Water Treatment plant in distance)



The main knoll of undisturbed Tourmakeady limestone exposures, and walls.



An area with limestone blocks exposed in the bank.



Small weathered limestone outcrop ~50m south of roadway at gated house perched on hill.



Rhyolites exposed in quarry pit 30m south of roadway.

