

MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Old Head
Other names used for site	
IGH THEME	IGH2 Precambrian to Devonian Palaeontology
TOWNLAND(S)	Legan, Balloor
NEAREST TOWN	Louisburgh
SIX INCH MAP NUMBER	86
ITM CO-ORDINATES	482425E 7824670N (centre of feature)
1:50,000 O.S. SHEET NO. 30	GSi BEDROCK 1:100,000 SHEET NOS. 10, 11
GIS Code MO084	

Outline Site Description

Located on the south coast of Clew Bay, on the west side of Old Head, the site comprises grazing and gorse land with drainage ditches.

Geological System/Age and Primary Rock Type

Fish fossils identified in the rocks provide a Silurian (Wenlock–Ludlow) age for the bedrock, (c. 425 million years ago). The bedrock consists of laminated red/green siltstones (Bunnamohaun Siltstone Formation) which occur near the top of the Louisburgh-Clare Island Silurian succession.

Main Geological or Geomorphological Interest

Bedrock exposed in a drainage ditch dug across fields close to Old Head have yielded a rare Silurian fossil association of fossil fish (*agnathan*) specimens (Genus: *Birkenia*), fish (*thelodont*) scales, spiral coprolites (faeces) and a primitive charophyte. The rocks are interpreted as having formed in a mudflat complex with short lived (playa) lakes. The fossils are important for understanding the entire geology of the Old Head-Louisburgh region and Clare Island to the west. The fossils allow correlation between the rocks of this area and rocks in the Midland Valley of Scotland.

The Louisburgh-Clare Island succession is one of three tectonic and stratigraphical Silurian units in South Mayo, whose age and relationships are the subject of active research and continued debate among the international geological community. The Old Head rocks are part of one Silurian bedrock succession that has yielded virtually no fossils to date, so the discovery of rare fossil fish specimens at Old Head demands considerable attention.

Site Importance – County Geological Site, recommended for Geological NHA

This site is very important to providing an understanding of the geological history of the Louisburgh area and the south Mayo region. The importance of the fossil fish in dating the Silurian rocks, the rarity of the Old Head fossils in an Irish context, and the potential for further fossil discoveries, all make this site a certain candidate for designation as a geological NHA. The site is bounded on two sides by the Old Head SAC (000532).

Management/promotion issues

No threats known at present, but development is always a potential threat in a scenic coastal area such as this. House-building, dumping, or other activities that might obscure the site should be discouraged. The site is inconspicuous and appears unremarkable and is not suitable for public promotion. The modern finds of fossil fish were from freshly excavated drainage ditches in the late 1980s and early 1990s. The current site boundary, based on existing field boundaries within which key fossil sites occur, may require revision if future earthworks expose significant new data.



View of key fossil site at Old Head, looking south.



View of landscape at Old Head, looking west towards Louisburgh.



Silurian bedrock exposed at cattle feeding station across the road (north) of Old Head fossil site.

