

CLARE - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE

Doolin to Hags Head (Cliffs of Moher)

Other names used for site

TOWNLAND(S)

Doonnagore, Luogh North, Luogh South, Lislorkan North, Slievenageeragh, Shingaunagh North etc

NEAREST TOWN

Doolin, Liscannor

SIX INCH MAP NUMBER

8, 8A, 14

NATIONAL GRID REFERENCE

106500 196000 to 101300 189200

1:50,000 O.S. SHEET NUMBER

51, 57 **1/2 inch Sheet No.** 14

Outline Site Description

Coastal cliffs section.

Geological System/Age and Primary Rock Type

Upper Carboniferous sedimentary rocks.

Main Geological or Geomorphological Interest**IGH9**

A coastal section with a remarkable development of sand volcanoes in Carboniferous beds over-lying slumped shales and sandstones. The 'Fisherstreet Slide' is a distinctive sheet, 30 metres thick, extending over some kilometres of the section. The entire sheet moved as a sedimentary slide, and now contains a wealth of soft sediment deformation features. It is part of the Gull Island Formation from Doolin southwards until the Central Clare Group comprises the bulk of the cliffs from O'Brien's Tower southward. The cliffs also illustrate cyclothems I and II (Tullig Cyclothem and Kilkee Cyclothem) of the five in the Central Clare Group. These cyclothems are repeated sequences of mudstone, siltstone and sandstone, formed by normal processes in the deltaic environment that created these rocks. They are normally separated by thin marine bands with distinctive *goniatite* fossils, allowing correlation of rocks and events across a wide area. They comprise a basin fill sequence with the greater depth and development of the basin in south west and central Clare. Accessible ledges of the sandstones also contain a wealth of trace fossils, apart from the very well known Liscannor Flags, which has the burrow *Olivellites* in abundance. The vertical sea cliffs in Upper Carboniferous shales and flagstones are of iconic status as a tourist attraction - this area is of considerable amenity value.

IGH3

The cliffs at Doolin that extend towards the southwest expose the uppermost part of the Clare Shale Formation. These rocks have yielded a rare *neopteran pterygote* insect, which possessed wings that could be folded over the insect's body (Monaghan, 1995). These wings were a major evolutionary advancement allowing the insect to access confined spaces in plants and rocks for food and shelter. This is the earliest such example of this type of insect in the British Isles. The section has also yielded goniatites, important in dating their host rocks. Further investigation of the area may reveal better examples of the fossilized insect.

Site Importance

The site is of International importance and may be proposed for NHA designation under the IGH 9 Upper Carboniferous and Permian theme and the IGH 3 Carboniferous - Pliocene Palaeontology theme.

Management/promotion issues

The Cliffs of Moher are possibly the most visited geological site in Ireland, after the Giant's Causeway in Antrim. Aside from the spectacular nature of the cliffs, the average visitor has no concept of the geological or geomorphological interest of the cliffs. The proposed visitor centre at the Cliffs must include accessible explanations of the geology. Parts of the cliffs are accessible as The Burren Way, but the northern part near Doolin is not. The access issues

should be dealt with as constructively as possible to make public access to the whole length of the cliffs available. The Council is probably best placed to provide leadership in this matter.



Left: Hag's Head
Below: Three images
of the Cliffs of Moher



Doolin to Hags Head (Cliffs of Moher)

