

CLARE - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE

Other names used for site

TOWNLAND(S)**NEAREST TOWN****SIX INCH MAP NUMBER****NATIONAL GRID REFERENCE****1:50,000 O.S. SHEET NUMBER****Doolin Green Holes**

Hell Complex/Mermaid's Hole

Doolin

Doolin

8, 14 & 8A

105600 197600 = R05600 97600

51

1/2 inch Sheet No. 14

Outline Site Description

Karst caves inundated by post-glacial sea level rise.

Geological System/Age and Primary Rock Type

Karst caves in Carboniferous Limestone.

Main Geological or Geomorphological Interest

The Doolin Green Holes, the best-documented karst caves in Ireland, consist of a series of cave passages that formed at a lower sea level than today when the water was trapped in huge ice sheets. Since their formation the caves have been inundated by post-glacial sea-level rises and have preserved much evidence of this. Other submarine karst springs have been identified along the northwest Clare coastline between Doolin and Black Head, and near Ballyvaughan but no open cave passage has been explored at these sites. Also of interest here are the [photokarren](#) and [phytokarst](#), which were examined by Simms (1990). These erosional features, which are absent in the darkest parts of the cave, are the first of their kind to be recorded outside of the tropics. They are produced by the boring and solutational activity of algae, which has proved to be the main factor in coastal limestone erosion rather than chemical solution dominant in freshwater or subaerial settings. A geophysical study conducted by Convery (1991) has demonstrated how VLF (Very Low Frequency) measurements can be used to locate salt-water passages within the cave. This study also highlighted the possibility of further passages north of Mermaid's Hole that may warrant additional investigation.

Site Importance

This site is of National importance and may be proposed for NHA designation under the IGH 1 Karst theme of the GSI's IGH Programme.

Management/promotion issues

The site is a popular place for visitors generally to stroll to the Point and would benefit from explanatory material at Doolin Pier, campsite or in guidebooks locally.

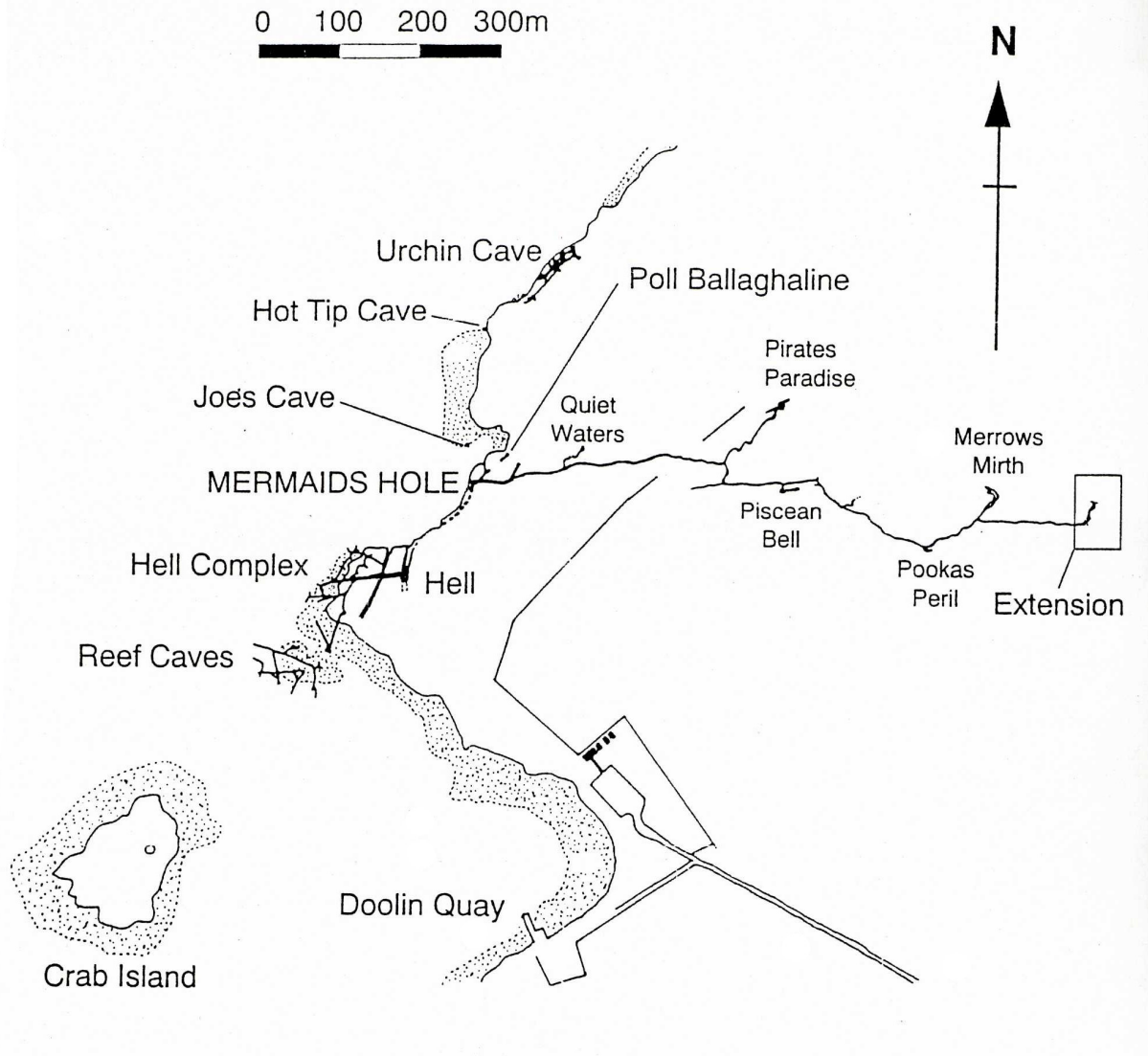


Far left: a view of the point from the pier area. Left: detail of an exposed karstic drainage channel from between beds of limestone, now exposed, showing cave formation in action.

The Green Holes of Doolin

After CDG Newsletter 101 with additions by Brian Judd, 1993.

See also UBSS Cave Notes, Co. Clare 1991 Vol 19(1)



Doolin Green Holes

