

WATERFORD - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Rathmoylan Cove
Other names used for site	
IGH THEME	IGH 10 Devonian, IGH13 Coastal Geomorphology
TOWNLAND(S)	Rathmoylan
NEAREST TOWN	Dunmore East
SIX INCH MAP NUMBER	Waterford 27
NATIONAL GRID REFERENCE	265675 98775 (cave at 265740 98660)
1:50,000 O.S. SHEET NUMBER	76 1/2 inch Sheet No. 23

Outline Site Description

This site comprises bedrock exposed on each side of a well developed, long, linear cove.

Geological System/Age and Primary Rock Type

Red sandstones and conglomerates of the Harrylock Formation, of earliest Carboniferous age.

Main Geological or Geomorphological Interest

The rocks seen here are a good representative section of the red sedimentary rocks formed on land, which are similar to classical Devonian 'Old Red Sandstone' but which are of early Carboniferous age. Their deposition preceded the flooding of the land surface, which then created the Carboniferous limestone across Ireland. These rocks display bright red siltstone and sandstone beds, interbedded with thick conglomerate units. These represent river channels, which meandered over a floodplain.

Weathering processes are well represented here with honeycomb weathering seen on the eastern side of the cove particularly. On the west side, there is deep erosion of fractures by the sea, leaving bed surfaces appearing like a limestone pavement. There are many classic erosion features with large blocks of conglomerate breaking off as the weaker sandstone beds beneath are removed by the sea.

Of particular importance at this site is a superb sea cave at the eastern edge of the cove. This sea cave has eroded in underground at least 60m in length, and is between 10 and 11m in width for most of its length, narrowing to 5m wide at the innermost part. It is around 8m high and has a thick conglomerate bed as its roof, therefore with an overall square profile. It may be Ireland's largest sea cave. A second smaller one occurs just alongside and parallel to it, to the east.

Site Importance

The site is a good representative for the red rocks produced in a continental environment, which occur in the centre of the Dunmore East and Brownstown Head area, and across the River Suir in the Hook Peninsula.

The sea cave is particularly impressive example, amongst many erosional and weathering features displayed here. The site may be considered for NHA status, but definitely merits County Geological Site status.

Management/promotion issues

Public access is easy and relatively safe by the beach. Access to the sea cave requires scrambling across rocks and may be only possible at low tide. Consideration should be given to active promotion of the geological interest through panels, leaflets, guidebooks or other means.



Honeycomb weathering at Rathmoylan Cove.



Block collapse of thick conglomerate beds at Rathmoylan Cove, with freshest falls being the most angular blocks.



The entrances to the sea caves at Rathmoylan Cove.



