

## GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Inishbofin
Other names used for site	<i>Inis Bó Finne</i> , Island of the White Cow
IGH THEME	IGH15 Economic Geology, IGH6 Mineralogy, IGH13 Coastal Geomorphology, IGH7 Quaternary
TOWNLAND(S)	Cloonamore, Knock, Middlequarter, Fawnmore, Westquarter
NEAREST TOWN/VILLAGE	Cleggan (ferry)
SIX INCH MAP NUMBER	9
ITM CO-ORDINATES	453800E 765500N (centre of island)
1:50,000 O.S. SHEET No. 37	GSI BEDROCK 1:100,000 SHEET NO. 10

### Outline Site Description

Inishbofin is an inhabited island approximately 5.5 kilometres of the northwest coast of Galway.

### Geological System/Age and Primary Rock Type

The rock comprising the island is of Precambrian (4,600-541 Ma) age, with some metadolerite intrusions of Caledonian age (490-390 Ma). The form of the island was shaped within the Quaternary (Ice Age) Period, when tills were deposited along the southern portion of the island, with much of the coastal erosion and *in situ* weathering of the bedrock having occurred since then, during post-glacial or Holocene times.

### Main Geological or Geomorphological Interest

Inishbofin is only 5 kilometres long and 2.5 kilometres wide, so the island can be circumnavigated on foot within a day. Low cliffs are present all around the island, with bay inlets between headlands, and many small coves with white, sandy beaches. Sea caves and arches are present along the northern and southern shorelines. Two blowholes on the northern coast are a local tourist attraction.

The regionally important structural feature, the Renvyle-Bofin Slide, can be traced from the west coast eastwards across the centre of the island. Prominent metadolerite dykes, present in excellent exposures on the foreshore, cut across the bedding of the Dalradian rocks south of the slide. Inland, along the southern side of the slide, Dalradian ultramafic rocks have been altered to talc, in the form of steatite. Talc was extracted on a local scale on Inishbofin for many years in the nineteenth century for the removal of grease from woollen items. Exploration in the 1970s and 1980s suggest a deposit of c. 5 million tonnes talc-magnesite containing c.50% talc.

The small lakes in the central and eastern portion of the island (church lake and Lough Gowlanagower) have had lake sediments cored and detailed palaeoecological interpretations drawn up. Their undisturbed situation means a full record of vegetation exists, all the way back to the last Ice Age.

### Site Importance - County Geological Site; may be recommended for Geological NHA

Inishbofin is a textbook locality for the recognition of coastal erosion features, and the history of talc mining is also an impressive story. As the island is relatively undisturbed, the long palaeoecological records stretching back to the Ice Age is a further topic of geological interest.

### Management/promotion issues

The fact that the island is inhabited means it is easily accessible *via* ferry, and is quite a popular day-trip destination for tourists. Information board along the cliffs at the north and southwestern sides of the island, detailing the unusual geology would prove a worthy addition to the site, explaining the formation of the features. The site is already an SAC and proposed NHA (000278, Inishbofin and Inishark) for biodiversity reasons and the exceptional geodiversity of the locality should be highlighted in any promotion of this.



The view east across outcropping talc along the southwestern edge of Inishbofin



Blowhole on northern coast



Dolerite dyke (bottom) cutting across Dalradian strata on west coast



Serpentinite pod (dark rock, centre) with light-coloured altered talcose margins, west of harbour.



One of the small coves at the western end of the island, with Inishark in the distance.

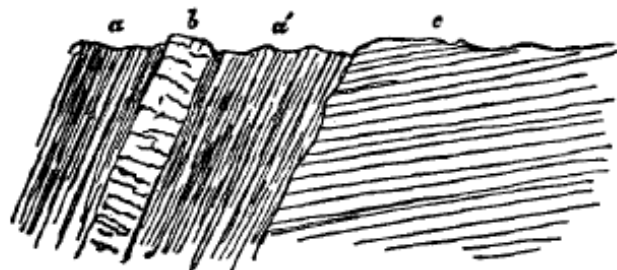


Lough Bofin, in the central portion of the island





Fig. 5.



Sketch of Junction of Steatite and Schist.

a and a' Platy Steatite. b Fine Hornblende rock. c Schist (Micaceous, Talcose, and Chloritic).

✓ Fig. 6.



Protrusions of Hornblende rock through the Steatite, Inishbofin.

✓ Fig. 7.



Bomb-shaped protrusion of Hornblende rock in Steatite, Inishbofin.

Excerpt from Memoir of the Geological Survey of Ireland, Sheet 83, page 40.