

KERRY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Fenit Island
Other names used for site	Fenit Tombolo, Fenit Island Tombolo
IGH THEME	IGH13 Coastal Geomorphology, IGH8 Lower Carboniferous
TOWNLAND(S)	Fenit Within, Fenit Without
NEAREST TOWN/VILLAGE	Fenit
SIX INCH MAP NUMBER	28
ITM CO-ORDINATES	472100E 617400N (centre of Fenit Island)
1:50,000 O.S. SHEET NUMBER	71
GS1 BEDROCK 1:100,000 SHEET NO.	20
GIS CODE	KY047

Outline Site Description

Fenit Island is a tombolo north of Fenit, with the coastal embayment of Barrow Harbour at the east, and Tralee Bay to the west.

Geological System/Age and Primary Rock Type

The tombolo, spit and beach features have formed during the Holocene Epoch (the last 11,700 years), since the last Ice Age. Barrow Harbour hosts soft sand sediment washed into the harbour during that time. It is likely that the macro-structure of the 'island', and the mainland bedrock ridges, date back from before the Ice Age to the Neogene / Palaeogene Periods (Tertiary).

The rocks exposed around the island's perimeter are fossil-rich Lower Carboniferous (Mississippian, 359-323 million years old) Waulsortian limestones.

Main Geological or Geomorphological Interest

Fenit Island itself is linked to the mainland by a sand spit, a feature known as a tombolo. There are beaches along either side of the spit. The beaches consist of calcareous sands derived from the sea floor and they are backed by a narrow strip of low dunes, as well as tidal flats with seagrasses.

The spit is the result of coastal erosion and deposition over the millennia since the end of the Ice Age. The dune field and wetland areas, including dune slacks and a salt marsh, are a result of wind erosion and add to the diversity of the site.

The Waulsortian limestone bedrock exposed around the northern edge of Fenit Island is a mudmound core. The mound is particularly interesting as it contains rare lithistid demosponge body fossils, in addition to typical Waulsortian faunal elements, including an interesting goniatite fauna, and corals, crinoids and ammonites. The conodonts present indicate a specific late Courcayan – Chadian age within the Lower Carboniferous Period (specifically 354 to 343 million years old).

Site Importance – County Geological Site

The rocks exposed around Fenit Island are scientifically important because they contain lithistid demosponges, as well as a wide variety of late Courcayan – Chadian fossils. The tombolo, beaches and flanking sand dunes and slacks, as well as the long sand spit, are excellent examples of coastal deposition and re-working, sometimes by wind.

Management/promotion issues

The site comprises a coastal beach and adjacent rocky shore, and the only likely risk to it is marine erosion, something that has already been studied in the locality. The beaches / tombolo element of the site, as well as the rock outcrops beside these, are easily accessible, but the rock outcrops on the northern end of the island are on private land. As with any rock outcrops, the surface may be uneven and quite slippery at times, so care is needed if searching for fossils in the rocks. Much of the site is within the Tralee Bay Complex SPA (site code 004188) and Akeragh, Banna and Barrow Harbour SAC / pNHA (site code 000332). The entire site merits promotion, preferably as part of a north Kerry coastal geological heritage trail.



View across Fenit Island from Barrow Townland, on the northern side of Barrow Harbour.



The front strand on the spit linking Fenit Island to the mainland, looking north.



Signboard at the southern end of the back strand.



Waulsortian bedrock outcrops at the northeastern end of Fenit Island, viewed from Carrahane Strand.



Fenit Island (with Samphire Island and Fenit Port in foreground), viewed from Derrymore Glen on the Dingle Peninsula.

