

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Toraigh
Other names used for site	Tory Island, <i>Oileán Thoraí</i> , <i>Oileán Thúr Rí</i> , <i>Thoraí</i> , Tory
IGH THEME	IGH13 Coastal Geomorphology, IGH7 Quaternary
TOWNLAND(S)	Tory Island
NEAREST TOWN/VILLAGE	An Fál Carrach (Falcarragh), Machaire Rabhartaigh (Magheraroarty, ferry), An Bun Beag (Bunbeg, ferry)
SIX INCH MAP NUMBER	6
ITM CO-ORDINATES	585575E 946375N (pier at West Town)
1:50,000 O.S. SHEET NUMBER 1	GS1 BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND018	

Outline Site Description

Tory Island/Toraigh is an inhabited island approximately 14.5 kilometres off the northwest coast of Donegal. The land rises towards the northern coast, especially towards the eastern end (83 m) where a chasm (geo) runs northward beside a narrow peninsula at The Anvil.

Geological System/Age and Primary Rock Type

The rock comprising the island is late-Silurian/early-Devonian (420-390 Ma) Thorr Granite. The granite is part of the Donegal Batholith, one of a number of plutons that comprise the various granite varieties occurring in northwest Ireland. The form of the island was shaped within the Quaternary (Ice Age) Period, with much of the coastal erosion and *in situ* weathering of the bedrock having occurred since then, during post-glacial or Holocene times. The eastern end of the island is underlain by quartzite.

Main Geological or Geomorphological Interest

Tory Island is only 4 kilometres long and 800m wide, allowing an appreciation of an incredible diversity of coastal erosion features situated within one small and accessible area. The northern coastline of the island comprises bedrock cliffs, many of which are overhanging. Headlands and bays have been etched into the cliffs, and geos (long narrow inlets of the sea), sea caves and blowholes are seen. Sea arches, sea stacks and very long, isolated spurs of rock jutting out into the ocean also occur. Many of these have local 'rock' names (Tór Mór, The Big Key, The Anvil, The Wishing Stone, Balors Fort, Balors Prison, and The Cave, among others). Rocky beaches have formed at the base of many of the deep coves along the northern side of the island, also. Just north of 'East Town' on the eastern side of the island, a number of 'tors' have formed, eroded by wind action since the ice age. From a distance, these rocky features resemble man-made structures. However, the granite outcrops are natural, formed by differential weathering of granite bedrock, and mass wasting and removal of the weathered material. Weathering along horizontal and near-vertical joints has created the characteristic granite tor shape. Among these tors are roche moutonnée features, shaped by ice during glaciations.

Site Importance - County Geological Site; recommended for Geological NHA

Tory Island is exceptional in the variety of coastal erosional features which lie side by side in such a small area. The island is a textbook locality for the recognition of coastal erosion features. The very long spurs, high arches and unusual protuberances of rock are important in their diversity in a regional and even national context.

Management/promotion issues

The inhabited island is easily accessible *via* ferry, and is a popular day-trip destination for tourists. Information board along the cliffs at the north and northeastern side of the island, detailing the unusual geology (there are already boards detailing biodiversity aspects) would prove a worthy addition to the site, explaining the formation of the features. The site is already an SPA, SAC and proposed NHA (000193, Tory Island) for biodiversity and the exceptional coastal geodiversity of the locality should be highlighted in any promotion of this.



The weathered granite tors along the northern edge of Tory Island.



Inlets, stacks, caves and cliffs along the northeastern edge of Tory Island.



Discrete sea stacks at 'Tory Peak'.



'The Anvil' and 'Tormore'.

