GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Roundstone Granite**
Other names used for site	
IGH THEME	**IGH11 Igneous intrusions**
TOWNLAND(S)	**Aillenacally (Aillenacally), Rosroe (Rosroe), Inish Ní (Inishnee)**
NEAREST TOWN/VILLAGE	**Roundstone**
SIX INCH MAP NUMBER	**50**
ITM CO-ORDINATES	**473070E 742245N (Inishnee Bridge)**
1:50,000 O.S. SHEET No. 44	**GSI BEDROCK 1:100,000 SHEET NOs. 10, 14**

Outline Site Description
Coastal and inland outcrops on low-lying and exposed island terrain.

Geological System/Age and Primary Rock Type
Late-Caledonian granodiorite emplaced between 422-410 million years ago (late Silurian-early Devonian), prior to the intrusion of the main Galway Granite Batholith bodies.

Main Geological or Geomorphological Interest
Similar to the other three satellite plutons (Omey, Letterfrack, Inish) in west Connemara, the Roundstone Granite is temporally and structurally different from the Main Galway Granite Batholith. The surface expression of the Roundstone pluton (as shown on geological maps) appears as a circular, c. 8 km diameter igneous body. To the south of Inis Ní, the Roundstone pluton is in contact with the Carna Pluton, the latter emplaced around 410 Ma. The contact is predominantly in Bertraghboy Bay, with limited surface contact observable at Leitreach Ard, west of An Glinsce.

Two mineralogically and texturally distinct granodiorite facies have been described in the Roundstone pluton. The predominant facies is an equigranular biotite-hornblende granodiorite. The other facies occurs as a network of sheets that cross-cut the main facies in the central region of the 8 km diameter pluton, around Rosroe.

The pluton is interpreted as a laccolith (a dome-shaped body of igneous rock intruded into pre-existing strata). Magma ascended from the mantle via reactivated north-northwest / south-southeast (NNW-SSE) faults and fractures into pre-existing bedrock, where the magma was laterally emplaced and domed upwards forming the laccolith.

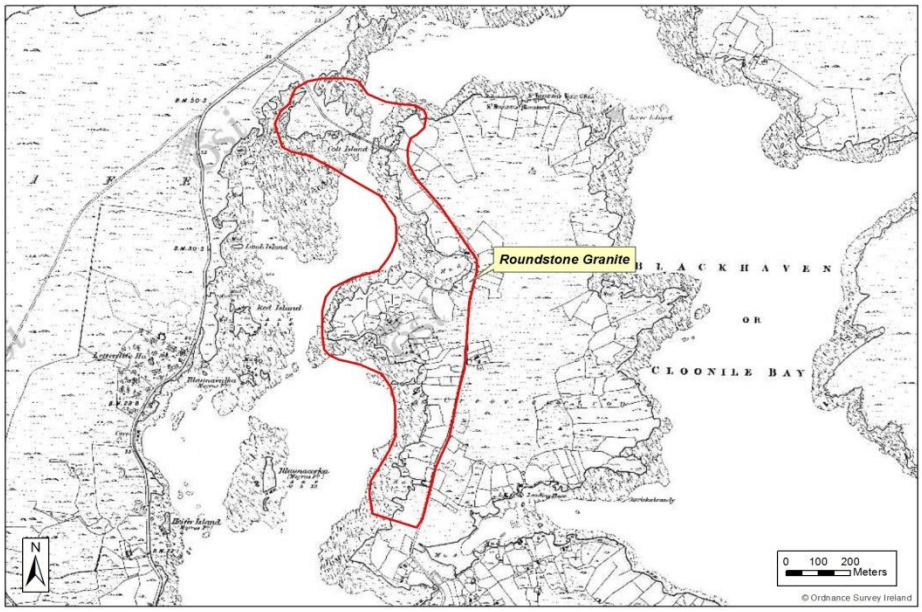
Site Importance – County Geological Site
This site contains good, accessible exposures of Roundstone Granite along the coastline, and to a lesser extent at inland locations. Knowledge of the emplacement processes and age of Roundstone Granite pluton, together with the other granite bodies in west Co. Galway, is essential to the understanding of the geological history of Ireland. Granite magmatism and mineralisation in Connemara is associated with the Appalachian-Caledonian orogeny (mountain-building events), and the magmatic event is similar to other sectors of the orogeny (Scotland, Donegal, Newfoundland, New England). The site is located within the Rosroe Bog SAC (site code 000324).

Management/promotion issues
Accessible coastal outcrops are suitable for promotion to visiting research and student groups. The geological heritage of the Roundstone Granite would be an important component of any guide or book on the local landscape and the geological landscape of Connemara.

Roundstone Granite on north side of Inishnee roadbridge. View northeast, Beanna Beola in background.

Roundstone Granite quarry by R341 at Cushatrower, west of Toombeola Bridge.

Roundstone Granite at northern ‘narrow-neck’ of Inishnee. Roundstone village and Errisbeg to southwest.



Meehan et al. 2019. Geological Survey Ireland.