

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Inveran Drumlin
Other names used for site	Knoch South, Knock Hill, <i>An Cnoc Indreabhán</i> , Knockeighter
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	An Cnoc
NEAREST TOWN/VILLAGE	An Spidéal
SIX INCH MAP NUMBER	92
ITM CO-ORDINATES	508670E 722030N
1:50,000 O.S. SHEET No. 45	GSI BEDROCK 1:100,000 SHEET NO. 14

Outline Site Description

A north-south oriented drumlin abutting the north shore of Galway Bay. The eroded cliff face on the shore exposes internal drumlin till deposits.

Geological System/Age and Primary Rock Type

The drumlin was deposited at the base of an ice sheet during the maximum period of the last ice age, around 20,000 years ago (Pleistocene). The landform is oriented roughly north-south, and was deposited by ice flowing along this direction, continuing into present day Galway Bay. The drumlin overlies granites of the late-Caledonian Galway Granite batholith.

Main Geological or Geomorphological Interest

The south-facing coastal cliff section cut into the drumlin exposes between 1 m and 10 m of 'lodgement'* till. The section is dominated by light brown/yellow coloured stiff till, with sub-horizontal interbeds of silt and fine sand lenses. Sediment sorting in beds is common throughout the section, and permeability is controlled by the till units. The clasts within the acidic till are dominated by local granite (>95%), with rare limestone erratics also present. The yellow/pink colour and texture of the till is indicative of a type expected from a granite source such as that which occurs throughout the inland terrain. Meehan (in 2007) classified the till as gravelly sandy silt, with the sand being coarse, and the permeability as being moderate. Soils on the drumlin included both podzols and acid brown earths, with a mainly unimproved grassland cover throughout. The drumlin was covered with gorse vegetation up until around 2010. Knock cemetery is 150 m inland from the coastline. The north-south axis of the drumlin roughly demarcates the contact between two granite types of the late-Caledonian Galway Granite batholith: the Knock Granite (west) and the Lough Lurgan Granite (east). These granites are exposed in places along the granite boulder strewn shoreline.

Site Importance – County Geological Site

This site is at the southwestern edge of a larger field of drumlins but owing to the excellent preservation of the features and the exposure within the till sediments, it has been designated a County Geological Site.

Management/promotion issues

This is an excellent site in terms of macro-scale Quaternary subglacial geomorphology. The site is accessible via the cemetery road (signposted *Reilig*), where parking is available at the cemetery. The road is also along the *Slí Chonamara*. The cliff is prone to slumping, and due care should be exercised in close proximity to the cliff face. An awareness of tides is also important. A signboard at the cemetery parking area might help promote both the geological heritage value of the feature, and the cultural/historical/ecclesiastical heritage of the graveyard that is suitably located on the easily dug-out drumlin sediments.

* *Lodgement' till is glacial sediment deposited by plastering of debris from the sole of a glacier by pressure melting or other mechanical processes.*



Minor road (Bóithrín na Cloiche) leading to coast. The unconsolidated tills of the drumlin provide an ideal substrate for burial at Knock Cemetery. The Burren can be seen in the background to the south.



Granite boulders west of the drumlin cliff.



Ice-smoothed granite bedrock. Burren in distance to south.



Cobbles and boulders till exposed in cliff face.



Rounded granite boulder (0.7 m diameter) in till.

