GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	**Gortgar Drumlins**
Other names used for site	*Gort Gearr, An Cnoc Garbh,* Laughil
IGH THEME	**IGH7 Quaternary**
TOWNLAND(S)	**Cnoc an Easair, Leamhchoill, Seanadh Gharráin**
NEAREST TOWN/VILLAGE	**An Spidéal**
SIX INCH MAP NUMBER	**80, 81**
ITM CO-ORDINATES	**517950E 727350N**
1:50,000 O.S. SHEET No. 45	**GSI BEDROCK 1:100,000 SHEET NO. 14**

Outline Site Description
A group of northeast – southwest (NE-SW) oriented drumlins. The drumlins are a representative sample of the drumlin field occupying high ground between Moycullen and An Spidéal.

Geological System/Age and Primary Rock Type
The drumlins are Quaternary in age and were deposited at the base of an ice sheet that moved north-to-south during the maximum period of the last Ice Age, around 20,000 years ago. The drumlins are made up of crushed till comprising local granite, limestone and metamorphic rocks. Bedrock underlying the drumlins is Megacrystic Granite (part of the late Caledonian Galway Granite batholith). The granite has a coarse-grained texture, and is characterised by large (up to 2 cm) pink, K-feldspar phenocrystics.

Main Geological or Geomorphological Interest
The site comprises a swarm of drumlins situated on an elevated (*c*. 100 m OD) region of Galway Granite on both sides of the L1320 Moycullen-An Spidéal road. The drumlins are oriented N-S to NE-SW. The glacial tills or diamict (unlithified sediments) consist of phenoclasts (large, conspicuous clasts in the finer-grained sediment) set in a grey-brown silt/clay matrix. The tills at Laughil are predominantly stiff, brown-coloured gravelly sandy clay till, with equal proportions of granite and limestone clasts (and metamorphic clasts to a lesser extent). Studies carried out in the 1980s revealed a variation of clasts (59% granite; 33% limestone/chert; 8% metamorphic) ranging in size from 5 mm-10 mm. The occurrence of limestone and metamorphic fragments indicates the drumlins formed as a result of generally north to south movement of ice during the last glaciation. Areas of limestone and metamorphic bedrock are *c.* 5 km north of the drumlins. The drumlins are easily recognisable as fertile, small hills protruding above otherwise boggy/bouldery terrain. The drumlins have long hosted pastureland, in this area of dominantly acidic, peaty landcover.

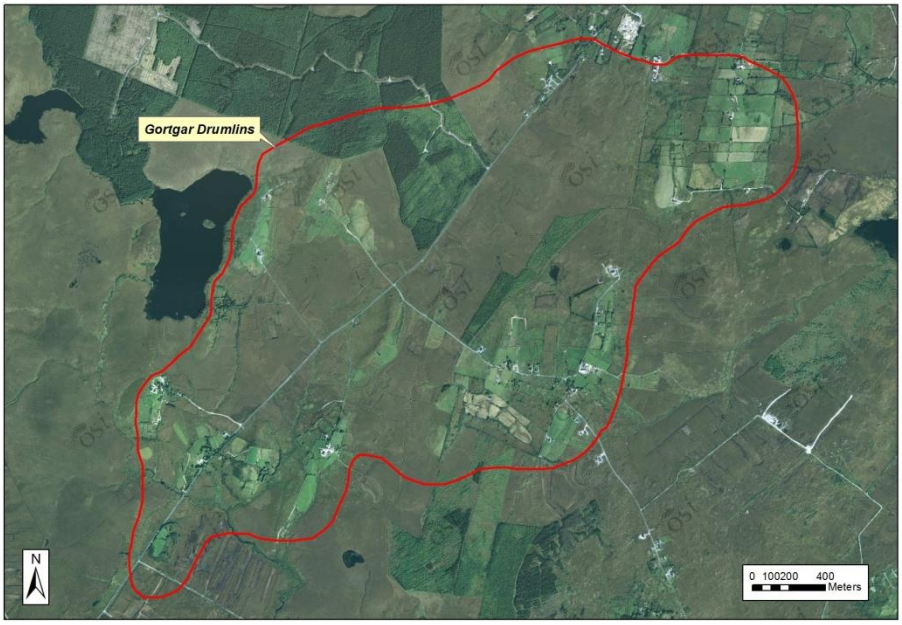
Site Importance – County Geological Site
This is the southwestern edge of a larger field of drumlins. Owing to the excellent preservation and their easily recognisable classic 'drumlin' shaped landform characteristics, these drumlins collectively represent an important County Geological Site. There are up to twenty features within the drumlin field itself; however only a representative roadside sample have been recognised here..

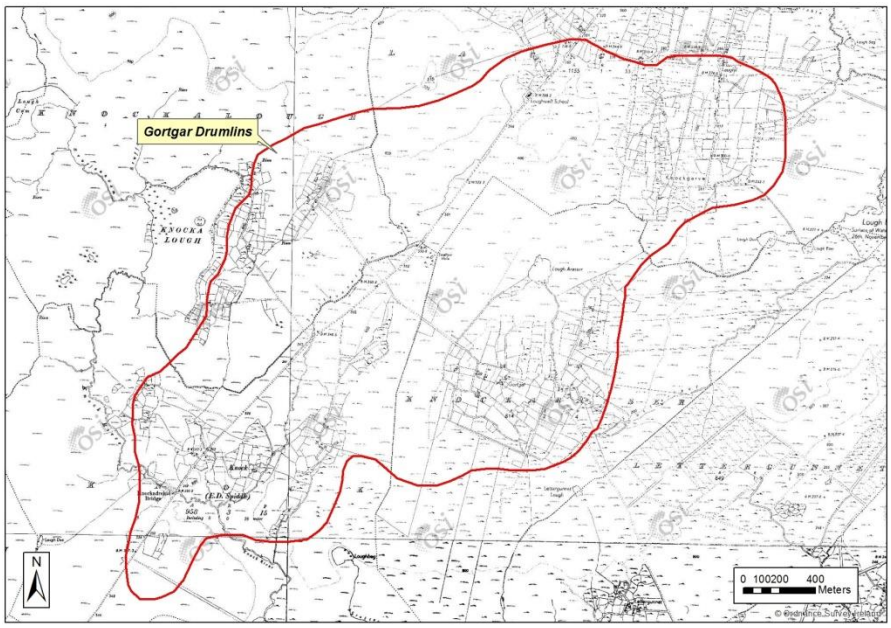
Management/promotion issues
This is an excellent site in terms of macro-scale Quaternary subglacial geomorphology, particularly considering the swarm of drumlins that occur on both sides of the L1320 road. Many of the drumlins host farm holdings with wet grassland with few drainage ditches, or low scrubby vegetation e.g. gorse. Some were quarried for fill both historically and in recent times. It is considered that public promotion (e.g. sign interpretation) of the glacial heritage of the region would be better sited at the coastal drumlin sites at Bearna/Silver Strand or at Knock/Indhreabhán. The generous depth of unlithified sediments on drumlins makes the landforms suitable as graveyards. The drumlin at Killough, 3 km south of Gortgar is the site of a cemetery, similar to the drumlin at Knock, Indhreabhán, 6 km to the west.

West side of western drumlin at Knock, viewed looking northeast from Knockadrehid Bridge on L1320 road.

West side of eastern drumlin at Knock, viewed looking southeast from L1320 road.

West side of drumlin at Gortgar, Knockarasser (Cnoc an Easair).





Meehan et al. 2019. Geological Survey Ireland.