

CAVAN - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Scotshouse-Redhills Cross-cutting Ribbed Moraines
Other names used for site	
IGH THEME	IGH7 Quaternary
TOWNLAND(S)	Too many to list ... this portion of the field covers over 75 individual townlands, across an area of 70 km²
NEAREST TOWN/VILLAGE	Redhills, Scotshouse (just inside Monaghan)
SIX INCH MAP NUMBER	Cavan 11, 12, 15, 16, 17, 18
ITM CO-ORDINATES	644600E 818000N (centre of features)
1:50,000 O.S. SHEET NUMBER	28a GSI BEDROCK 1:100,000 SHEET NO. 8/9

Outline Site Description

This site is part of the largest field of ribbed moraines found anywhere in the world. The entire field includes over 3,000 individual glacial features but this subset covers an area of 10 by 7 kilometres containing approximately 50 individual features. It includes the only mapped area of cross-cutting ribbed moraines yet found in the world.

Geological System/Age and Primary Rock Type

The ribbed moraines were formed on bedrock of either Lower Carboniferous shales and limestones or Ordovician metasediments and volcanic rocks. The moraines themselves are Quaternary in age, having been deposited at the base of the ice sheet that initially moved in a southwesterly direction during the initial phase of the last glaciation, and then in a southeasterly direction during the glacial maximum.

Main Geological or Geomorphological Interest

These ribbed moraines each contain many superimposed drumlins on their crests, and the area has traditionally been known as the northern portion of the 'Drumlin Belt'. Owing to their size, the ribbed moraines can only be seen using digital elevation modelling (DEM) and satellite imagery.

Nowhere else in the world have ribbed moraines been noted where they record two separate ice flows. Here, the major orientation of the moraines is northwest to southeast, but there are also forms adjoined to these which are oriented northeast to southwest. The features therefore record flow from two different directions. In plan view they appear as irregular, wavy, snake-like forms.

The features are generally 1-2km long and 500m or so wide, with individual superimposed drumlins being c. 400m long and 100m-200m wide. The ribbed moraines are typically 20m high but can reach a maximum height of 30m.

Site Importance – County Geological Site; recommended for Geological NHA

These are the only mapped cross-cutting ribbed moraine features anywhere in the world and therefore form one of the most important geological terrains in Ireland. The area of cross cutting features is recommended for Geological NHA status.

Management/promotion issues

This is an excellent site in terms of macro-scale Quaternary subglacial geomorphology. The features are too large to undertake any conservation efforts on their part, but the landscape itself is noteworthy and should be promoted as unique amongst landscape elements within the Cavan County Development Plan, and in Landscape Characterisation.



A view across some of the cross cutting ribbed moraines at Coolnacarte, west of Scotshouse.



Cross cutting ribbed moraines at Corraskea, north of Scotshouse, looking southeast.



