MAYO - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE Other names used for site IGH THEME TOWNLAND(S) NEAREST TOWN/VILLAGE SIX INCH MAP NUMBER ITM CO-ORDINATES 1:50,000 O.S. SHEET NO. 23 GIS Code MO017

Briska (North Mayo)

IGH5 Precambrian Briska, Shragrady Bangor 26, 27 471700 838535 GSI BEDROCK 1:100,000 SHEET NO. 6

Outline Site Description

Hillside exposures in northwest Mayo.

Geological System/Age and Primary Rock Type

Mid-Dalradian (*c.* 650–600 million years ago) age tillites, quartzites and schists of the Briska Boulder Bed Formation. The formation is correlated with the Portaskaig Boulder Bed in Islay, Scotland.

Main Geological or Geomorphological Interest

The Briska Boulder Bed Formation outcrops along discontinuous sections to the south (~15km) and northwest (~10km) of Bangor. The unit contains granite pebbles and boulders (up to 40cm), in an unstratified, foliated matrix interbedded with quartzites. This unit of tillites is the principal marker horizon within the NW Mayo Dalradian inlier. The unit is equated with the Portaskaig Boulder Bed in Islay, Scotland, the Cleggan Boulder Bed Formation in Connemara and the Doogort Boulder Bed in Achill. The formation comprises distinctive boulder and cobble conglomerate beds containing unsorted granite, granite gneiss, psammite, and rare quartzite boulders, with smaller clastic debris traceable for over 30 km along strike. The boulder beds are highly variable in thickness, boulder type and size, especially where they are interbedded with glaciofluvial sands and laminated silts. The Boulder Bed is overlain by a quartzite-dominated sequence (Bangor Quartzite Formation) containing abundant granite clasts. The Briska Boulder Bed Formation and equivalent tillite units provide evidence for a major global glaciation (ice age) during the Precambrian era. The Port Askaig Formation tillites are interpreted as being formed from repeated ice-sheet advances over a shallow marine shelf and followed by melting of the ice sheets carrying sedimentary debris, which sank to the seafloor.

Site Importance – County Geological Site

The site is an important County Geological Site because it is one of the few locations where outcrops of the Portaskaig Boulder Bed (Neoproterozoic tillite) occur in County Mayo. The site is located in the Owenduff/ Nephin Complex SAC (000534).

Management/promotion issues

The site is in a remote hilly area, and access to the site is not easy. The features are not of obvious interest to the public and thus the site is not deemed suitable for public promotion. However, its significance (in the context of the Precambrian geological history of Mayo, Ireland and Scotland) in providing evidence of glaciations (ice ages) that occurred over 600 million years ago, warrants inclusion in any literature pertaining to the geological heritage of County Mayo.



View of Briska townland small stream 'valley' where Briska tillites outcrop.



Briska Boulder Bed outcrop.



Briska Boulder Bed outcrop by N59 roadside.



Weathered Briska Boulder Bed outcrop.



Quarry outside Bangor, viewed from Srahgraddy, where Briska Boulder Bed outcrops.



Hennessy et al. 2014 (revised 2019). Geological Survey Ireland.