

GALWAY - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Currywongaun
Other names used for site	
IGH THEME	IGH11 Igneous intrusions
TOWNLAND(S)	Corr Uí Mhongáin (Currywongaun)
NEAREST TOWN/VILLAGE	Kylemore
SIX INCH MAP NUMBER	10
ITM CO-ORDINATES	472730E 759560N
1:50,000 O.S. SHEET NO. 37	GSI BEDROCK 1:100,000 SHEET NO. 10

Outline Site Description

Abundant large outcrops on moorland in extensive upland area.

Geological System/Age and Primary Rock Type

Ordovician layered mafic intrusion emplaced into Dalradian psammities and semi-pelites.

Main Geological or Geomorphological Interest

The Currywongaun Gabbro, along with the related Dawros Peridotite that lies to the west, is part of the extensive Connemara Metagabbro and Orthogneiss Complex. This complex formed the root zone of the Ordovician magmatic arc that developed above the northward-dipping subduction zone on the northern margin of the Iapetus Ocean. Most of the exposed rocks of the arc are found in south Connemara in the Ballyconneely – Roundstone area but deformation led to fragmentation of the arc and parts of it are exposed further north, principally in the Dawros – Currywongaun – Doughruagh area.

The Currywongaun Gabbro forms the high ground underlying both Currywongaun Hill and, to the east, separated by a fault, Doaghruagh Hill. It comprises a sequence of norites, pyroxenites and anorthosites that are intruded by mafic pegmatites and most abundantly acid gneiss. The gabbro is everywhere deformed, with a mineral fabric reflecting the syntectonic nature of the intrusion. Of principal interest is the well-developed magmatic layering that can be seen on Currywongaunbeg, the small peak to the west of Currywongaun summit, and on Currywongaun summit itself. The layering typically consists of alternating brown pyroxene-rich and grey feldspar-rich layers that can exceed 0.3 m in thickness but are typically 0.1 m thick or less. Graded bedding has been observed within some layers as have slump structures. The magmatic layering is considered to have formed by gravity separation of minerals in the magma, i.e. through a process of magmatic sedimentation.

Site Importance – County Geological Site; may be recommended for Geological NHA

This site contains some of the best exposures of mafic intrusive rocks in Connemara. The excellent exposures of magmatic layering within the gabbro are of particular importance in the context of understanding crystallization processes within the magma chamber. Observed graded bedding and slump textures provide evidence for magmatic sedimentation processes. With its extensive areas of clean outcrop, this site provides a particularly good opportunity to study textural variation within a mafic intrusion.

Management/promotion issues

The site is on open moorland on a relatively steep hill, used for sheep grazing. It is within the Twelve Bens/Garraun Complex SAC and proposed NHA. As it is likely to be mainly of interest to researchers, the site does not require promotion.



General view of extensive outcrops of gabbro on Currywongaunbeg, viewed from south west.



Magmatic layering in gabbro on Currywongaunbeg summit, looking north.



Close-up of magmatic layering on Currywongaun summit: light grey layers are feldspar-rich; darker, red-brown layers are pyroxene-rich.



