

NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT

NAME OF SITE	Knockalla
Other names used for site	
IGH THEME	IGH10 Devonian
TOWNLAND(S)	Ballycallan
NEAREST TOWN/VILLAGE	Carrowkeel
SIX INCH MAP NUMBER	18
ITM CO-ORDINATES	623628E 936204N
1:50,000 O.S. SHEET NUMBER 2	GS1 BEDROCK 1:100,000 SHEET NO. 1
GIS Code ND038	

Outline Site Description

Rocky cliffs of sandstone and conglomerate in an escarpment on the edge of farmland.

Geological System/Age and Primary Rock Type

Devonian sandstones and pebbly conglomerates of the Ballymastocker Formation.

Main Geological or Geomorphological Interest

The Devonian period is only glimpsed in two small areas in Donegal, one of which is at Ballymastocker where exposures occur on the beach at Ballymastocker Bay and this complementary site inland at Knockalla. The Devonian rocks here form an *outlier* (younger rocks entirely surrounded by older rocks) with Dalradian rocks lying to north, south and west.

The Devonian rocks are juxtaposed against the Dalradian to the south by the Leannan Fault.

The Ballymastocker Formation here has more sandstones than the boulder conglomerates seen at the coastal exposures. The rocks were deposited as sands and coarse gravels in a desert intermontane basin. The unconformable contact between the Old Red Sandstone and the Dalradian is reportedly poorly exposed inland but is not seen in this site. The southern end of the outlier is not far to the south and the unexposed escarpment can be seen continuing across the bog from the site.

The formation is resistant to erosion compared to the Dalradian, and this has created a small escarpment along the edge of the outcrop.

Site Importance – County Geological Site

The site is a good representation of the most northerly Devonian rocks in the country and is complementary to the Ballymastocker site on the coast.

Management/promotion issues

The site comprises either rough grazing with gorse cover or wooded cliff and few issues other than access for geological visits are apparent.



The steeply dipping beds of Devonian sandstones at Knockalla.



The cliff of Devonian sandstones at Knockalla.



The cliff of Devonian sandstones at Knockalla,
with the Leannan Fault along the hillslope behind.

