#### **NORTH DONEGAL - COUNTY GEOLOGICAL SITE REPORT**

NAME OF SITE Abhainn an Toir
Other names used for site Owenator River

IGH THEME IGH14 Fluvial and Lacustrine Geomorphology
TOWNLAND(S) Tor, Comeen, Brockagh, Loughagher, Meencorick,

Bunawack, Cronaguiggy

NEAREST TOWN/VILLAGE An Clochán Liath (Dunglow)

**SIX INCH MAP NUMBER** 41, 42, 49, 50

ITM CO-ORDINATES 585422E 914135N (centre of channel) 1:50,000 O.S. SHEET NUMBER 1 GSI BEDROCK 1:100,000 SHEET NO. 1

**GIS Code ND022** 

# **Outline Site Description**

The Owenator River is a long mountain river that rises on the northern slopes of Crocknasharragh Mountain and flows into Lough Anure, near Dunglow.

## **Geological System/Age and Primary Rock Type**

The river in its current form has been formed in the Holocene Period, since the last glaciation. It is likely that the macro-structure of the river channel dates back to the Quaternary (Ice Age), and possibly even the Tertiary Period.

The majority of bedrock exposures along portions of the channel stretch are of late-Silurian/early-Devonian (420-390 Ma) granite. The granite is either Thorr Granite or the Main Donegal Granite, both part of the Donegal Batholith, and one of a number of plutons that comprise the various granite varieties occurring in northwest Ireland.

### **Main Geological or Geomorphological Interest**

The Owenator River is a river channel flowing from mountain terrain into a lowland lake. The channel is approximately 10 kilometres long, having a number of major directional changes along its route. These changes are related to the structural geology of the bedrock in the area; particularly the course of one of the Owenator tributaries, the Owencrovarra River.

The Owenator River is deeply incised to a depth of approximately 20m within the Donegal landscape. Much of the course has been etched in bedrock, with portions in the central section etched in a mixture of glacial till (moraines) and bedrock.

The majority of the channel is V-shaped, with the portion closest to Lough Anure U-shaped, which may suggest that this portion was shaped by glacial meltwaters. The Owenator River is essentially a misfit stream along this stretch of channel, as it is much smaller than the valley it lies within.

## **Site Importance - County Geological Site**

The Owenator River is an impressive locality and the associated channel features, as well as the form of the channel, make the river a good locality for the recognition of fluvial erosion and deposition features. The fact that the river is related to the structural geology of the region adds to its interest.

#### Management/promotion issues

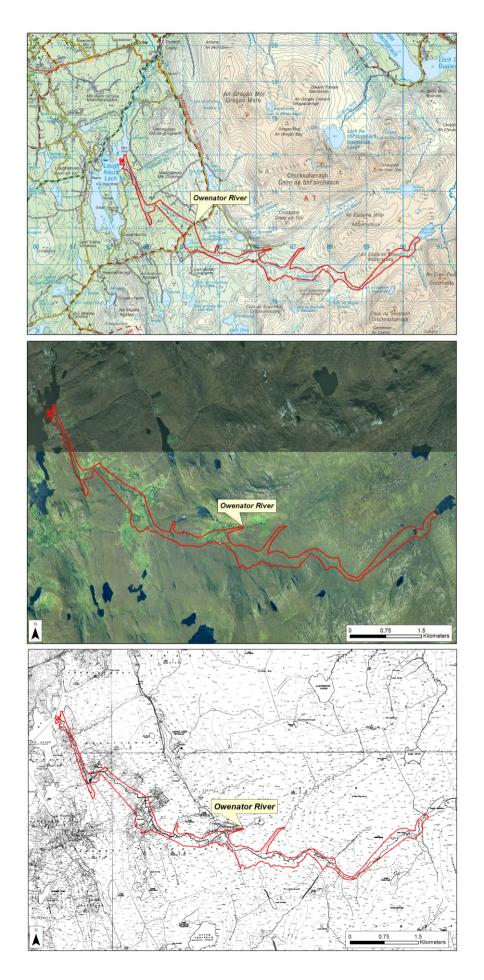
The location of the river means the lower and middle stretches are accessible, but the upper reaches need to be walked and the terrain is rough and boggy. The upper portion of the channel is part of the Cloghernagore Bog and Glenveagh National Park SAC, SPA and pNHA (002047).



View up into the upper reaches of the Owenator River, at Tor-Loughagher.



The Owenator floodplain and bounding moraines, Tor Townland.



Hennessy et al. 2019. Geological Survey Ireland.