

## GALWAY - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Owenduff Bridge</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH4 Cambrian-Silurian</b>
<b>TOWNLAND(S)</b>	<b>Lecknavarna, Bunowen, Lettershanbally</b>
<b>NEAREST TOWN/VILLAGE</b>	<b>Leenane</b>
<b>SIX INCH MAP NUMBER</b>	<b>11</b>
<b>ITM CO-ORDINATES</b>	<b>481240E 760280N (centre of outcrops)</b>
<b>1:50,000 O.S. SHEET No.37</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 10</b>

### **Outline Site Description**

A large area of open moor and bog with numerous scattered rock exposures.

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

The rocks include a fault breccia constituting a major tectonic boundary between the Silurian rocks of north Galway and south Mayo and the Dalradian rocks of Connemara. The majority of the site comprises Silurian rocks of the Lettergesh Formation with a thin development of the Kilbride Formation fossiliferous sandstones between them. The Lettergesh Formation comprises thick boulder conglomerates in the lower part and turbidite sandstones and siltstones further up the succession.

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

The fault breccia exposed in glacially scoured pavement immediately beside Owenduff Bridge is critical evidence of the tectonic relationship (a major fault structure) between the Silurian succession of north Galway and south Mayo and the metamorphic Connemara Dalradian rocks. To the north east of the bridge scattered outcrops of rock exhibit the succession of Silurian strata dipping steeply northward and younging in that direction. The first rocks are fossiliferous sandstones of the Kilbride Formation in a very thin unit contrasting with the same formation to the south east, and in the Kilbride area of south Mayo. Downcutting channels filled with coarse conglomerates of the Lettergesh Formation replace much of the Kilbride Formation. The conglomerates comprise well rounded large cobbles and small boulders of varied lithologies. Further up the succession, going northwards, the Lettergesh Formation is composed of the more common turbiditic sandstones and siltstones that characterise the bulk of the outcrop.

A roadside quarry (now with a mobile phone mast in the centre) has yielded sparse graptolite fossils in the past which have helped date the formation and correlate it with Silurian rocks elsewhere.

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

The site comprises accessible exposures of a significant part of the Silurian stratigraphy and may be recommended for NHA status under the IGH4 Cambrian-Silurian Theme, as well as being defined as a County Geological Site.

### **Management/promotion issues**

The open countryside, although very boggy, makes access easy for geologists, but there is no nearby parking place for safety, especially for coaches where large student parties are involved.



Left: Exposures of major fault breccia beside Owenduff Bridge looking south.  
Right: Exposures of major fault breccia beside Owenduff Bridge looking north.



Left: Exposures of Kilbride Formation sandstones, with weathered fossils at hammer level.  
Right: Exposures of Kilbride Formation sandstones just north of Owenduff Bridge.



Left: Exposures of Lettergesh Formation conglomerates north of Owenduff Bridge.  
Right: Exposures of Lettergesh Formation turbidites north of Owenduff, in roadside quarry.



