# **GALWAY - 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. 45 Oughterard – Owenriff Falls Owenriff Falls IGH6 Mineralogy, IGH8 Lower Carboniferous Oughterard Oughterard 54 511380E 742570N GSI BEDROCK 1:100,000 SHEET NO. 11

## **Outline Site Description**

River section, 800 m in length, with outcrops in river and in cliffs.

## Geological System/Age and Primary Rock Type

Argillaceous limestones of the Lower Carboniferous Oughterard Formation separated from the Ordovician Oughterard Granite by cross-bedded sandstone of the basal Carboniferous Tonweeroe Formation.

## Main Geological or Geomorphological Interest

The outcrops along the Owenriff River in Oughterard expose a section through the lowermost formations of the Lower Carboniferous succession and its contact with the Oughterard Granite. Crystalline native sulphur occurs within cavities in the limestone.

At the waterfall, the Tonweeroe Formation consists of coarse, cross-bedded sandstone a few metres thick, in faulted contact with both granite and overlying Oughterard Limestone Waterfall Member. The Waterfall Member is well exposed downstream of the waterfall and consists of argillaceous and silty limestones, with subordinate shale. Brachiopod-rich beds ('Chonetes Beds') mark the top of the Waterfall Member; they can be seen in outcrop in the riverbank beside the car park upstream (west) of the bridge. The overlying Owenriff Member is made up of darker grey, more argillaceous limestone and interbeds of fossiliferous shale. It forms cliffs several metres high on the southern side immediately upstream of the bridge.

Geodes and nodules of calcite and dolomite occur in places within the Waterfall Member. Crystalline native sulphur also occurs in some of these geodes and nodules, having typically grown last within the cavity. The Irish name for the Owenriff River, "Abhainn Ruibhe", means 'sulphur river'.

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

The site contains good exposure of the lowermost formations within the Carboniferous of Galway. The contact with the Oughterard Granite and the presence of native sulphur provide additional interest. The site is proposed as a County Geological Site and possible NHA.

#### Management/promotion issues

On the northern bank of the river, 400 m upstream of bridge, a small car park leads to a well maintained recreation / picnic area. This area would be a suitable site for a signboard outlining the geology of the site. The waterfall is crossed by a pedestrian bridge, part of the "Waterfall Walk", that allows viewing of the outcrop but no access. A riverbank walk leading to the waterfall outcrop is part of the garden of a private guesthouse.



Recreation area on northern bank of Owenriff River, view to south.



Cliffs on south side of Owenriff River, immediately upstream of bridge; argillaceous limestones and shales of Owenriff Member of Oughterard Limestone Formation.



Brachiopod fossils in limestone of Waterfall Member, beside car park on northern bank.



Basal clastics of Tonweeroe Formation at waterfall. *Meehan et al.* 2019. Geological Survey Ireland.







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